**Test Plan**

**Copernicus Power Platform Solution (Outside ERP)**

Prepared by the Psiog-QA Test Team

Version 0.1

**Document History**

* Document Location - [AGC](https://psiog0.sharepoint.com/:f:/s/AGC580/Eh6xgiA1vM1EtXxD1E-b_nYBgGIIkEOW9WURfay7c4nUZQ?e=lpLaKT)

**Revision History**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Authors** | **Objective/Scope of changes** | **Distribution** |
| 0.1 | 22/12/2023 | Muthukumaran.D | Requirement for Mail Notification | QA team |
| 0.2 | 31/12/2024 | Muthukumaran.D | Create APC list | QA team |
| 0.3 | 29/01/2024 | Muthukumaran D | Customer and vendor master additional field for power automate in Thai requirement | QA team |

Table of Contents

[1. Introduction 4](#_Toc147241666)

[1.1 Purpose 4](#_Toc852055639)

[1.2 Objectives 4](#_Toc1999625331)

[2. Test Items 5](#_Toc296476085)

[3. In Scope 5](#_Toc564277614)

[4. Out of Scope 5](#_Toc1110947603)

[5. Test Environment 6](#_Toc1721145964)

[6. Features 6](#_Toc885002444)

[6.1 Requirement for mail notification 6](#_Toc468616388)

[6.2 APC 6](#_Toc589636229)

[6.3 Thai requirements 7](#_Toc1610305704)

[7. Quality Metrics 7](#_Toc643398737)

[8. Test Schedule 8](#_Toc2059981532)

[9.Tools Used 8](#_Toc894497308)

[10. Test Execution 9](#_Toc1269922730)

[10.1 Test Procedures 9](#_Toc1321003128)

[10.2 Test Data Management 9](#_Toc1386052895)

[10.3 Defect Reporting 9](#_Toc1055850893)

[11. Entry Criteria 10](#_Toc1716661897)

[12. Exit Criteria 10](#_Toc106996289)

[13. Risks and Assumptions 11](#_Toc1410106553)

[13.1 Prioritized Issues Specific to Application 11](#_Toc76507010)

[13.2 Additional Considerations on the AGC Application 11](#_Toc1636415341)

[14. Test Deliverables 13](#_Toc1502126810)

[15. Approvals 13](#_Toc610198925)

# 1. Introduction

## 1.1 Purpose

The test plan will help the team ensure all Functional, Design Requirements and enhancements are implemented. It also provides a procedure for Testing throughout the software life cycle and helps in identifying more Defects and Test Cases.

It also helps in identifying the documentation process and serves as a valuable record of what testing activities was done. Please note that the test plan document is a live document and would be updated per milestone / Phase accordingly.

## 1.2 Objectives

The AGC Group creates new value in the fields of glass, electronics, chemicals and ceramics. AGC Inc. formerly Asahi Glass Co Ltd., is a Japanese global glass manufacturing company, headquartered in Tokyo.

Power Platform enhancements will streamline workflow for external and internal users, enabling them to raise requests in Power Apps and manage master data in D365. This update also includes guided business rules and process guidelines for approvers and operators. Testing is ongoing to ensure proper functionality of flows and UI changes.

**Core Objectives:**

* Verify Functionality: Ensure all features work as intended, handle data correctly, and produce accurate results.
* Identify Defects: Uncover any bugs that impact functionality, user experience, or data integrity.
* Track Defect Resolution: Ensure identified issues are fixed throughout testing and development.
* Optimize User Experience: Evaluate ease of use, intuitiveness, and clarity of information. Recommend improvements to enhance user satisfaction and productivity.

# 2. Test Items

|  |  |
| --- | --- |
| **Data Storage** | Dynamics365 F&O  Microsoft Dataverse  SharePoint Lists |
| **Input** | Application form in Excel |
| **Customer Facing Tools-PowerApps (PA)** | Application form – PA  Registration form – PA |
| **Process Automation** | Data sync Workflow - PA  Customer Approval Workflow - PA  Registration Workflow – Vendor, Customer, Common.  Customer and Common - PA |

The test items include all features and components of Copernicus Power Platform Solution outlined in the project documentation.

# 

# 3. In Scope

* The application is a (web/mobile) application and testing would be performed in Latest Edge browser.
* The Requirement for mail notification, Approval Progress Confirmation and Thai requirements are the features to be tested.
* Only Manual testing is in scope for this project.
* Integration testing, Smoke testing, Regression testing, Feature regression testing as part of manual testing.

# 4. Out of Scope

* The other browsers like Firefox, IE, Edge are not in scope for this application.
* Performance testing and Security testing will not be done as part of Nonfunctional testing only Manual testing is in scope for this application.
* Automation testing / API testing are not in scope.

# 5. Test Environment

* Testing here is done using a local setup in the windows laptop with (all the required software for the app to run)
* It is a Shared Environment between the Developer/Tester.

# 6. Features

## 6.1 Requirement for mail notification

* The mail notification is sent to a group of members called approval, Recipient confirmation and Requestors to get notified about the registration process.
* Distribution lists maintained by the admin/operator is used to manage the groups of users in Recipient approval and Recipient confirmation identified by an email address to send email notifications.
* Two new Columns (Registration Confirmation Recipients and Registration Approval Recipients) in the Approval Flow Master SharePoint list and Dataverse
* New Key/value pair in the Multi Language Master Dataverse table and SharePoint for the Email Subject
* Make sure you enter valid email IDs in the Approval Flow Master SharePoint list for RC and RA
* Make sure DL has one user added as member.
* A ( ; ) needs to be used as a separator between the mail address
* Below are the account and new connection details used in Power Automate.

## 6.2 APC

* The Approval Progress Confirmation (APC) List allows users to view the status of applications. APC List tracks the overall status of the application, with details on approval, registration and confirmation status.
* The list will be updated every time when there is progress in the application or operation.
* Every item will contain attachment of excel application form.
* Flow will be able to accommodate new companies.
* The list will be visible only to the corresponding company to which the user belongs to Data verse to share point will be synced so that the existing status will be updated in Share point as well.

## 6.3 Thai requirements

* The application form submitted for company code 2007 will only be populated in D365 with new mandatory fields for customer and vendor. The new entity created will have 2007 as Area ID in D365.
* Power automates will be extended to read the fields in the excel and update it in D365 through automation.
* There will changes made in approval workflow’s power automate for extended version.
* There will be changes made in registration workflow’s power automate for extended version.

# 7. Quality Metrics

|  |  |  |  |
| --- | --- | --- | --- |
| **Metrics** | **Formula** | **Metrics Calculation** | **Description** |
| Defect Density | Defect Density = Defect count/size of the release | <=0.5 | Defect Density is the number of defects confirmed in software/module during a specific period of operation |
| Defect Rate % | (No. of valid defects in current build / No. of test cases executed) x 100 | 0 for P0/P1 | The formula for defect rate is the number of defective products observed divided by the number of units tested |
| Passed Test Cases % | (No. of successful test cases / No. of test cases executed) x 100 | 100 | The number of test cases passed based on number of executed test cases |
| Defect Removal % | (No. of defects resolved by Dev / No. of overall defects reported) x 100 | 100 | The defects resolved by the Dev team in the current build |
| Requirement Coverage % | (No. of requirements mapped to test cases / Total no. of requirements) x 100 | 100 | Test cases written based on the available requirement and its coverage |

Refer Link- [Test Document](https://psiog0.sharepoint.com/:f:/s/AGC580/ErneFQZZUotEiHn76i6DK84B2H7134w-vOZDe5Mo_g70EA?e=EErJFm)

# 8. Test Schedule

* Scheduling the time for testing dependents up on the projects, for the current Copernicus Power Platform Solution, we estimate around 2 months to complete the In-scope features after development and bug fixes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No** | **Feature Name** | **Start Date** | **End Date** | **Comments** |
| 1 | Feature 1 (Mail notification) | 22/12/2023 | 3/1/2024 | Completed the testing on these days |
| 2 | Feature 2 (APC) | 31/12/2024 | 17/01/2024 | Completed the testing on these days |
| 3 | Feature 3 (Thai requirements) | 29/01/2024 | 07/02/2024 | In-progress due to there is a change in the client requirement |
| 4 | Feature 4 (Reg ID) | 07/02/2024 | 09/02/2024 | Completed the testing on these days |

# 9.Tools Used

* There is no specific tool for AGC project, but the team is currently using the below mentioned tools.

|  |  |  |
| --- | --- | --- |
| **Project management Tool** | Microsoft planner | [Planner](https://tasks.office.com/psiog.com/EN-US/Home/Planner/" \l "/usercharts) |
| **Test Case Management Tool** | Excel document XLSX | [TestCases](https://psiog0.sharepoint.com/:f:/s/AGC580/ErneFQZZUotEiHn76i6DK84B2H7134w-vOZDe5Mo_g70EA?e=fkV7qm) |

# 10. Test Execution

## 10.1 Test Procedures

* **Test Case Preparation:**
* After developer unit testing, testers analyse requirements and prepare test scenarios, cases, and steps with expected results.
* **Test Execution:**
* **Smoke testing:** Execute basic tests to ensure core functionality.
* **Regression/Feature regression testing:** Verify workflow (approval flow master, update request list, SharePoint, data sync flow). Capture evidence and attach to Excel sheet for reference.
* **Defect Management:**
* Report identified issues/defects via Teams and document them in Excel.
* Retest resolved issues to confirm fixes.

## 10.2 Test Data Management

* **New/updated data:** Provided in existing SharePoint/Dataverse/D365 tables.
* **No changes to existing data:** New tables created for new companies with data provided accordingly.
* **User-provided data:** Attached to Copernicus approval form (submitted state) for specific company/request/application types.
* **Operator role:** Fills registration form and uploads data to Dynamics365.
* **Microsoft Dataverse:** Primary data storage.
* **SharePoint Lists:** Temporary data storage.

## 10.3 Defect Reporting

Priority Legend for Test Cases and Defects:

|  |  |
| --- | --- |
| **P0** | Critical features or functionalities without which a software user will not be able to achieve its goal |
| **P1** | Features or functionalities without which software might still serve its purpose but customer might face losses |
| **P2** | Features or functionalities without which the software can be used successfully with some work around, but customer will be unhappy |
| **P3** | Features or functionalities which add very minor value to the software like a text in UI |

* Once any issue/defect is identified it will be informed through teams and the evidence will be captured in excel sheet. Once it is resolved it will be retested by the testing team.

# 11. Entry Criteria

Before starting of the testing, the following criterions should be satisfied:

* **Tester Access:**
* Provide login access to the Virtual Desktop (Remote desktop).
* Grant access to Mail and Teams applications.
* Assign an M365 license for Power Apps and Power Automate testing.
* Provide credentials for Approver and Operator roles.
* **Test Items:**
* After developer completion, unit-tested requirements are delivered for testing.
* Smoke, sanity, and regression testing are performed based on requirements and needs.

# 12. Exit Criteria

The following exit criteria must be satisfied before considering the entry criteria fulfilled:

* **Test Execution:**
* All test cases are executed with their expected results documented in an Excel sheet.
* Screenshots are captured as evidence and embedded in the Excel sheet upon completion.
* **Test Reporting:**
* Pass and fail test case counts are calculated to determine the overall test pass percentage.
* QA metrics are collected, including bug count, severity distribution, and regression testing results.
* This report is shared with AGC teams for client analysis.
* **Release Decision:**
* With all critical and high-priority bugs addressed (excluding P0 and P1), the application undergoes a risk assessment based on the test pass percentage and QA metrics.
* If the risk is acceptable, the release proceeds.
* Otherwise, remaining issues are resolved before release.

# 13. Risks and Assumptions

## 13.1 Prioritized Issues Specific to Application

* **Approver/Operator Name Changes:**
* **Issue:** Name changes in the flow do not trigger email notifications to the new Approver/Operator.
* **Impact:** Delays in approvals and potential confusion.
* **Recommendation:** Investigate and rectify the flow logic to ensure email notifications are sent to the correct approver based on dynamic updates.
* **RA & RC Name Changes:**
* **Issue:** Updates to RA and RC names in the flow master don't trigger confirmation/cancellation notifications to the requestor.
* **Impact:** Requestors are unaware of approval status changes and may experience confusion or frustration.
* **Recommendation:** Ensure the flow sends notifications to the correct requestor based on any RA or RC name changes.

## 

## 13.2 Additional Considerations on the AGC Application

* **Licenses:**
* **Issue:** Insufficient or missing licenses may limit access to necessary features for testing.
* **Impact:** Incomplete or inaccurate testing due to restricted functionality.
* **Recommendation:** Ensure testers have the appropriate licenses to access all relevant features for comprehensive testing.
* **Limited Testing Time:**
* **Issue:** Time constraints may lead to rushed testing and potential gaps in coverage.
* **Impact:** Increased risk of undetected issues and potential post-release problems.
* **Recommendation:** Allocate sufficient time for thorough testing, considering the complexity of the flow and potential risks
* **Language-Requirement:**
* **Issue:** Lack of clear language requirements may lead to misinterpretations during testing.
* **Impact:** Inconsistent or inaccurate test cases due to unclear expectations.
* **Recommendation:** Define clear and concise language requirements for the flow's functionality and user interface.
* **Inadequate Information:**
* **Issue:** Insufficient information during test case writing may result in poor test coverage.
* **Impact:** Missed critical scenarios and potential issues due to incomplete understanding.
* **Recommendation:** Provide testers with comprehensive documentation, specifications, and access to relevant information for thorough test case development.
* **Multiple Company Code Requests:**
* **Issue:** Handling multiple company code requests leads to performance delays due to "company code locker."
* **Impact:** Slows down the approval process and could affect overall system performance.
* **Recommendation:** Investigate the "company code locker" mechanism and explore potential optimizations to improve request processing speed.

# 14. Test Deliverables

* Test deliverables are the documents that describe the testing process and can be used to document your efforts.

|  |  |
| --- | --- |
| **Test Plan** | Lakshmi, Dinesh Ganesh, Naveed |
| **Test Results** | Lakshmi |
| **Bug Report** | Dinesh Ganesh & Naveed |
| **Metrics** | All team members (Dev & QA) |

# 15. Approvals

* In the project approval name has been mentioned accordingly to the AGC account and Psiog account.

|  |  |
| --- | --- |
| **QA-COE Manager** | Dinesh Ganesh |
| **QA Project Lead** | Naveed |
| **Client’s** | Naomi, Izumi |
| **SPOC (Project Manager)** | Lakshmi |
| **Governance & Steering** | Harith, Savitha |