## **Milestone 1: End-to-End Functional Test Plan**

### **Test Scenarios**

#### **1. Campaign Creation & Scheduling**

* Verify that a user can create a campaign by specifying a name, recipient list, email template, and scheduling time.
* Ensure that the user is able to set the scheduled time in UTC.
* Validate that campaigns are saved successfully in the system.
* Check that an error is displayed when attempting to schedule a campaign in the past.
* Ensure that duplicate campaign names are handled properly.

#### **2. Recipient List Selection**

* Verify that the user can select a recipient list from the available options.
* Validate that the selected recipient list is correctly associated with the campaign.
* Ensure that the system allows filtering and searching for recipient lists.
* Check how the system handles large recipient lists.

#### **3. Email Template Selection**

* Verify that a user can select an email template from predefined templates.
* Ensure that the email template content is displayed correctly before selection.
* Validate that an error is displayed if no template is selected.

#### **4. Editing Campaign Name**

* Verify that users can modify the campaign name before scheduling.
* Ensure that renaming a campaign updates it correctly in the database.
* Validate that duplicate campaign names are not allowed.

#### **5. Canceling a Scheduled Campaign**

* Verify that a user can cancel a scheduled campaign before its scheduled time.
* Ensure that the campaign is removed from the sending queue upon cancellation.
* Validate that users receive a confirmation message before cancellation.

#### **6. Campaign Execution & Email Sending**

* Verify that the campaign is sent at the exact scheduled time.
* Validate that emails are sent to all recipients in the selected list.
* Check that email content is correctly rendered as per the chosen template

## **Milestone 2: Integration Test Plan**

### **Test Scenarios**

#### **1. Integration with Recipient Management Service**

* Verify that the campaign scheduling service correctly fetches recipient lists.
* Ensure that any updates to recipient lists reflect in scheduled campaigns.
* Validate error handling when the recipient management service is down.

#### **2. Integration with Email Template Service**

* Validate that the email template service fetches available templates.
* Ensure that the correct template is used when sending emails.
* Verify error handling for missing or deleted templates.

#### **3. Integration with Email Dispatch Service**

* Verify that campaigns trigger email dispatch at the correct scheduled time.
* Validate that email status updates (sent, failed, bounced) are logged correctly.
* Ensure that retry mechanisms are triggered for failed email deliveries.
* Verify logging and reporting for dispatched emails.

#### **4. Logging & Monitoring Integration**

* Verify that campaign scheduling and execution logs are correctly recorded.
* Ensure that monitoring tools provide real-time updates on campaign status.
* Validate that error alerts are triggered for failed campaigns.