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| TOWER LOAD SYSTEM  Analytical Study  Revision: 1.0 – Date 26/12/2021 |





Information Consultancies & Installation

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## Workflow Management Module

### Purpose of Module

The purpose of this module is to provide analytical study for the workflow management module in Tower Load Inventory System.

The module on application side includes main functionalities, which allow user to add, edit, view, delete, copy, disable/enable and view details of workflow via TLIS interfaces.

### Brief Description

The aim of this module is to analyze the new features requested in CR3 and to update the ones related to workflow management module, which agreed previously in PO and affected by CR3 requests, as below:

* Create workflow template with actions and permissions;
* Copy workflow template;
* Add parallel actions and the relation between them;
* Add new features and actions (Escalation, Reminder, Integration);
* Manage mail structure with variables.

### Analysis Models & Use Cases

#### Workflow Template

Through this interface user will be able to create workflow template, enable escalation and reminder features on workflow, add actions, order the executing of the actions, edit workflow, copy workflow, delete workflow and disable it, based on the usability status of workflow (used/unused) as following:

* Delete **unused** workflow;
* Disable **used/unused** workflow;
* Copy **used/unused** workflow;
* View details of **used/unused** workflow;
* Edit all properties (name, site status, type, permission, …etc.) and actions of **unused** workflow;
* Edit only these features (escalation and reminder) and the receivers of the mail action for **used** workflow, in case the workflow template contains “Send Mail Action”;

Here we will analyze to cover the actions agreed in PO and affected by the new CR3 requests, the new features and actions required in CR3 and the workflow template use cases.

##### Updated Actions

System will allow to add, delete or edit any action as previously mentioned in PO and explained in the UI Scenario file.

There are some points related to workflow actions in PO have been updated, below we will mention the common updates between all actions then will we mention the updates related to each one:

###### All Actions

* The variables (period and label) were added to all actions in TLIS, which will be determined while adding actions within the workflow, label will represent the action name which will be inserted by user to differentiate between actions of the same type (Ex: in the workflow we have two Insert Data Actions with two different labels).
* The assigner in each action through adding workflow must be one of custody type (group/ user/ actor/ integration system), if action needs more than one, user has to re-add the action with another assigned custody, then all actions will be executed on parallel.
* The integration system will be able to execute the action assigned to it, by calling the TLI side API that represents the action, **Ex**: if the action is insert data and it assigned to integration system (x), so x will execute this action by calling “Insert Info General API” which is mentioned in TLI Side API document.
* After adding the parallel action concept and to avoid any performance issue, setting the next-action (“next step” in previous concept) of the condition options, item options or any action in workflow will be removed from the action UI itself and it will be done in a separate stage (Actions Relations).

So user will add all actions without relations between them, then move to the last stage of creating workflow template to order all the created actions and set the relations between them.

###### Assign Action

This action is removed and its business will be covered by using send mail action, then assign the next action to specific custody:

###### Approval, Reject, Accept Actions

Approval, reject, accept actions won’t be separated action, they will be considered as condition types and covered in condition action.

###### Send Mail Action

The mail will be sent by the system, user will select mail (subject and body) from the mail templates list, without ability to edit it.

###### API Action

API action is removed and its business will be covered by Integration action and Integration list action, which will be explained in detail in Integration Module Document.

###### Change Task Status Action

The action name will be “Change Ticket Status”, which will represent the current status of the ticket.

###### Check Available Space Action

The options of this action (Available Space / Not Available Space) will be selected by system and the UI of adding this action will contain just two fields (period action, action name), the next action of this action options will be as we explained before in last stage of creating workflow template.

###### Select Target Support Action

The options of this action will be (Add or Dismantle civil support / Add or Dismantle item on existed civil support).

##### New Features and Actions

###### Escalation Feature:

The purpose of this feature is to prevent the delay that may occur in executing the pending requests, it will give ~~the TLIS user who has the permissions on the workflow or on one of its actions~~ the TLI system the ability to escalate the request when its period ends by sending an email to the uppers of the user who has to execute this request.

Admin will choose if the actions of workflow could be escalated during the creation of workflow template by enable the “Escalation” checkbox, then select its configuration (period, level).

~~Permitted user will be able to click on “escalation” button to send email for all chosen levels,~~ the escalation mail will be sent automatically by TLI system when the period of action is ended, if admin select the 2 or 3 levels of escalation and the user who has to execute this request had only “upper one”, the escalation will be for “upper one” 2 or 3 times.

~~It is also possible to click again on the “escalation” button after the end of escalation period, if escalation period is 2 days, “Escalation” button will disable after the first click for 2 days and then it will be enabled again when the period is finished.~~

The escalation mail will be resent after the end of escalation period, if escalation period is 2 days, escalation mail will be sent when the action period is ended and it will be resent after 2 days if the action hasn’t done yet.

~~An “Escalation” button will be displayed next to the requests and will be disabled for:~~

* ~~Requests of workflow which not configured to be escalated;~~
* ~~Pending requests of the user “my pending requests”;~~

Below we will analyze the test case of enabling the escalation feature on workflow…

1. **Enable Escalation Use Case**

|  |  |  |
| --- | --- | --- |
| **ID** | **1** | |
| **Name** | Enable/Disable Escalation of workflow | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents enabling escalation on workflow. | |
| **Business [System] Trigger:** | User want to enable escalation on workflow through creating workflow template or when editing one. | |
| **Preconditions:** | * User has to have a permission. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will click on checkbox to enable escalation on workflow as we mentioned in [Create Workflow Use Case](#_Add_Workflow_use);  **Step3:** user will define the values that he wants. | **Step 2**: system will display:   * Input field to specify the period between two escalations. * Dropdown list to select levels of escalation.   **Step 4:** system will enable the escalation on the actions of this workflow. |
| **Alternate Flow:** | **Step1:** user will uncheck the escalation checkbox  **Step 2**: system will disable the period and level fields and escalation features will be disabled for this workflow | |
| **Post Condition:** | * The escalation action will be applied on workflow. | |
| **Business Rule:** | * The escalation period must be between 1-30 days. * The level of escalation will be (1, 2 or 3). * One escalation mail template at least must be added in workflow setting. | |

###### Reminder Feature:

The purpose of this feature is to prevent the delay that may occur in execute the pending requests, it will give the TLIS user who has the permissions on the workflow or on one of its actions the ability to remind the user who has to execute this request ~~when its period finished~~, by sending an email to him.

Admin will choose if the actions of workflow could be reminded during the creation of workflow template by enable the “Reminder” checkbox, then select its period.

It is also possible to click again on the “Reminder” button after the end of its period, if reminder period = 2 days, “Reminder” button will disable after the first click for 2 days and then he will be able to click again.

A “Reminder” button will be displayed next to the requests and will be disabled for:

* Requests of workflow which not configured to be reminded;
* Pending requests of the user “my pending requests”;

Below we will analyze the test case of enabling the reminder feature on workflow…

1. **Enable Reminder Use Case**

|  |  |  |
| --- | --- | --- |
| **ID** | **2** | |
| **Name** | Enable\Disable Reminder of workflow | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents enabling reminder of workflow. | |
| **Business [System] Trigger:** | User want to enable reminder on workflow through adding workflow template or when he edits one. | |
| **Preconditions:** | * User has to have a permission. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will click on checkbox to enable reminder on workflow as we mentioned in [Add Workflow Use Case](file:///C:\Users\MarwaA\Desktop\Analytical%20Study_Batch4_workflow.docx#_Add_Workflow_use);  **Step3:** user will define the values that he wants. | **Step 2**: system will display:   * Number input field to detect the specify the period between two reminders.   **Step 4:** system will enable the reminder on the actions of this workflow. |
| **Alternate Flow:** | **Step1:** user will uncheck the reminder checkbox  **Step 2**: system will disable the period field and reminder features will be disabled for this workflow | |
| **Post Condition:** | * The reminder action will be applied on workflow. | |
| **Business Rule:** | * The reminder period must be between 1-30 days. * One reminder mail template at least must be added in workflow setting. | |

###### Parallel Actions:

The concept of “Step” will be removed and replaced with “action”, so the workflow will consist of actions (Sequence/Parallel), user will be able to group several actions into phases (parallel or sequential actions).

The concept of “next step” removed, user will add all actions without relations between them, then move to the last stage of creating workflow template to order all the created actions and set the relations between them.

The relations between actions will be parallel or Sequence and it will be set in Actions Relations UI, and will be defined in one of the following ways:

* And

System will execute action C when action “A” and action “B” is done.

* Or:

System will execute action C when one of the actions (A or B) is done, the remaining ones will move to action C when they are executed

* Action “A” is executed;
* “B” still under processing;
* Action “A” will move to action “C” first;
* Action “B” will move to action “C” when “B” is executed.
* Only one way to the end:

System will move to the next action (action C) when one of the actions is done and the remaining ones will be canceled.

* Action “A” is executed;
* Action “A” will move to action “C”;
* Action “B” will cancel;

###### Integration Action:

It will be explained in details in Integration Module Document.

##### Workflow Template Use Cases:

Below the test cases related to workflow template management…



Figure 1- Workflow Template Management

###### Create Workflow Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **1** | |
| **Name** | Create workflow (Add) | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents create a new workflow including new actions in TLI system. | |
| **Business [System] Trigger:** | User want to create new workflow. | |
| **Preconditions:** | User has to have a permission | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step 1**: user choose select “Template” under “manage workflow”, then click on add button;  **Step 3:** user will insert workflow name and fill the other fields  **Option1:**  If user click on “save & continue” button the new info will be saved and moved to the next step;  **Option2**:  If user click on “save & exit” button, the new info will be saved, system will close adding interface;  **Step5**: user will select first ticket status then adds all workflow types by insert type name then click on add button;  user can delete added types by click on delete button next to the type;  **Step7:** user will select permitted custody then click on “Save & Continue” to save info and move on to the next step.  **Step9:** user will add workflow actions, then click on “Save & Continue” to save info and move on to the next step.  user can delete added action by click on “delete” button.  user can edit added action by click on “edit” button.  user can view details of added action by click on “view details” button.  **Step11:** user will order the added actions by setting the relation between them, then click “save” button to save the created workflow template. | **Step 2**: system will display an interface containing:   * Input Field to insert new workflow name. * Dropdown list to select workflow site status. * Checkbox to enable the reminder feature. * Input Field to specify the period between reminders. * Checkbox to enable the escalation feature. * Input Field to specify the period between two escalations. * Dropdown list to select level of escalation.   **Step 4:** system will display a new interface to add workflow types and define the first status of the ticket;  **Step6:** system will display a new interface to add workflow permissions to TLIS custody and integration system, which allow to open ticket of this workflow, the interface will contain the following lists:   * Dropdown lists: to select multi users * Dropdown lists: to select multi groups * Dropdown lists: to select multi actors * Dropdown lists: to select multi integration systems.   **Step8:** system will save the workflow types and permission then display a new interface to add action to the workflow.  **Step10:** system will display a new interface to specify the relations between all added actions in order to complete the creation of workflow. |
| **Alternate Flow:** | - | |
| **Post Condition:** | * A new workflow template will be created and added to TLI system. | |
| **Business Rule:** | * Workflow name must be unique. * Workflow Type must be unique on workflow level. * At least one permitted custody must be selected in add workflow permission step. * Workflow type is not mandatory. * Escalation period and level are mandatory to be filled if the escalation feature checkbox is checked * Reminder period is mandatory to be filled if the reminder feature checkbox is checked | |

###### Copy Workflow Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **2** | |
| **Name** | Copy workflow | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents copying workflow template. | |
| **Business [System] Trigger:** | User wants to take a copy of workflow template to reuse it in TLIS after updating its properties. | |
| **Preconditions:** | User has to have a permission | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will click on copy button;  **Step3:** user will insert workflow name and click on “Save” button; | **Step 2**: system will display a dialog contain input text to insert new workflow name;  **Step 4**: system will close the dialog and add new workflow to TLIS. |
| **Alternate Flow:** | - | |
| **Post Condition:** | Copied workflow template will be displayed in the view table. | |
| **Business Rule:** | Workflow name must be unique. | |

###### Add Action to Workflow Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **3** | |
| **Name** | Add Action to Workflow | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents adding action to workflow template. | |
| **Business [System] Trigger:** | User want to add action while creating workflow template or editing unused one. | |
| **Preconditions:** | * User has to have a permission. * Edited workflow must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will move to fourth step through adding or editing workflow template;  **Step3:** user choose one of actions to add;  **Step5:** user will fill all fields, then click on “Save” button; | **Step2**: system will display an interface containing   * Dropdown list of actions to choose which action to add, the list will contain: * Send Mail * Change Ticket Status * Upload File * Insert Data * Update Data * Apply Calculation * Condition * Select Target Support * Check Available Space * Telecom Validation * Civil Decision * Proposal Approved * Study Result * Civil Validation * Data table containing all added actions.   **Step4**: system will display adding dialog for user contains all fields related to the selected action, which explained in the UI Scenario file and the updated actions section in this document;  **Step6:** system will close the adding dialog and the new action will be displayed in the data table. |
| **Alternate Flow:** | - | |
| **Post Condition:** | * Added action will be displayed in the data table. | |
| **Business Rule:** | * Action period must between 1-30 days * Action label must be unique on the created workflow. * In all actions user has to select which custody (group/ user/ actor/ integration system) the action will be assigned to. * In **Send Mail Action** user has to: * Insert at least one mail receivers. * Select mail from mail templates. * In **Change Ticket Status Action** user has to: * Select status of the ticket. * In **Upload File Action** user has to: * Select at least one part or site that he wants to upload file to it * Uploading file will be mandatory for the selected parts or site. * In **Insert Data Action** user has to: * Select at least one part or site that he wants to insert data to. * Select Income item status. * Select Operation type (add, dismantle, or both). * In **Update Data Action** user has to * Select at least one part or site that he wants to update data on it * Select income item status. * In **Apply Calculation Action** user has to: * Select calculation type. * In **Condition Action** user has to: * Select condition type. * Select at least two options from all condition options. * In **Telecom Validation Action** user has to: * Select at least two Item options from all options and its status. * Select at least one part or site that he wants to validate data on it. * Select income item status. * In **Civil Decision Action** user has to: * Select income item status. * Select at least two item options that will apply at the item level and item status for each item option. * Select at least two action options that will apply at the action level. * In **Proposal Approved Action** user has to: * Select income item status. * In **Study Result Action** user has to: * Select income item status. * In **Civil Validation Action** user has to: * Select income item status. * Select at least one part or site that he wants to apply civil validation data on it. * Select at least two civil validation item options and its status. | |

###### Edit Action Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **4** | |
| **Name** | Edit Action | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents editing workflow action. | |
| **Business [System] Trigger:** | User want to edit action while creating workflow template or editing unused one. | |
| **Preconditions:** | * User has to have a permission * Edited workflow must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will click on edit button under actions column (edit, show detail, delete);  **Step3:** user will be able to edit any of this fields, then click on “Save” button; | **Step2**: system will display editing dialog contains all fields related to selected action holding the old values;  **Step4:** system will close the editing dialog and the new values will be saved. |
| **Alternate Flow:** | - | |
| **Post Condition:** | * The new value of the edited action will be saved. | |
| **Business Rule:** | * The same business rules of adding action | |

###### Delete Action Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **5** | |
| **Name** | Delete Action | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents deleting workflow action. | |
| **Business [System] Trigger:** | User wants to delete action while creating workflow template or editing unused one. | |
| **Preconditions:** | * User has to have a permission. * Edited workflow must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will click on delete button under actions column;  **Step3:** user will confirm the delete process by clicking on the “confirm” button and he will able to cancel it by clicking “Cancel” button; | **Step2**: system will display confirm dialog for user to complete the delete process;  **Step4:** system will delete the selected action |
| **Alternate Flow:** | - | |
| **Post Condition:** | * The deleted action won’t be displayed in data table * If the user has ordered the actions, then delete one of them, the relations between all actions will be removed and he has to reorder them | |
| **Business Rule:** |  | |

###### Order Actions Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **6** | |
| **Name** | Order Action | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents ordering workflow action. | |
| **Business [System] Trigger:** | User want to link between actions through adding workflow template or when he edits unused one. | |
| **Preconditions:** | * User has to have a permission. * Edited workflow must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will move to fifth step through adding new workflow template;  **Step 3:** user will insert the phase name and select the current action if it isn’t selected  **Step5:** user will click on the add way button  **Step7:** user will select the relation.  Ex: user select parallel relation  **Step9:** user will select the action/s and then click on save button  Ex: user select two actions (A1, A2)  **Step11**: user will be able to click on “New current action” button and on “New phase” button  **Option1:**  **Step A:** user click on “New phase” button  **Step C:** user insert the phase name  Ex: user insert “phase 2”  **Step12**: user will click on “New current action” button  **Step15:** user will select one of the action to be the current action  Ex: user select A1  **Step17:** user will click on the add way button  **Step19:** user will select the relation.  Ex: user select Sequence relation  **Step21:** user will select the action/s and then click on save button  Ex: user select action (A4)  **Step23:** user will keep repeat the operation from step 11 until he orders all action together  **Step24**: we will continue with steps to cover all cases in the example  **Step25**: user will click on “New current action” button  **Step28:** user will select one of the action to be the current action  Ex: user select A2  **Step30:** user will click on the add way button  **Step32:** user will select the relation.  Ex: user select Sequence relation  **Step34:** user will select the action/s and then click on save button  Ex: user select action (A4)    **Step36:** user will select the relation  Ex: user select “and”  **Step38**: user will click on “New current action” button  **Step41:** user will select one of the action to be the current action  Ex: user select 3  **Step43:** user will click on the add way button  **Step45:** user will select the relation.  Ex: user select Parallel relation  **Step47:** user will select the action/s and then click on save button  Ex: user select action (A4 and A5)  **Step49:** user will select the relation  Ex: user select “or”  **Step51:** all phases were covered so let’s assume that the actions now are finished.  **Step52**: user will click on “New current action” button  **Step55:** user will select one of the action to be the current action  Ex: user select A5  **Step57:** user will click on the add way button  **Step59:** user will select the relation.  Ex: user select sequence relation  **Step61:** user will select the action/s and then click on save button  Ex: user select action (close)  **Step63:** user will keep repeat the process until all ways in the tree receive to the close action | **Step2:** system will display an interface containing:   * Input text to add phase name which will contain several actions. * Drop down list to select the current action (if the workflow has type so the first current action will be selected and it will be “select type”)   Ex: the first action is selected type and there are two types (t1, t2)  **Step 4:**  If the current action has types, or options. The system will display   * text box for each item or option and “add way” button next to each one   Ex: the system will display:   * text box holding “t1” value and “add way” button next to it * text box holding “t2” value and “add way” button next to it   If the action doesn’t have types or options.  System will display   * “add way” button   Also the interface will contain   * “New current action” button but it is disabled button * “New Phase” button but it is disabled button   **Step6:** system will display a popup contain  Drop down list to select the relation Sequence or Parallel  **Step8**: system will display a pop up contains   * Drop down list to select the next action/s   If the selected operation is Sequence the list will be to select one action, else if the relation is parallel so the list will be multi choice and user has to select two actions at least   * Save button   **Step10**: system will close the pop up  If the action has types or options, user has to add way to each one  Ex: user add way to the first type “t1” as we mentioned and then add way to second type “t2 and select sequence relation to “t2” then select the action “A3”, so the tree of workflow will be as the figure below:    If user add way to the current action or add way to each type or option of the current action  System will active “New current action” button and “New phase” button  **Step B**: system will save the current action and its relation with the next action/s.  System will save the previous phase with actions related to.  System will display input to insert the new phase name  **Step13**:  if “option 1” is not executed system will save the current action and its relation with the next action/s.  **Step 14:** System will display drop down list to select the current action  The list will contain the actions that selected in the previous ways  Ex: the list will contain (A1, A2, and A3)  **Step16:**  If the current action has options. The system will display   * text box for each option and “add way” button next to each one   If the action doesn’t have options.  System will display   * “add way” button   Also the interface will contain   * “New current action” button but it is disabled button * “New Phase” button but it is disabled button   Ex: A1 doesn’t have option  **Step18:** system will display a popup contain  Drop down list to select the relation Sequence or Parallel  **Step20**: system will display a pop up contains   * Drop down list to select the next action/s   If the selected operation is Sequence the list will be to select one action, else if the relation is parallel so the list will be multi choice and user has to select two actions at least   * Save button   **Step22**: system will close the pop up  If the action has options, user has to add way to each one  Ex: user add way to the current action “A1” and the workflow tree for the whole example will be as figure    If user add way to the current action or add way to each option of the current action  System will active “New current action” button and “New phase” button  **Step26**:  System will save the current action and its relation with the next action/s.  **Step 27:** System will display drop down list to select the current action  The list will contain the actions that selected in the previous ways  Ex: the list will contain (A2, A3, and A4)  **Step29:**  If the current action has options. The system will display   * text box for each item or option and “add way” button next to each one   If the action doesn’t have item or option.  System will display   * “add way” button   Also the interface will contain   * “New current action” button but it is disabled button * “New Phase” button but it is disabled button   Ex: A2 doesn’t have option  **Step31:** system will display a popup contain  Drop down list to select the relation Sequence or Parallel  **Step33**: system will display a pop up contains   * Drop down list to select the next action/s   If the selected operation is Sequence the list will be to select one action, else if the relation is parallel so the list will be multi choice and user has to select two actions at least   * Save button   **Step35**: system will display a drop down list to define the relation between A1 & A2 (“and”, “or”, or “one way”  **Step37**: system will close the pop up  Ex: user add way to the current action “A2” and the workflow tree for the whole example will be as figure    If user add way to the current action or add way to each type or option of the current action  System will active “New current action” button and “New phase” button  **Step39**:  System will save the current action and its relation with the next action/s.  **Step 40:** System will display drop down list to select the current action  The list will contain the actions that selected in the previous ways  Ex: the list will contain (A4, and A3)  **Step42:**  If the current action has options. The system will display   * text box for each item or option and “add way” button next to each one   If the action doesn’t have item or option.  System will display   * “add way” button   Also the interface will contain   * “New current action” button but it is disabled button * “New Phase” button but it is disabled button   Ex: A3 doesn’t have option  **Step44:** system will display a popup contain  Drop down list to select the relation Sequence or Parallel  **Step46**: system will display a pop up contains   * Drop down list to select the next action/s   If the selected operation is Sequence the list will be to select one action, else if the relation is parallel so the list will be multi choice and user has to select two actions at least   * Save button   **Step48**: system will remove the relation between A1 &A2 and display drop down list to define the relation between A1, A2, and A3 (“and”, “or”, or “one way”  **Step50**: system will close the pop up  Ex: user add way to the current action “A3” and the workflow tree for the whole example will be as figure    If user add way to the current action or add way to each type or option of the current action  System will active “New current action” button and “New phase” button  **Step53**:  system will save the current action and its relation with the next action/s.  **Step 54:** System will display drop down list to select the current action  The list will contain the actions that selected in the previous ways  Ex: the list will contain (A4, and A5)  **Step56:**  If the current action has options. The system will display   * text box for each item or option and “add way” button next to each one   If the action doesn’t have item or option.  System will display   * “add way” button   Also the interface will contain   * “New current action” button but it is disabled button * “New Phase” button but it is disabled button   Ex: A3 doesn’t have option  **Step58:** system will display a popup contain  Drop down list to select the relation Sequence or Parallel  **Step60**: system will display a pop up contains   * Drop down list to select the next action/s   If the selected operation is Sequence the list will be to select one action, else if the relation is parallel so the list will be multi choice and user has to select two actions at least   * Save button   **Step62**: system will close the pop up  Ex: the workflow tree for the whole example will be as figure    **Step64 :**  to complete our example the tree at the could be as the figure below |
| **Alternate Flow:** | - | |
| **Post Condition:** | - | |
| **Business Rule:** | User has to add way to each option if the current action has options | |

#### Workflow Setting

Through this interface user will be able to configure the settings of actions used in creating workflow template, the interface will be composed of many tabs:

##### Mail Template

Using this UI user will be able to create mail template to be used in creating workflow template, manage the content of mail subject or body.

###### Create Mail Template Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **1** | |
| **Name** | Create Mail Template | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents creating new mail template. | |
| **Business [System] Trigger:** | User want to create new template for use during add mail action in workflow in TLIS. | |
| **Preconditions:** | User has to have a permission | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step 1**: user will click on setting button under the manage workflow tab;  **Step 3:**  user choose which type of mail template to display its management UI by clicking on its tab;  **Step5:** user will click on add template button;  **Step7:** user will insert template name.  **Step8:** user will select content type (Static/Variable) from dropdown list.   * **Option1:** if select static, input text will be display to insert static text. * **Option2:** if select variable, dropdown list will be display to select specific variable.   **Step9:** user will click on add content button;  **Step11**: user will click on “Save” button. | **Step2**: system will display an interface containing tabs represent the main types of the mail template as below:   * General Template; * Reminder Template; * Escalation Template;   **Step 4**: system will display template management UI which containing:   * Add button to add new template; * Edit button to edit **unused** General template or **used /unused** Reminder & Escalation templates; * Delete button to delete unused template. * Data table contains the templates related to the tab of the selected type;   **Step6**: system will display adding dialog for user contains these fields:   * Template name. * Button to add content * Subject data table contains the following fields: * Content type (dropdown list) * Content (dropdown list or input text) * Delete button to delete added content * Edit button to edit added content * Text area to show the subject in final form. * Body data table contains the following fields: * Content type (dropdown list) * Content (dropdown list or input text) * Delete button to delete added content * Edit button to edit added content * Text area to show the body in final form.   **Step10:** system will add this content and the added data will be displayed in data table and in the text area.  **Step12**: system will close the adding dialog and the new template will be displayed in the data table which contains all templates. |
| **Alternate Flow:** | User will be able to repeat step **8**, **9** to add needed content. | |
| **Post Condition:** | * The new template of the chosen type is displayed. | |
| **Business Rule:** | * Selected variable must be one of the list that mentioned of in the analytical [section](#_Mail_Content_Management). * Just unused template will be edit or disable. * Under “Reminder” tab, user can add just one template and edit it. * User can delete reminder template if isn’t used in workflow template. * Add template button in Reminder tab will be disabled if there is one template under it. * Under “Escalation” tab, user can add just one template and edit it. * User can delete escalation template if isn’t used in workflow template. * Add template button in Escalation tab will be disabled if there is one template under it. | |

###### Mail Content Management

Managing mail content to give the TLIS user the ability to add variables or static text to the body or subject of the mail template, the content of mail will be one of these types:

* Static text: will be added by TLIS user which create a new mail template, this text will remain the same in workflow template and during the use of workflow.
* Variables: will be selected by TLIS user which create a new mail template, these variables will take their values during the use of workflow (during the ticket execution) from system.

The below table shows the variables which can be used:

|  |  |  |  |
| --- | --- | --- | --- |
| **System variables of subject** | **Description** | **System variables of body** | **Description** |
| Site Name | Represent the site name | Current Action Name | Represent the current action name |
| Site Code | Represent the site code | Actor | ~~Needs more explanation from Syriatel~~ The actor of the user (the executer for the previous action before sent email action) |
| Task Type | Represent Workflow name | Link | Hyperlink to current Task |
| Task Sub Type | Represent Workflow type | ~~Related SLA period~~ Escalation period | ~~Needs more explanation from Syriatel~~ |
|  |  | Action period |  |
| Number of Escalation | Represent the number of escalation mail on action level | User Name | The user who executed the previous action before mail action |
| Actor |  | Next Action Name |  |
| Number of Reminder | Represent the number of reminder mail on action level | Reminder Importance | Variables imported in reminder popup |
|  |  | Reminder Name |  |

User will be able to add, edit, and delete the content of the mail subject or body, and these operations will be analyzing in the below test cases:



Figure 2- Mail Content Management

* 1. **Add Content Use Case**

|  |  |  |
| --- | --- | --- |
| **ID** | **1** | |
| **Name** | Add Content | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents adding content to a new mail template or to an existed **unused** one. | |
| **Business [System] Trigger:** | User want to add content (subject or body) to a new mail template or when editing the content of an unused one. | |
| **Preconditions:** | * User has to have a permission. * Edited template must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will select content type (Static/Variable) from dropdown list.   * **Option1:** if user select static.   **Step B**: user will insert static text.   * **Option2:** if user select variable.   **Step B**: user will select variable.  **Step3:** user will click on add button; | **Step A**: system will display input text to insert static text.  **Step A**: system will display dropdown list to select specific variable.  **Step4:** system will add this content and display it in the view table. |
| **Alternate Flow:** | User will be able to repeat this operation to add needed content. | |
| **Post Condition:** | * All added content will be displayed in the view table and text area in the same sequence of adding. | |
| **Business Rule:** | * Selected variable must be one of the list that mentioned in the analytical [section](#_Mail_Content_Management). | |

* 1. **Edit Content Use Case**

|  |  |  |
| --- | --- | --- |
| **ID** | **2** | |
| **Name** | Edit Content | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents editing content of a new mail template or existed **unused** one. | |
| **Business [System] Trigger:** | User want to edit content (subject or body) of a new mail template or when editing the content of an unused one. | |
| **Preconditions:** | * User has to have a permission. * Edited template must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step 1**: user will click on edit button;  **Step3:** user will be able to edit the type of the content or its value;  **Step4:** user click on “save” button to save new values or click on “cancel” button to cancel edit operation; | **Step 2**: system will display the old values of the static/variable content;  **Step5:** system will save the new values and it will be displayed in the data table and text area. |
| **Alternate Flow:** | System will cancel the operation if user click on “cancel”.- | |
| **Post Condition:** | The new values will be displayed in the view table and text area. | |
| **Business Rule:** | * Selected variable must be one of the list that mentioned in the analytical [section](#_Mail_Content_Management). * Just unused mail template could be edited. * user will not be able to edit content of mail subject or body during add “Send Mail Action UI” in creating workflow template. | |

* 1. **Delete Content Use Case**

|  |  |  |
| --- | --- | --- |
| **ID** | **3** | |
| **Name** | Delete Content | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents deleting content of a new mail template or existed **unused** one. | |
| **Business [System] Trigger:** | User want to delete content of a new mail template or while editing **unused** one. | |
| **Preconditions:** | * User has to have a permission. * Edited template must be unused in TLIS. | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step 1**: user will click on delete button;  **Step 3**: user will click on delete button to confirm the delete operation; | **Step 2**: system will display a confirmation dialog for user to confirm or cancel the deleting operation;  **Step 4**: system will delete the selected content. |
| **Alternate Flow:** | User will click on cancel button to cancel the delete operation; | |
| **Post Condition:** | The deleted item won’t be displayed. | |
| **Business Rule:** | * Just unused template will be delete. | |

##### Ticket status

The old name of this tab was “Task Status”, in this analytical study we changed it to “Ticket Status” as it represents the current status of the ticket.

The first status of the ticket must be selected through adding workflow template as we mentioned in [Add Workflow use case](#_Add_Workflow_use_1).

The status of the ticket will be “closed’, when the execution of the last action is done.

User won’t be able to edit or delete

* “closed” status as it represents the end of the ticket.
* used task status.

##### Action Options

Through this interface, user will be able to add action options

*Note*: during the current study we noticed that the Sub Option management which was existed before in the prototype is not applicable in workflow, and we will cover this concept in option management as described in the example:

Ex: The Proposal option and its sub options will be replaced by two options as below:

* Proposal Civil Request New Study
* Proposal Need Requester Action.

Or user will add new condition “proposal type” and Its options will be:

* Civil Request New Study
* Proposal Need Requester Action.

##### Item status

In order to have the full control on the items through the workflow, and as we discuss the item status will be static, and it won’t be able to modified by user, so its management will be removed from the workflow setting UI. The item status will be one of: (Request to install, Request to dismantle, Need validation, Installed, Dismantled or Rejected).

The last item status must be one of these status (Installed, Dismantled or Rejected).

##### Item Options

System will allow to add item options

*Note*: during the current study we noticed that the Sub Option management which was existed before in the prototype is not applicable in workflow, and we will cover this concept in option management as described in the example:

Ex: The Proposal option and its sub options will be replaced by two options as below:

* Proposal Civil Request New Study
* Proposal Need Requester Action.

Or user will add new condition “proposal type” and Its options will be:

* Civil Request New Study
* Proposal Need Requester Action.

Below a use case for the workflow setting management which affected by CR3 requests:

###### Add Condition Type with its Options Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **1** | |
| **Name** | Add Condition Type with its Options | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents adding condition type with its options. | |
| **Business [System] Trigger:** | User want to add condition type with options for use in “Condition Action”. | |
| **Preconditions:** | * User has to have a permission | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step1:** user will click on condition tab;  **Step3:**  **Option1:**  If user click on add condition button to add new condition type.  **Step1.2:** user will insert “condition type” name then click on “Save” button.  **Option2:**  If user click on add option button next to the condition to adding new option;  **Step2.2:** user will insert “option” name then click on “Save” button;  **Option3:**  If user click on show options button next to the wanted condition type to show its options;  **Step3.2:** user will be able to edit/ change status for any condition option; | **Step2:** system will display an interface containing:   * A view table for all added condition and tool buttons to: * view & manage Condition options. * Add new option. * Edit “Condition Type” name. * Active/inactive condition type. * Add button to add new condition type.   **Step1.1:** system will display adding dialog for user contains a field to insert the “condition type” name;  **Step1.3:** system will close the dialog, add the new condition type and display it in view table,  **Step2.1:** system will display adding dialog for user contains a field to insert the “Option” name;  **Step2.3:** system will close the dialog, add the new option to selected condition type;  **Step3.1:** system will display:   * All condition options in data view; * Edit button to edit option name; * Toggle to change option status (Enable/Disable) |
| **Alternate Flow:** | - | |
| **Post Condition:** | * The condition type and its options will be added. | |
| **Business Rule:** | * Used \ unused Condition type will be able to edit * Unused condition type will be able to disable. * Used\unused option will be able to edit. * Just unused option will be able to disable. | |

## Request Management Module

### Purpose of Module

The purpose of this module is to manage the requests in Tower Load Inventory System. It will be developed to give the TLIS user the ability to view the requests created by them or by other users, filter the displayed requests, view the details of requests created by them or by other users, view the details of actions related to a request, send reminders to the user responsible for executing the pending action, escalate the pending actions to the uppers of their users who are responsible for executing the action, and execute pending actions assigned to them.

As the execution of request’s actions are analyzed in details and previously agreed in PO, here we will analyze the request module test cases, and regarding actions execution section we will mention only the ones which affected by the new below features which requested in CR3:

* The ability to compare between the inserted data and the updated one, which will be through telecom validation, civil validation, and civil decision actions.

### Brief Description

Request module will provide the TLIS user with interfaces to view and control the requests assigned to them or to other users based on what their permissions allow, considering the needed validations and business rules of executing, escalating pending action or sending reminders to pending actions, these interfaces will be classified under three categories:

* My Requests: will contain all requests which user created whatever the ticket status is.
* My Pending Request: will contain all requests, which still pending and waiting an action to be executed by the ~~user~~ custody, which this action is assigned to them.
* All Requests: will contain all requests in TLIS regardless who create them or what is the request status.

### Analysis Models & Use Cases

In order to analyze all use cases related to TLIS requests, and to avoid any repetition, we will analyze the “view” test case for each type of requests (my requests, my pending requests, all requests) as it will be different, then we will work on those which will be common between the three types, and at the end we will mention the changes happened on executing these actions (telecom validation, civil validation, and civil decision).



Figure 3- Request Management

#### My Requests Test Cases

###### View My Requests Use Case

|  |  |  |
| --- | --- | --- |
| ID | **1** | |
| Name | View My Requests | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents viewing all requests which user created whatever the ticket status is. | |
| Business [System] Trigger: | User wants to display all requests he created. | |
| Preconditions: | User has to have a permission | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Main Flow: | **Actor Action** | **System Response** |
| **Step 1**: user click on My Request under Requests;  User will be able to filter the displayed requests, view the details of pending action, view the details of a ticket, ~~escalate the pending action to its custody uppers~~ and send reminder to the custody of the pending action. | **Step 2**: system will display an interface containing add button to open new ticket and view table composed of these below columns:  Management: contains four buttons:  Pending Action Details: to view the details of the action which the ticket is pending at right now.  Ticket Details: to view the details of the selected ticket.  ~~Escalation: to escalate the pending action to the uppers of its custody, by mail.~~  Reminder: to remind the custody of the pending action by mail.  Ticket Id: represents the id of the ticket  Workflow Name: represents the name of workflow, is it (collect data, modification data, or new site).  Workflow Type: represents the type of the workflow, like if the workflow name is Modification data the workflow type will be (on civil steel or other equipment on location).  Site Name: represents the name of the site.  Site Code: represent the code of the site.  Region: represents the region where the site is exist  Area: represents the area where the site is exist  Pending Action: represents which action to be executed now.  Custody: represents the group where the request is pending now (the group that the pending action is assigned to).  Action Date: represents the date when the system assigned the action to be executed.  Create Date: represents the date of creating the ticket.  Ticket Status: represents the status of the ticket is it (pending, closed, data validation, data correction, under study…etc.)  example: civil team approved the task on 10/07/2021 then system assigned the ticket to SO:  Pending Action: Insert Data  Custody: SO  Action Date: 10/07/2021 |
| Alternate Flow: | ---- | |
| Post Condition: | * All the tickets created by the user will be displayed in the table view. * User will be able to filter the displayed requests. * User will be able to display the details of the action which the ticket is pending at. * User will be able to display the details of the tickets created by them. * ~~User will be able to escalate the pending action to its custody uppers.~~ * User will be able to send a reminder to the custody of the pending action. | |
| Business Rules: | * ~~Escalation feature and~~ Reminder button will be disabled in case:   + The ticket status is closed.   + The ticket is pending and the Requester = Custody (user won’t be able to escalate or remind themselves). * Pending Action Details button will be disabled in case:   + The ticket status is closed. * Pending Action column will contain ~~empty~~ “no action” value in case:   + The ticket status is closed. | |

###### Open Tickets on Multi (sites, regions or areas) Use Case

|  |  |  |
| --- | --- | --- |
| **ID** | **2** | |
| **Name** | Open Tickets on Multi (sites, regions or areas) | |
| **Version Date** | 26/12/2021 | |
| **Brief Description:** | This use case represents open tickets on multi (sites, regions, or areas). | |
| **Business [System] Trigger:** | User wants to open tickets on multi (sites, regions, or areas). | |
| **Preconditions:** | User has to have a permission to access this UI | |
| **Assumptions:** | - | |
| **Actor(s):** | Admin, Permitted User | |
| **Priority:** | High | |
| **Basic Flow:** | **Actor Action** | **System Response** |
| **Step 1:** user will click on open ticket button;  **Step 3:** user will select the required (sites, regions or areas), then click on the get button;  **Step 5:** user will selectone of workflow templates and its type, then click on save button; | **Step 2**: system will display a dialog containing:   * Three radio buttons:   + Multi Sites   + Multi Regions   + Multi Areas * Multi select dropdown list containing (all sites, all regions or all areas) depends on what radio button is checked, with a filter on name; * Button: to get the workflow templates which could be applied on the selected sites;   **Step 4**: system will display a dropdown list containing workflow templates which could be applied on the selected sites and their types if existed;  **Step 6**: system will open the tickets on the selected sites then close the dialog. |
| **Alternate Flow:** | In case there is no workflow template could be applied on the selected sites, regions or areas, system will notify user by displaying a message. | |
| **Post Condition:** | The opened tickets will be found on Requests Interface. | |
| **Business Rules:** | The dropdown list of workflow template will be empty in case there is no workflow could be applied on the selected sites regions or areas. | |

#### My Pending Requests Test CAses

###### View My Pending Requests Use Case

|  |  |  |
| --- | --- | --- |
| ID | **1** | |
| Name | View My Pending Requests | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents viewing requests which are still pending and waiting an action to be executed. | |
| Business [System] Trigger: | User wants to display all requests which are pending and waiting to be executed by them. | |
| Preconditions: | User has to have a permission | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Main Flow: | **Actor Action** | **System Response** |
| **Step 1**: user click on My Pending Requests under Requests;  User will be able to execute the pending actions, and view the details of the pending tickets. | **Step 2**: system will display an interface containing view table composed of these below columns:  Management: contains four buttons:  Execute Action: to execute the action.  Ticket Details: to view the details of the selected ticket.  ~~Escalation: to escalate the pending action to the uppers of its custody by mail~~.  Reminder: to remind the custody of the pending action by mail.    Ticket Id: represents the id of the ticket  Workflow Name: represents the name of workflow, is it (collect data, modification data, or new site).  Workflow Type: represents the type of the workflow, as if the workflow name is Modification data the workflow type will be (on civil steel or other equipment on location).  Region: represents the region where the site is exist  Area: represents the area where the site is exist  Site Name: represents the name of the site.  Site Code: represent the code of the site.  Pending Action: represents which action to be executed now.  Custody: represents the group where the ticket is pending now (the group that the pending action is assigned to).  Action Date: represents the date when the system assigned the action to be executed.  Create Date: represents the date of creating the ticket.  Ticket Status: represents the status of the ticket is it (pending, closed, data validation, data correction, under study…etc.)  Requested BY: represents the name of the actor which the requester user belongs to (EX: if the requester is Arwa from OSS team and the requester actor is OSS, so requested by will be OSS)  example: civil team approved the task on 10/07/2021 then system assigned the ticket to SO:  Needed Action: Insert Data  Custody: SO  Action Date: 10/07/2021 |
| Alternate Flow: | ---- | |
| Post Condition: | * All the tickets which pending for the current user will be displayed in the table view. * User will be able to execute the action which the ticket is pending at. * User will be able to display the details of the pending tickets. * User won’t be able to escalate or send reminders to their pending requests. | |
| Business Rules: | * Escalation and Reminder buttons will be disabled for all the requests displayed in My Pending. | |

###### Execute Pending Action Use Case

As the execution of actions is agreed in PO, and explained in details in UI scenario document, here in this use case we will explain the executing of pending actions in general and we will mention the business rules regarding the actions which their execution is modified after CR3.

Upon the new requirement to give TLIS user the ability to compare between the data inserted through “insert data” action and the one which modified through “update data” action, the execution UIs of these three actions (telecom validation, civil validation, and civil decision) are modified.

The modification was that the UI will contain a button to perform the required comparisons, by click on it, system will display two lists, one of them shows the original inserted data and the another one shows the updated one.

User will be able to perform the comparison through these actions only if the actions insert data and update data were executed previously in this ticket.

|  |  |  |
| --- | --- | --- |
| ID | 2 | |
| Name | Execute Pending Action | |
| Version Date | 13/12/2021 | |
| Brief Description: | This use case represents executing the pending action. | |
| Business [System] Trigger: | User wants to execute the pending action. | |
| Preconditions: | User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: user will click on the execute button under Management column next to the pending request they want to execute;  **Step 3**: user will do the required business to execute the action; | Step 2: system will display the suitable execution interface based on the pending action user want to execute;  The executing interfaces content is explained in details in UI scenario.    Step 4: system will execute the action then move to the next one in the workflow. |
| Alternate Flow: | -- | |
| Post Condition: |  | |
| Business Rules: | In telecom validation, civil validation, and civil decision actions:  the comparison button will be enabled only if there are, insert data and update data actions executed previously in this ticket. | |

#### All Requests Test CAses

###### View All Requests Use Case

|  |  |  |
| --- | --- | --- |
| ID | **1** | |
| Name | View All Requests | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents viewing all requests in TLIS regardless who create them or what is the request status. | |
| Business [System] Trigger: | User wants to display all requests in TLIS. | |
| Preconditions: | User has to have a permission | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Main Flow: | **Actor Action** | **System Response** |
| **Step 1**: user click on All Requests under Requests;  User will be able to filter the displayed requests, view the details of pending actions, view the details of tickets. | **Step 2**: system will display an interface containing view table composed of these below columns:  Management: contains four buttons:  Pending Action Details: to view the details of the action which the ticket is pending at right now.  Ticket Details: to view the details of the selected ticket.  ~~Escalation: to escalate the pending action to the uppers of its custody by mail.~~  Reminder: to remind the custody of the pending action by mail.    Ticket Id: represents the id of the ticket  Workflow Name: represents the name of workflow, is it (collect data, modification data, or new site).  Workflow Type: represents the type of the workflow, as if the workflow name is Modification data the workflow type will be (on civil steel or other equipment on location).  Region  Area  Site Name: represents the name of the site.  Site Code: represent the code of the site.  Pending Action: represents which action to be executed now.  Custody: represents the group where the ticket is pending now (the group that the pending action is assigned to).  Action Date: represents the date when the system assigned the action to be executed.  Create Date: represents the date of creating the ticket.  Ticket Status: represents the status of the ticket is it (pending, closed, data validation, data correction, under study…etc.)  Requested BY: represents the name of the actor which the requester user belongs to (EX: if the requester is Arwa from OSS team and the requester actor is OSS, so requested by will be OSS). |
| Alternate Flow: | ---- | |
| Post Condition: | * All the tickets created on TLIS will be displayed in the table view. * User will be able to display the details of the pending action of the pending tickets. * User will be able to display the details of the tickets. * ~~User will be able to escalate the pending action to its custody uppers.~~ * User will be able to send a reminder to the custody of the pending action. | |
| Business Rules: | * ~~Escalation and~~ Reminder button will be disabled in case:   + The ticket status is closed.   + The ticket is pending and the current user = Custody. * Pending Action Details button will be disabled in case:   + The ticket status is closed. * Pending Action column will be ~~empty~~ “no action” value in case:   + The ticket status is closed. | |

#### Common Test Cases

###### Filter Displayed Requests Use Case

|  |  |  |
| --- | --- | --- |
| ID | 1 | |
| Name | Filter Displayed Requests | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents filtering the displayed requests in the view tables. | |
| Business [System] Trigger: | User wants to filter the displayed requests in the view tables. | |
| Preconditions: | User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: user will click on Filter button;  **Step 3**: user will insert filter data in one or more of these input fields then press "enter" or click on search button; | Step 2: system will display an input filed or a dropdown list above each column in the view table based on their data type;  Step 4: system will display all matching records. |
| Alternate Flow: |  | |
| Post Condition: | Only the items which matching the filter columns will be displayed. | |
| Business Rules: | * The relation between filters will be “and”. * Filter criteria will be “~~start with~~” “contain”. | |

###### Ticket Details Use Case

|  |  |  |
| --- | --- | --- |
| ID | 2 | |
| Name | Ticket Details | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents displaying all actions which done and belong to same ticket. | |
| Business [System] Trigger: | User wants to display the details of selected ticket. | |
| Preconditions: | User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: user will click on the view ticket details button under Management column;  **Step 3**: user will be able to check all the displayed actions, and display the details of each action by clicking on view button under Action Details column; | Step 2: system will display an interface containing all actions have been done and belong to the selected ticket, composed of this info:   * Workflow Name * Site Name * Site Code * Create Date * Created By * Table View   The table view will compose of these columns:   * Action Name * Create Date * Execute Date * Executer * Action Details   Under Action Details column will be a button to view the details of a selected action;  Step 4: System will display a read only interface containing detailed data of this action. |
| Alternate Flow: | -- | |
| Post Condition: | All actions have been done and belong to the selected ticket will be displayed. | |
| Business Rules: |  | |

###### Action Details Use Case

|  |  |  |
| --- | --- | --- |
| ID | 3 | |
| Name | Action Details | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents displaying the details of one of the ticket actions. | |
| Business [System] Trigger: | User wants to display details of action where the ticket is pending at. | |
| Preconditions: | User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: user will click on the view action details button under Management column in (My request and All requests) UIs, or by clicking the view action details button under Action Details column in “view ticket details” UI.  **Step 3**: user will be able to read only this details. | Step 2: system will display the suitable action details interface based on the action user want to display its details;  The action details interfaces content is explained in details in UI scenario. |
| Alternate Flow: | -- | |
| Post Condition: |  | |
| Business Rules: | * In case the ticket status is pending so the action details UI will be Read Only. * In case the ticket status is closed action details button will be disabled. * In My requests and all requests UIs, action details will be to display the details of the pending action. * In case user wants to display the details of each action belong to the ticket, this will be through the Ticket Details UI, by clicking on the action details button next to each displayed action. | |

###### Escalate Pending Action Use Case

|  |  |  |
| --- | --- | --- |
| ID | 4 | |
| Name | Escalate Pending Action | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents escalating pending action to the uppers of its custody. | |
| Business [System] Trigger: | User wants to escalate the pending action to the uppers of its custody. | |
| Preconditions: | User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: ~~user will click on the escalate button under Management column;~~ system will check if the period    ~~User will be able to escalate the pending action many times considering the required business rules.~~ | Step1: system will check if the action period is finished.  Step2: system will check if the escalation was not executed before for this action.  Option1: if it is escalation for the first time:  Step 1.1: system will send an escalation mail to the uppers of the custody who are responsible for executing this pending action.  Option2: if it is not escalation for the first time:  Step2.1: system will check if the escalation period is finished.  Step2.2: system will send an escalation mail to the uppers of the custody who are responsible for executing this pending action. |
| Alternate Flow: | Escalation for the first time will fail ~~and system will notify user by displaying clear message~~ in these cases:   * ~~User has no permission on the workflow or on any of its actions.~~ * The escalation feature was not enabled for the selected ticket (workflow). * Action Period didn’t finish yet. * Custody user has no uppers.   Escalation for the second time will fail if the escalation period wasn’t finish yet. | |
| Post Condition: | Escalation mail will be sent to the uppers of the custody of this pending action. | |
| Business Rules: | Escalation for the first time:   * ~~User has permission on the workflow or on any of its actions.~~ * The escalation feature is enabled for the workflow used in this ticket. * Action Period finished. * Custody user has uppers (at least one upper).   Escalation for the second time:   * In addition to the business rules of the escalation for the first time, The Escalation Period must be finished. | |

###### View Reminders Use Case

|  |  |  |
| --- | --- | --- |
| ID | 5 | |
| Name | View Reminders | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents viewing the last reminder sent to the custody of the pending action. | |
| Business [System] Trigger: | User wants to view the last reminder sent to the custody who responsible for executing the pending action. | |
| Preconditions: | * User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: user will click on the view reminder button under Management column;  **Step 3:** user will be able to check the info of the reminder. | Step 2: system will display a dialog contains:   * Received Group: Auto generated, the last assigned group in this task. * Note: Manual, inserted by the user when he/she add reminder. * Actor Role: Auto generated, the Role of user who add reminder. * Date: Auto generated, the date when the user add reminder. * Reminder On: Auto generated, as assign action is. * Number of Reminder: Auto generated, Reminder number for the same group to the same task and same action. * Importance: Manual, inserted by the user when he/she add reminder. * Custody: Auto generated, the last assigned group in this task (As Actor). |
| Alternate Flow: |  | |
| Post Condition: |  | |
| Business Rules: |  | |

###### Send Reminder Use Case

|  |  |  |
| --- | --- | --- |
| ID | 6 | |
| Name | Send Reminder | |
| Version Date | 26/12/2021 | |
| Brief Description: | This use case represents sending reminder email to the custody of the pending action. | |
| Business [System] Trigger: | User wants to send a reminder to the custody who responsible for executing the pending action. | |
| Preconditions: | * User has to have a permission to access this UI. | |
| Assumptions: | - | |
| Actor(s): | Admin, Permitted User | |
| Priority: | High | |
| Basic Flow: | **Actor Action** | System Response |
| **Step 1**: user will click on the reminder button under Management column;  **Step 3:** user will choose the importance type, and fill the note field, chose the CC, then click on submit reminder button;  User will be able to send reminder mail regarding the pending action many times considering the required business rules. | Step 2: system will display a dialog contains:   * Importance dropdown list: consist of (High, Medium, or Low). * Note input field: Optional to add any additional note related to the Reminder. * CC multi-choice dropdown list: same of Mail Group. * Submit Reminder button: to submit new reminder and the mail will sent after submit the reminder.   Step 4: system will send a reminder mail to the custody who are responsible for executing this pending action and to the chosen CC. |
| Alternate Flow: | Reminder for the first time will fail and system will notify user by displaying clear message in these cases:   * User has no permission on the workflow or on any of its actions. * The reminder feature wasn’t enabled for the selected ticket (workflow). * ~~Action Period did not finish yet.~~   Reminder for the second time will fail if the reminder was not finish yet. | |
| Post Condition: | Reminder mail will be sent to the custody who are responsible for executing this pending action and to the chosen CC. | |
| Business Rules: | Reminder template:   * Importance type is mandatory to be specified in order to send a reminder. * Note and CC are optional to be filled in order to send a reminder.   Reminder for the first time:   * User has permission on the workflow or on any of its actions. * The reminder feature is enabled for the workflow used in this ticket. * ~~Action Period finished.~~ * Reminder isn’t under my Pending requests of the user “my pending requests”;   Reminder for the second time:   * In addition to the business rules of sending reminder for the first time, the reminder period must be finished. | |