



Paralinear Solutions

Team 7

Deliverable 2

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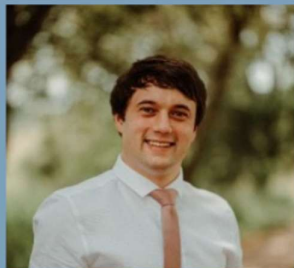
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System Name: Gohvan Construction system
Type of System: Complete Business Solution

This deliverable represents the logical flow and representation of the system that Team 7 is building for Gohvan Construction. The documents included in this deliverable range from the initial descriptive layout of each functionality that will be presented in the system. Each functionality aspect in the deliverable will have the relevant diagrams for further explanation and a more visual representation for each data flow in the system. The diagrams present will include use cases for the entire system, context diagrams for the system as a whole, High, Middle and primitive level data flow diagrams. The document will also include UML Modelling in the form of an activity diagram. Lastly the document will include input and output descriptions for each data flow in the aforementioned data flow diagrams.

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Deliverable Introduction

This document follows on the sign-off functional requirements listed in the previous deliverable by expanding and explaining them through use case diagrams, use case narratives, data flow diagrams as well as activity diagrams. The document also contains an entity relationship model which explains how all the relevant entities in the system connect with one another and what attributes they contain. Finally, the document contains inputs, outputs and validation of the functional requirements diagrams that help explain the flows.

1. Use Case

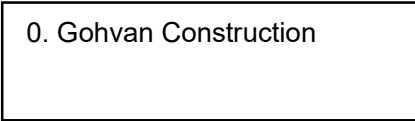
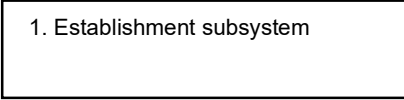
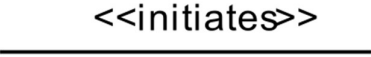
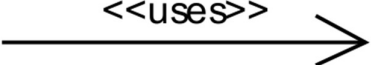
Introduction

This section contains the complete set of use case diagrams, as well as the complete set of use case narratives for the Gohvan Construction System. These will provide the logical view of the system.

1.2 Use Case diagrams

Introduction

This section contains the complete set of use case diagrams and the use case diagram key to help identify symbols and actors within the use case.

Use Case Diagram Key		
Element	Description	Preview
System	Entity element, filled with white and identified by " 0. Gohvan Construction ".	
Subsystem	Use Case rectangle element, filled with white & black text and outline. Identified by the subsystem's name eg: "1. Establishment subsystem"	
Use Case	Use Case use case element, with black text, filled with a light blue	
Actor	Element, with relevant relationship types, with light blue fill and outline.	
Association Relationship	Use Case association element, identified by the <<initiates>> tag	
Uses Association Relationship	Use Case dependency element, identified by the <<uses>> tag	

1.2.1 Establishment Subsystem

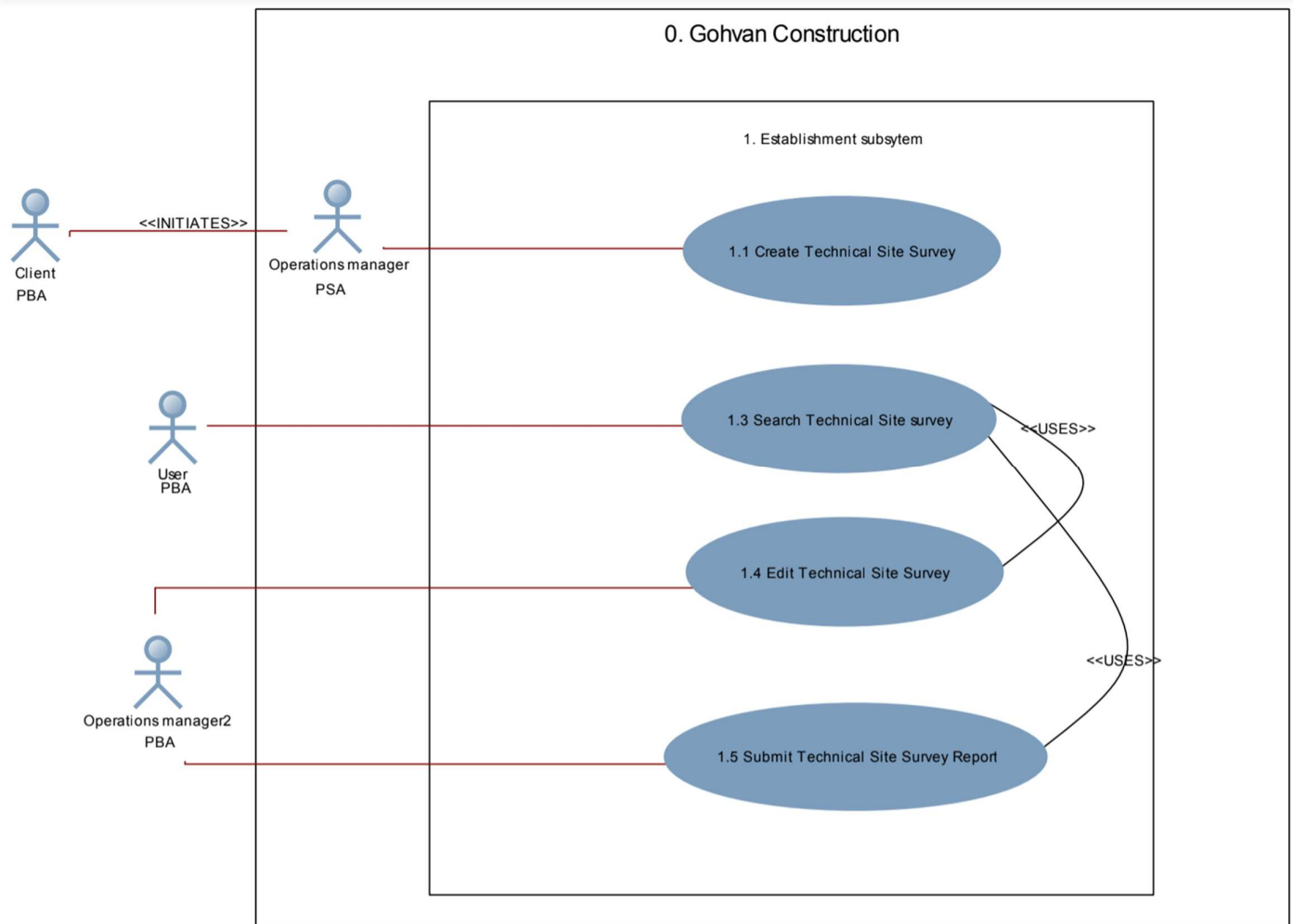


Figure 1-1-1: Establishment Subsystem Use Case Diagram: 1.2 – 1.5

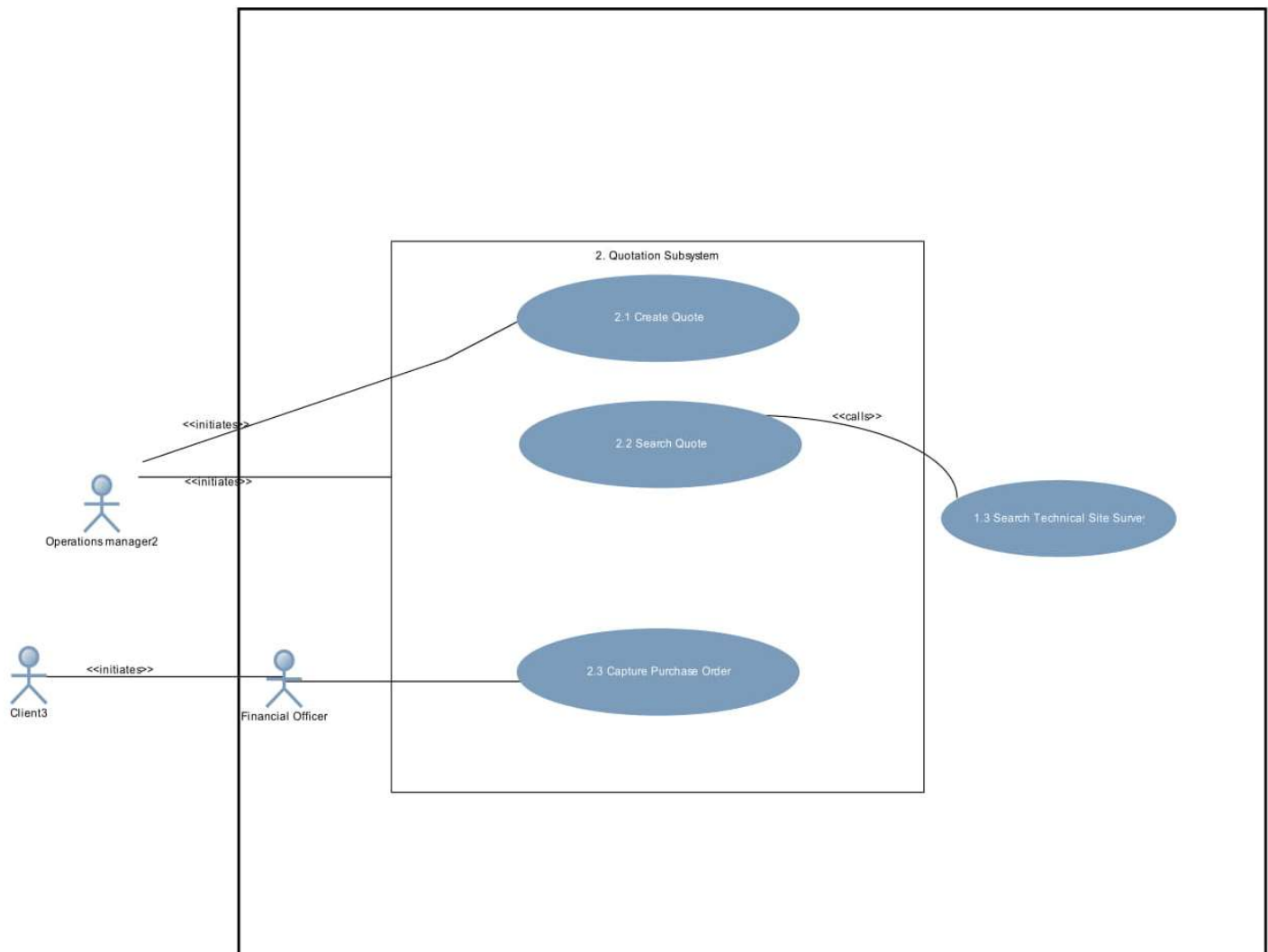


Figure 1-1-2: Quotation Subsystem Use Case Diagram: 2.1 – 2.3

1.2.3 Administration Subsystem

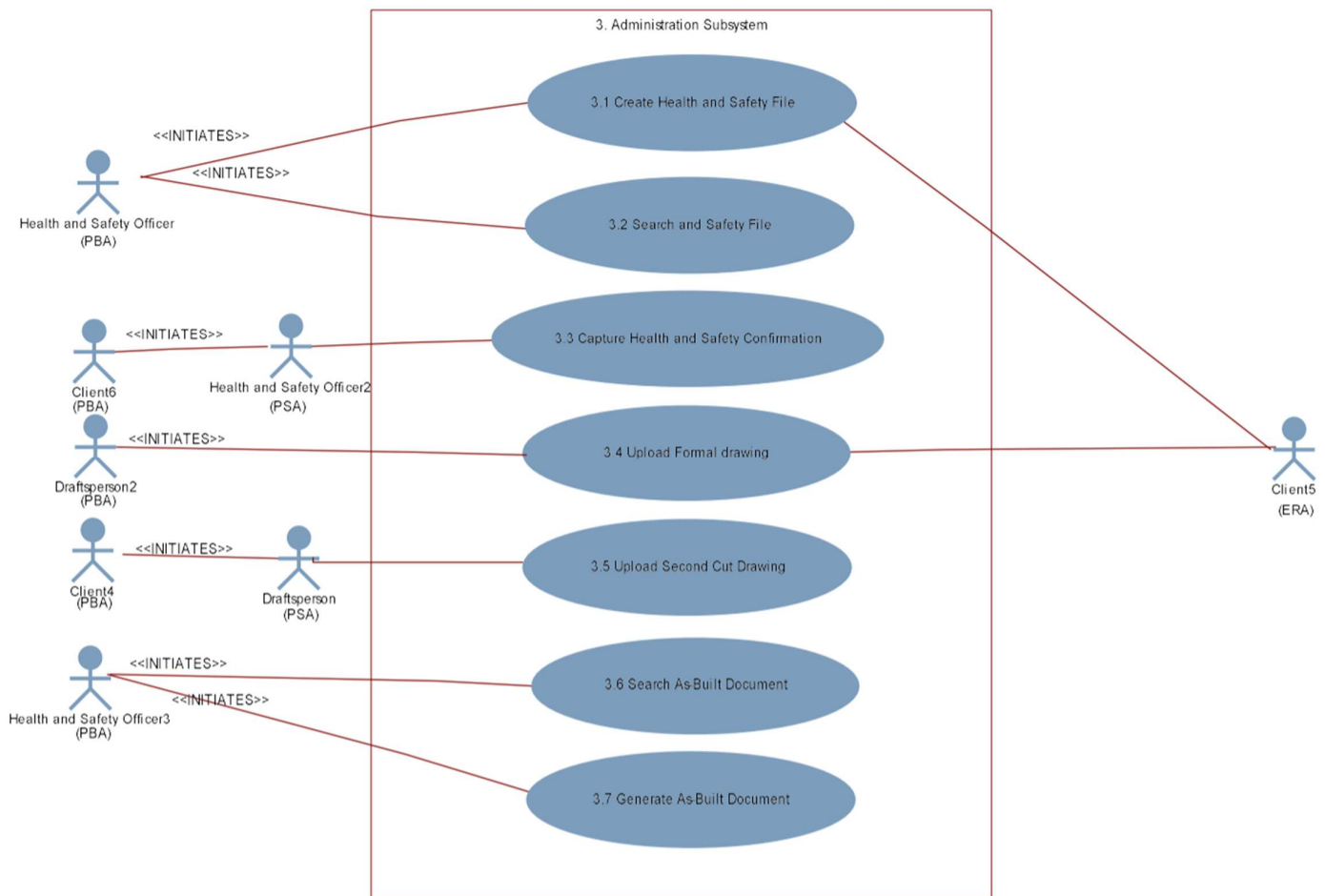


Figure 1-1-3: Administration Subsystem Use Case Diagram: 3.1 – 3.7

1.2.2 Quotation Subsystem

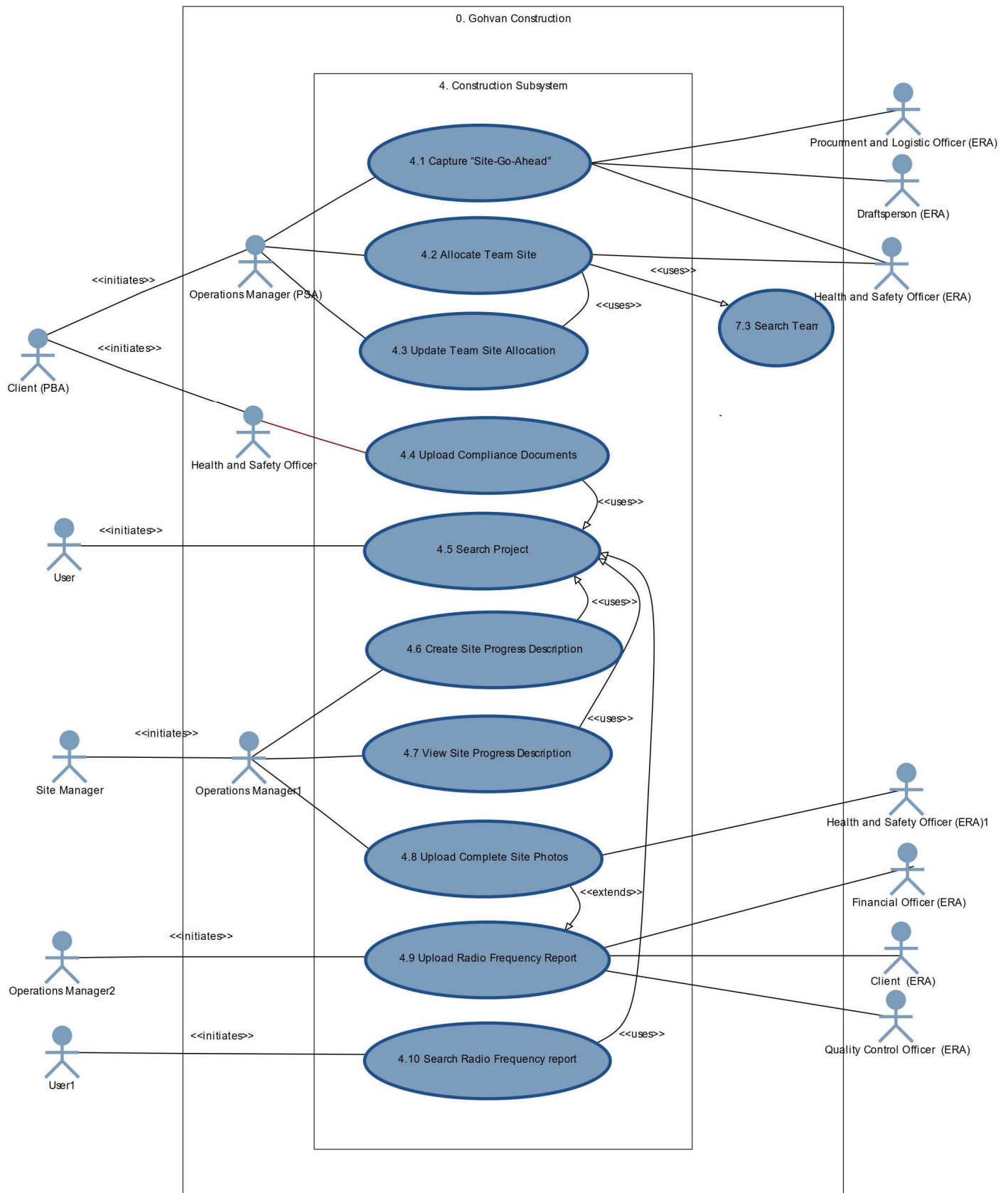


Figure 1-1-4-1: Construction Subsystem Use Case Diagram: 4.1 – 4.10

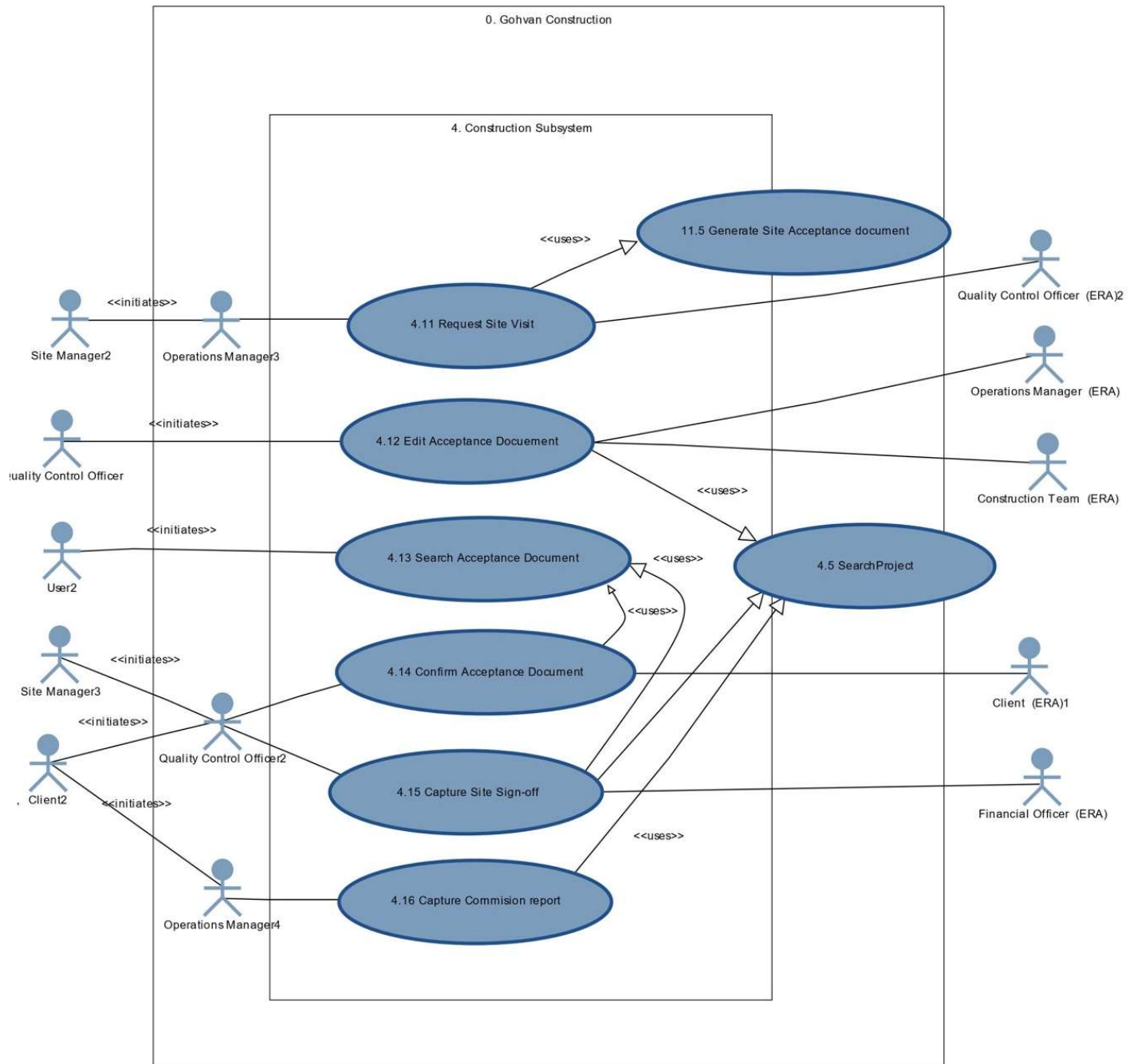


Figure 1-1-4-2: Construction Subsystem Use Case Diagram: 4.11 – 4.18

1.2.5 Invoicing Subsystem

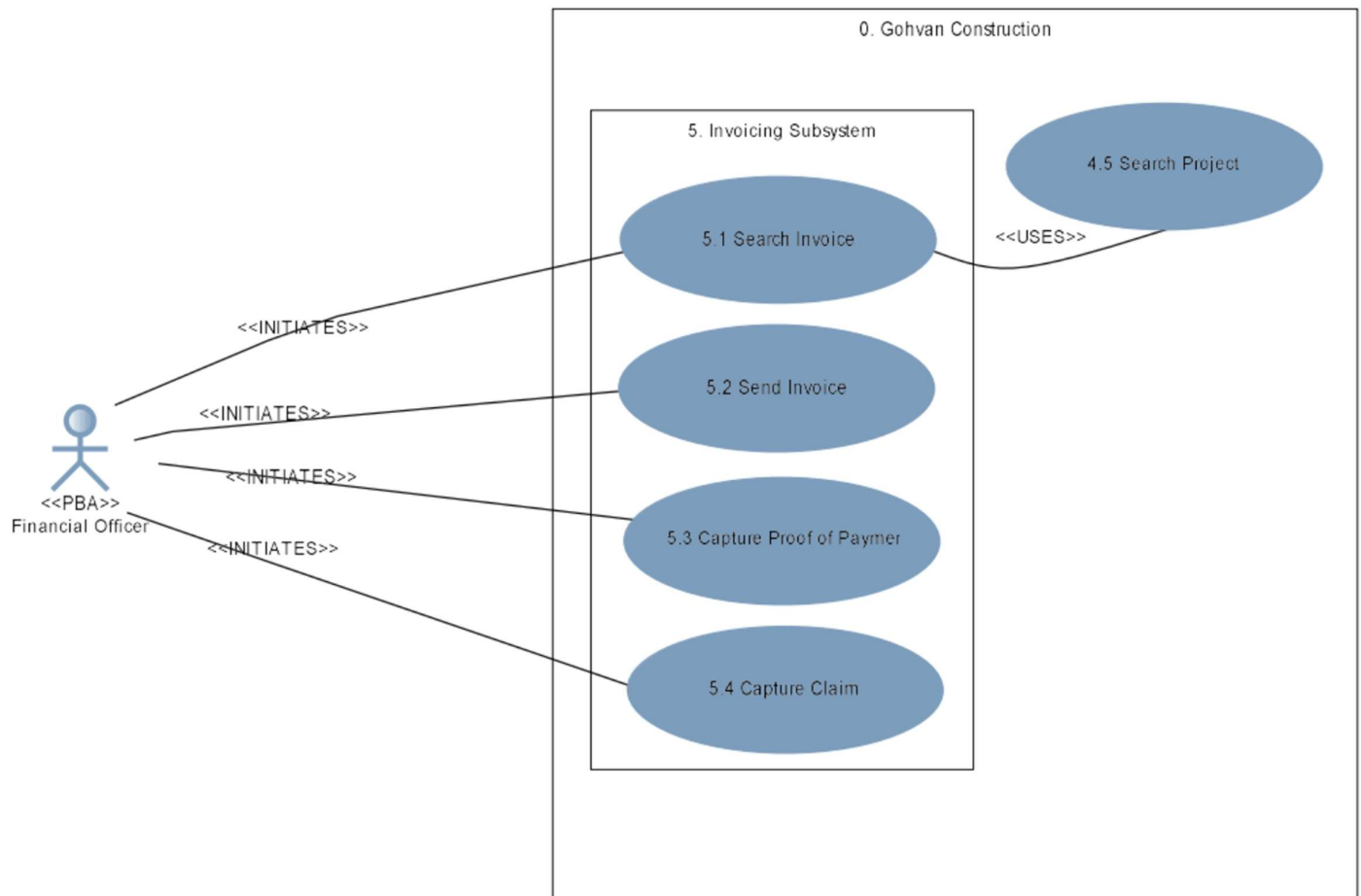


Figure 1-1-5: Invoicing Subsystem Use Case Diagram: 5.1 – 5.4

1.2.6 Human Resource Subsystem

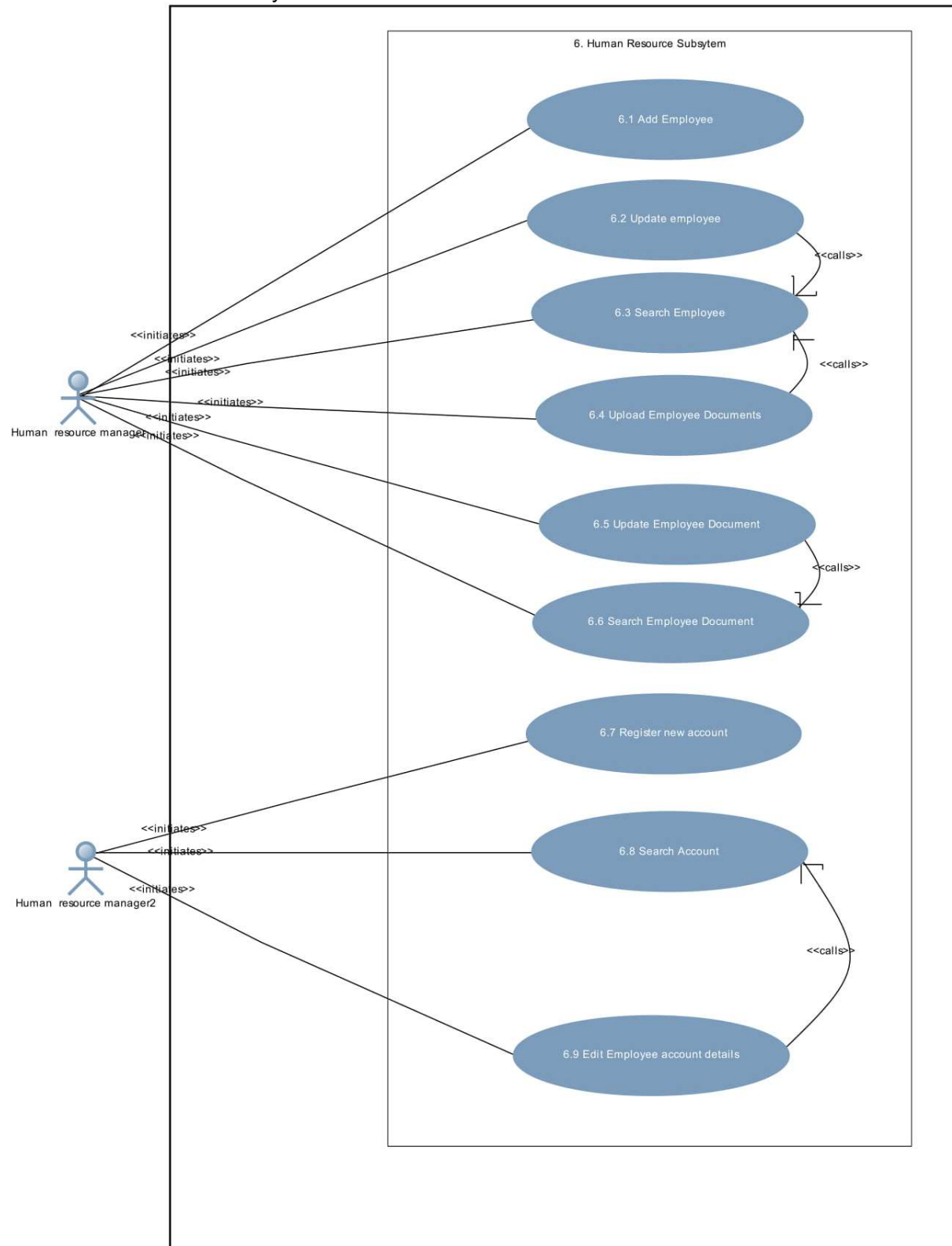


Figure 1-1-6: Human Resource Subsystem Use Case Diagram: 6.1 – 6.9

1.2.7 Team Subsystem

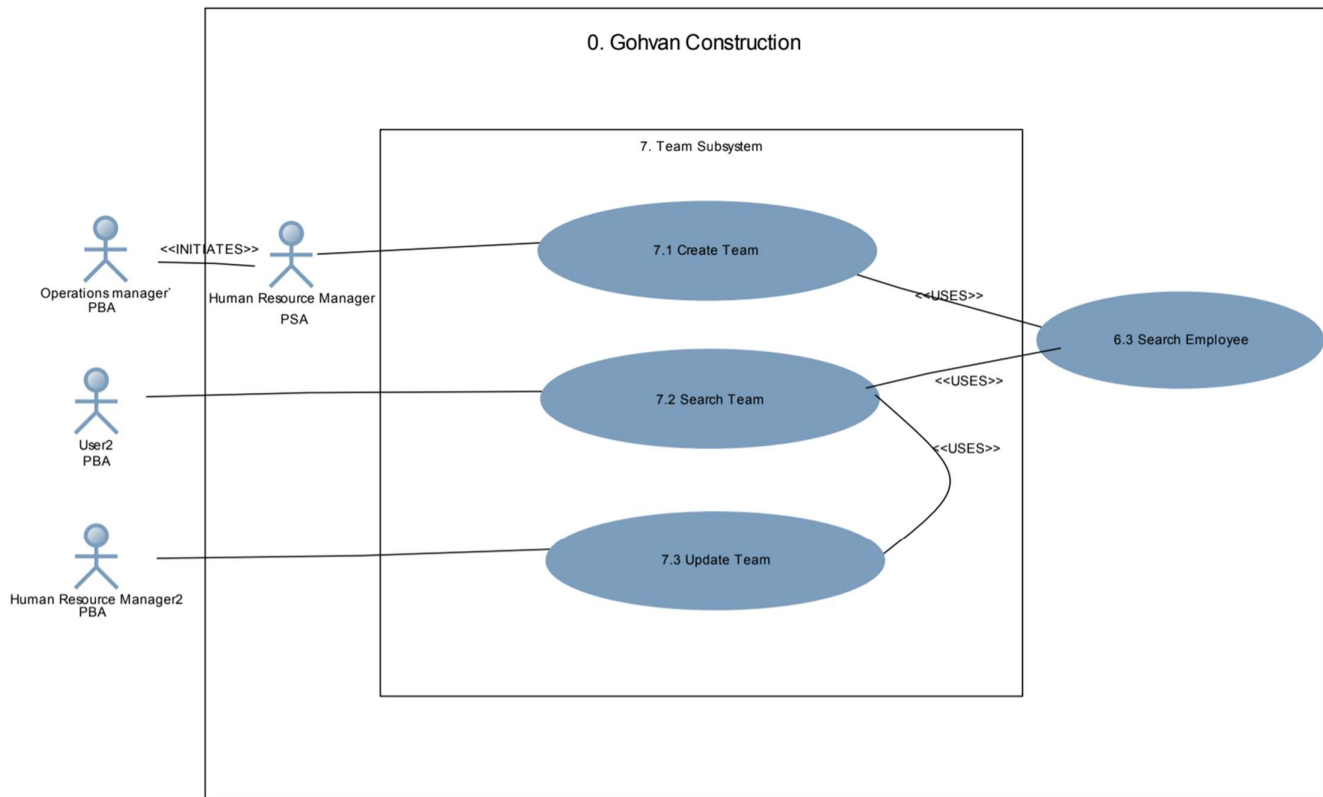


Figure 1-1-7: Team Subsystem Use Case Diagram: 7.1 – 7.3

1.2.8 Supplier Order Subsystem

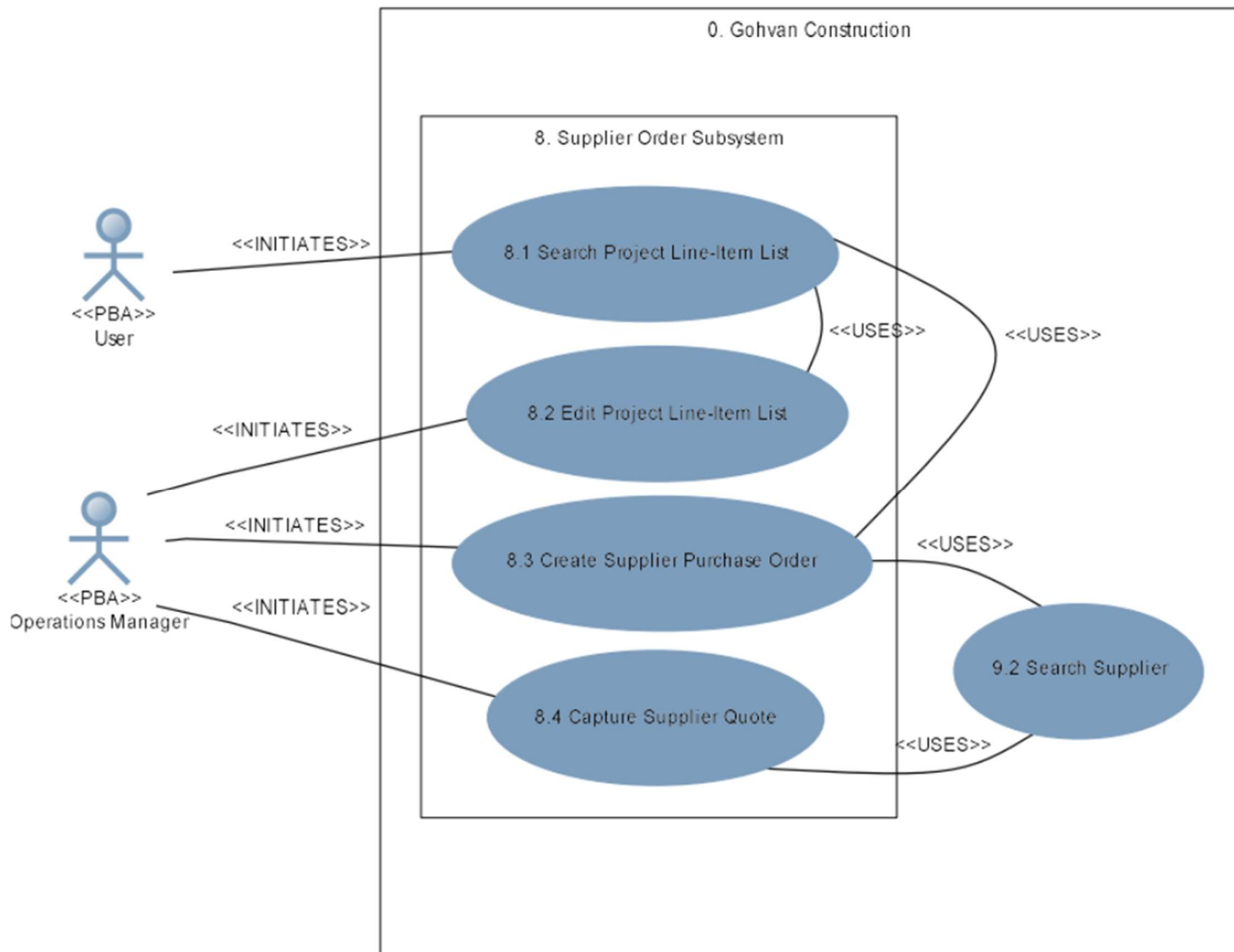


Figure 1-1-8: Supplier Order Subsystem Use Case Diagram: 8.1 – 8.4

1.2.9 Supplier Subsystem

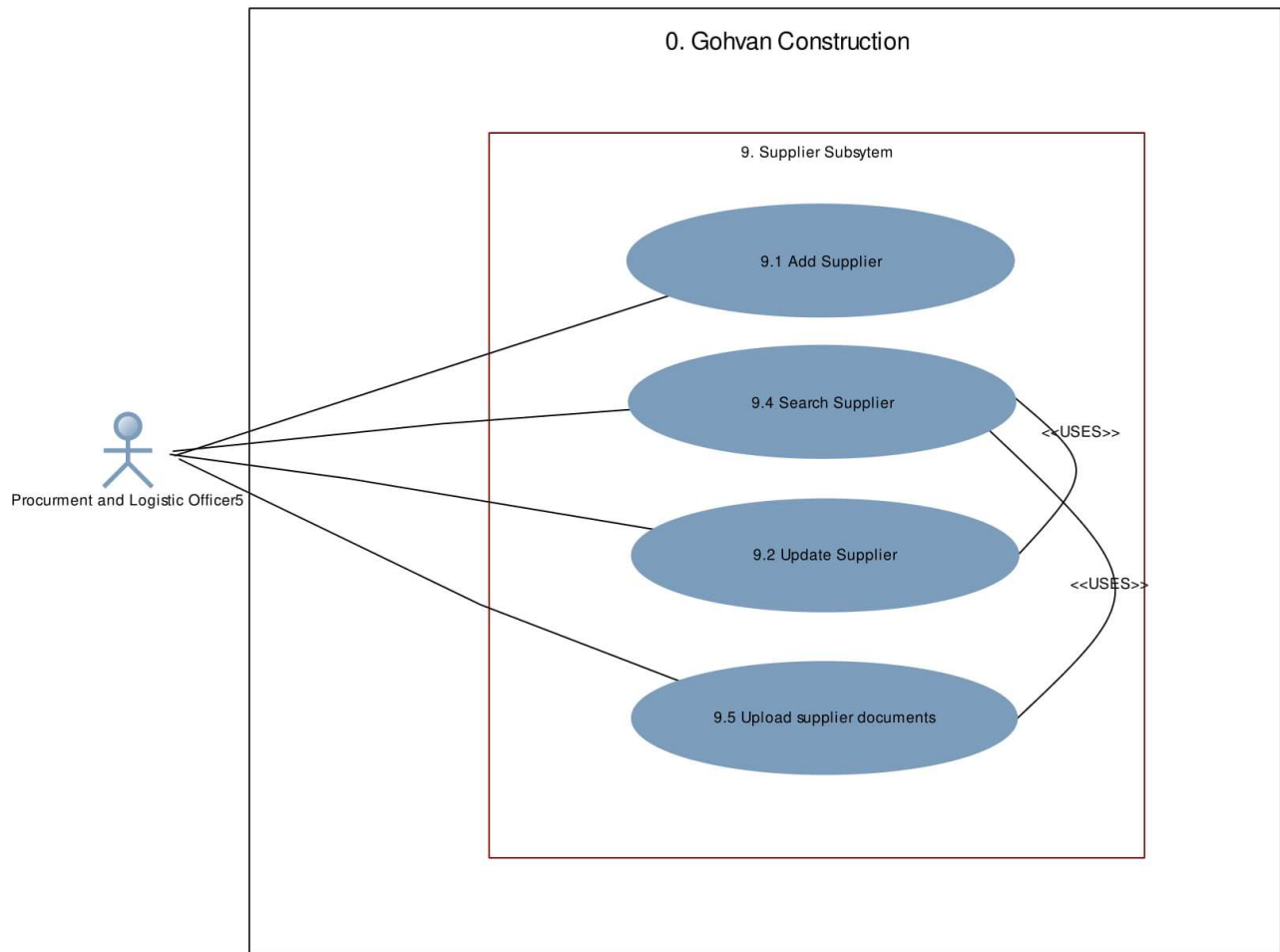


Figure 1-1-9: Supplier Subsystem Use Case Diagram: 9.1 – 9.5

1.2.10 Inventory Management Subsystem

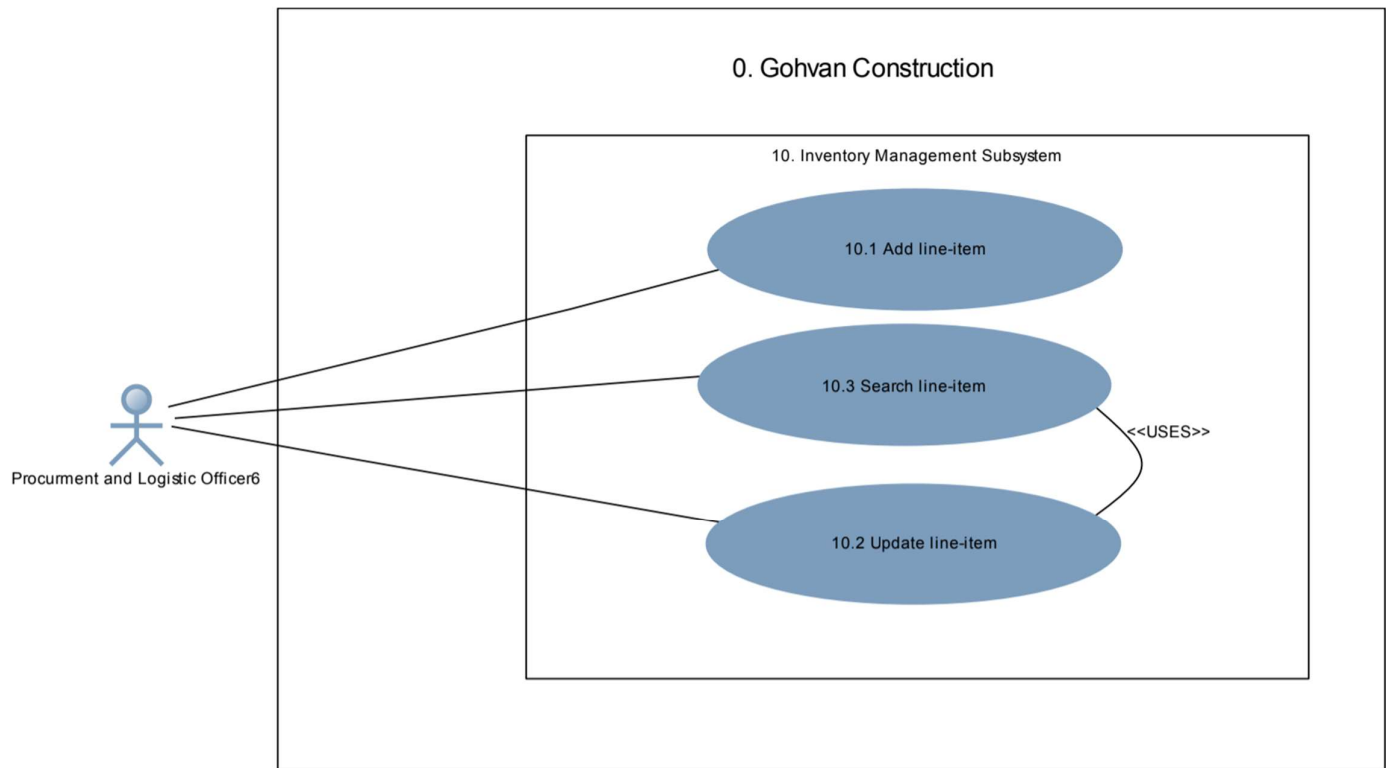


Figure 1-1-10: Supplier Subsystem Use Case Diagram: 10.1 – 10.3

1.2.11 Report Subsystem

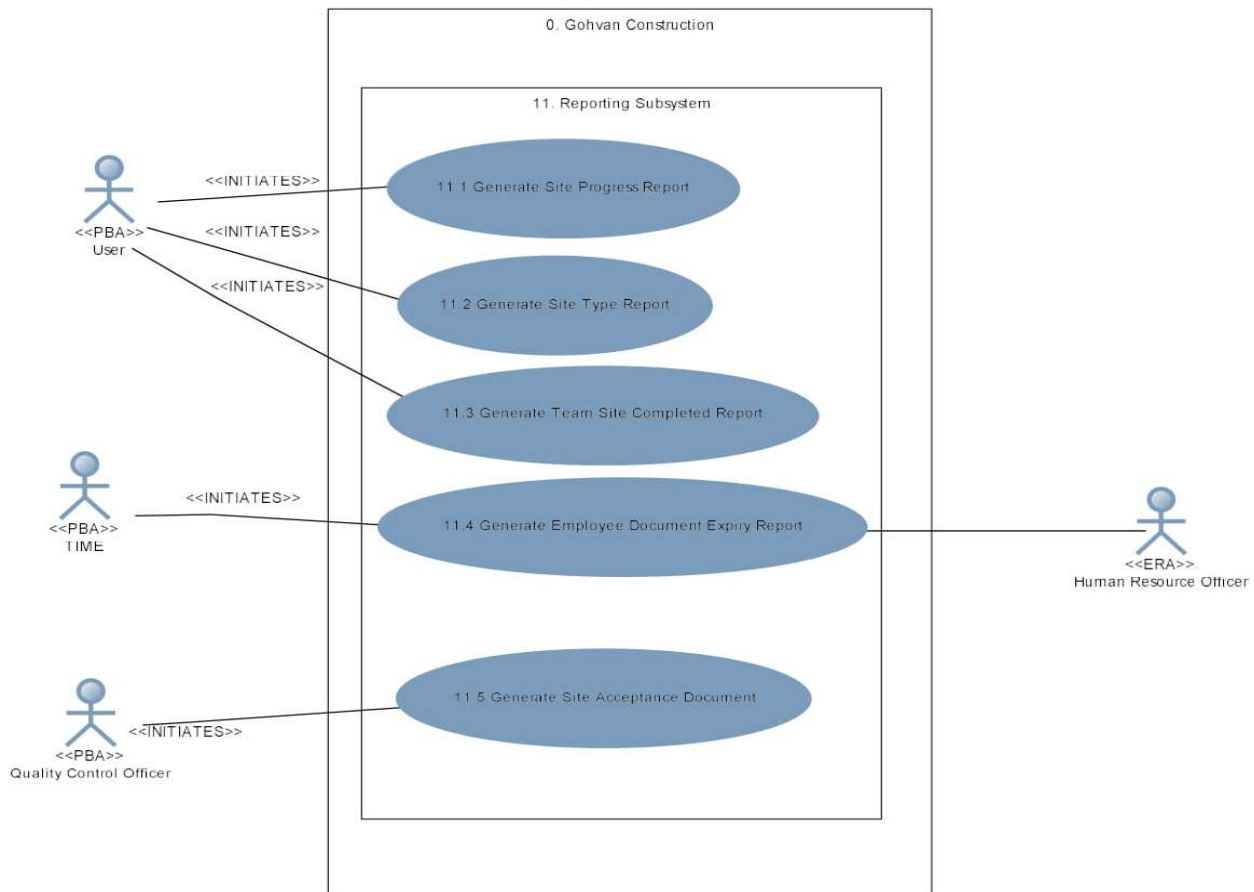
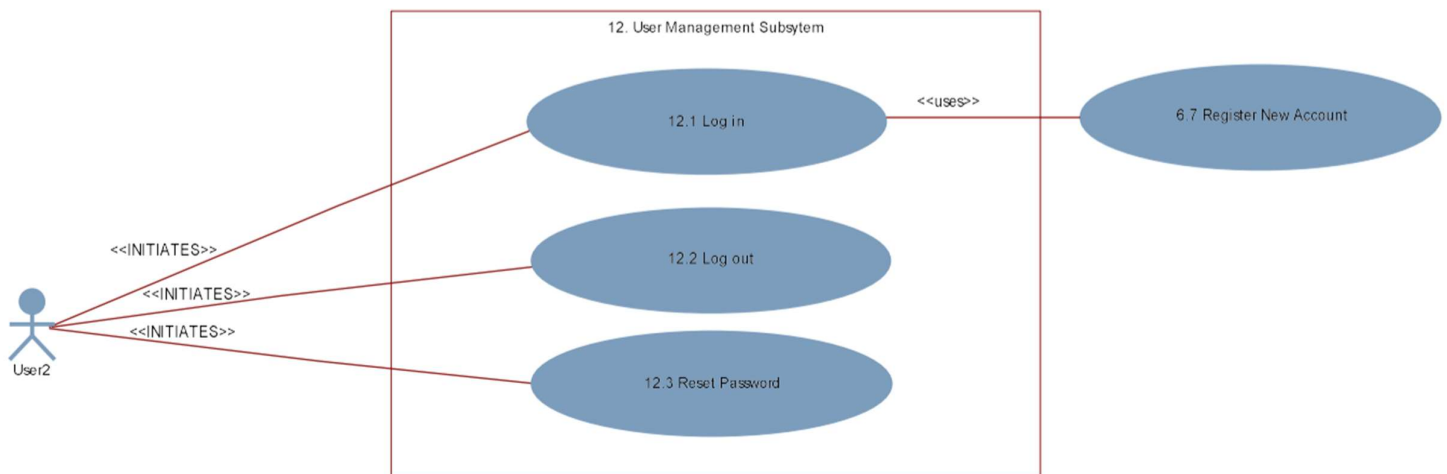


Figure 1-1-11: Supplier Subsystem Use Case Diagram: 11.1 – 11.5

1.2.12 User Management Subsystem



Conclusion

This section of the functional specification deliverable contained the use case diagrams and the use case narratives. The use case diagrams showed the overall view of the system. The use case narratives showed in detail how the system will complete the required business processes.

1.4 Use Case Narratives

Introduction

This section indicates the Use case narratives which describes the details and steps for each use case and the logical flow of thought for every functional requirement in the system.

1.4.1 Establishment Subsystem

Gohvan Construction

Author (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Create Technical site survey	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	1.1	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Client (PBA)	
PRIMARY SYSTEM ACTOR	Operations Manager (PSA)	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the operations manager will follow when they want to create a new technical site survey (TSS) . The client will send a request for construction of a new site which will require the operations manager to do a technical site survey. A new technical site survey is created on site. The operations manager will be prompted to fill in a form describing the site type, site information and the construction materials required for building the site.	

	The system will capture and validate the site survey information and if the information was validated successfully the system will store it in the TSS table, TSS PHOTO table and PROJECT LINE ITEMS table.	
PRE-CONDITION:	The operations manager needs to be logged into the system before creating a new TSS.	
TRIGGER:	The operations manager receives a new site request from the client and wants to create a new TSS.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The client sends a request for a technical site survey to the operations manager via Email.	
	Step 2: The operations manager receives this request and wants to create a new TSS.	Step 3: The system prompts the user to enter the required TSS details: - TSSID - SiteName - BSnumber - SiteType - ClientID - Description - Location - Coordinates - SiteLocalityMapPhoto - Site_pre-approval - RequiredMaterials - RF_details - Site_Accommodation details - SiteElectricalFencing details - SiteFencing details - SiteFinish details - TSSphotosID - RoughSiteDrawing - IdentifiedRisks - AttendeesDetails - TSSphotosID - Photo - TSSID - ProjectLine-itemID

		• LinItemID • Project ID • ProjectID • SiteName • BSnum •
	Step 4: The operations manager fills in the necessary information requested by the system and saves the form.	Step 5: The system captures and validates the information supplied by the user by checking if all necessary fields have been filled in and whether it was entered in the correct format. [ALT]
		Step 6: The system prompts the user to confirm that the information captured is correct.
	Step 7: The operations manager confirms that the captured information is correct. [ALT]	Step 8: The system adds a new TSS in the TSS table, TSS PHOTO table and PROJECT LINE ITEMS table with details captured from the user and notifies the user that the TSS has been added successfully. The system will change the status in the PROJECT table to “TSS in progress” [ALT]
ALTERNATE COURSES:	ALT Step 5: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 3.	
	ALT Step 7: The operations manager does not confirm that the information captured is correct. The system returns to step 3.	
	ALT Step 8: The system does not successfully add the TSS information to the TSS table, TSS PHOTO table and PROJECT LINE ITEMS table. The system notifies the user that the TSS has not been added successfully. The system terminates this use case.	
CONCLUSION:	This use case concludes when the operations manager has completed the TSS form successfully.	

POST-CONDITION:	The technical site survey has been added to the TSS table, the required materials is added to the PROJECT LINE ITEMS table and the site photos were added to the TSS PHOTO table.
BUSINESS RULES	Only the operations manager is allowed to create a new TSS.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	The operations manager will always have a smart device with him when visiting a site to make a new TSS.
OPEN ISSUES:	None

Gohvan ConstructionAuthor (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Search TSS	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	1.2	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	User (PBA) [the management director, director, operations manager, health and safety officer and the draughtsman.]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the user will follow when they want to search for a TSS (Technical Site Survey) . This use case begins when a User wants to search for an existing TSS, the user will enter search parameters such as the TSS site name or the TSS Site client. The system will validate the search parameter and retrieve and display the search results.	
PRE-CONDITION:	The User must be logged into the system.	
TRIGGER:	- The user wants to search for a TSS. - The use case is invoked by another use case	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The User wants to search for an existing TSS.	Step 2: The system prompts the user to enter one of the following search parameters: - Site Name - Site Client - Site Location
	Step 3: The User enters one of the requested search parameters.	Step 4: The system captures and validates the search parameters supplied by the user. [ALT]

		Step 5: The system retrieves and displays the search result based on the search parameter supplied by the user from the TSS table. [ALT]
	Step 6: The User selects the TSS from the search result.	Step 5: The following information is displayed from the TSS table, TSS PHOTO table and the PROJECT LINE ITEMS table: • TSSID • SiteName • BSnumber • SiteType • ClientID • Description • Location • Coordinates • SiteLocalityMapPhoto • Site_pre-approval • RequiredMaterials • RF_details • Site_Accommodation details • SiteElectricalFencing details • SiteFencing details • SiteFinish details • TSSphotosID • RoughSiteDrawing • IdentifiedRisks • AttendeesDetails • TSSphotosID • Photo • TSSID • ProjectLine-itemID • LineItemID • Project ID • ProjectID • SiteName • BSnum
ALTERNATE COURSES:	ALT Step 4: The captured search parameters are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	

	ALT Step 5: The TSS that the user searched does not exist within the database. The system notifies the user that no search results were found. The system will terminate this use case.
CONCLUSION:	This use case concludes when the system retrieves and displays the technical site survey search results to the User.
POST-CONDITION:	The searched technical site survey is retrieved and or displayed.
BUSINESS RULES	• Only the Users described in this use case are allowed to search the technical site surveys.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	• None

Gohvan ConstructionAuthor (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Edit TSS	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	1.3	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	The Operations manager	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the operations manager will follow when they want to edit an existing technical site survey.	
PRE-CONDITION:	- The user must be logged into the system. - The technical site survey that the user wishes to update must exist in the database.	
TRIGGER:	The operations manager wants to update an existing technical site survey.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The user wants to update an existing technical site survey.	Step 2: The system invokes Use Case 1.3 "Search Technical Site Survey"
		Step 3: The system will prompt the user to update the following details: - TSSID - SiteName - BSnumber - SiteType - ClientID - Description - Location - Coordinates

		• SiteLocalityMapPhoto • Site_pre-approval • RequiredMaterials • RF_details • Site_Accommodation details • SiteElectricalFencing details • SiteFencing details • SiteFinish details • TSSphotosID • RoughSiteDrawing • IdentifiedRisks • AttendeesDetails • TSSphotosID • Photo • TSSID • ProjectLine-itemID • LineItemID • Project ID • ProjectID • SiteName • BSnum
	Step 4: The user will enter the necessary changes and submit them.	Step 5: The system captures and validates that the updated TSS information is filled in and that it was entered in the correct format. [ALT]
		Step 6: The system prompts the user to confirm that the changes made to the technical site survey is correct.
	Step 7: The user confirms that the changes made to the technical site survey is correct. [ALT]	Step 8: The system updates the existing TSS in the TSS table, TSS table, TSS PHOTO table and CONSTRUCTION SITE table. with the changes captured from the user and notifies the user that the TSS has been updated successfully. [ALT]
ALTERNATE COURSES:	ALT Step 5: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 3.	
	ALT Step 7:	

	The user does not confirm that the information captured is correct. The system returns to step 3.
	ALT Step 8: The system does not successfully update the TSS information in the TSS table, TSS PHOTO table and PROJECT LINE ITEMS table. The system notifies the user that the TSS has not been updated successfully. The system terminates this use case.
CONCLUSION:	This use concludes when the operations manager has successfully updated the technical site survey's details.
POST-CONDITION:	The technical site survey has been updated in the TSS table, TSS PHOTO table and PROJECT LINE ITEMS table.
BUSINESS RULES	Only the operations manager is allowed to edit the technical site survey.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

Gohvan ConstructionAuthor (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Submit TSS	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	1.4	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	The Operations Manager (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the operations manager will follow when they want to submit the finished technical site survey (TSS) report. Once the technical site survey is complete the operations manager will request the system to create a TSS report which will be sent to the operations manager via email.	
PRE-CONDITION:	- The operations manager must be logged into the system. - The technical site survey must be complete.	
TRIGGER:	The operations manager wants to submit the technical site survey report to the client.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The user wants to submit the technical site survey to generate a technical site survey report.	Step 2: The system prompts the user to confirm that they want to submit the report and that the site survey details are correct.
	Step 3: The user confirms that they want to submit the report and that the site survey details are correct.	Step 4: The system compiles all the details from the technical site survey from the TSS table into a pdf file.

	[ALT]	
		Step 5: The system displays the TSS report and allows the user to download the report.
		Step 7: The system will email the TSS report to the operations manager. The system will change the status in the PROJECT STATUS table to “TSS submitted”
ALTERNATE COURSES:	ALT Step 3: The operations manager does not confirm that they want to submit the report and that the site survey details are correct. The system returns to step 3.	
CONCLUSION:	This use concludes when the operations manager has successfully submitted the TSS report.	
POST-CONDITION:	The technical site survey report has been compiled and submitted. The operations manager has received the technical site survey report.	
BUSINESS RULES	Only the operations manager is allowed to submit the TSS report.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

1.4.2 Quotation Subsystem

Gohvan Construction System

Author (s):

01/04/2021Tshepang Mashao Date:Version: 1.0

USE CASE NAME:	Create Quote	USE CASE TYPE
USE CASE ID:	2.1	Business Requirements: ☐
PRIORITY:	Critical	System Analysis: ☐
SOURCE:	Gohvan Construction	System Design: ☐
PRIMARY BUSINESS ACTOR	Client	
PRIMARY SYSTEM ACTOR	Operations Manager	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The Operations Manager takes the line items from the TSS report and enters the required quantities on a fixed-price list.	
PRE-CONDITION:	A TSS Booking has been made. Materials and items have been confirmed	
TRIGGER:	The client requests a quote	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The client requests a quote	Step 3: Invoke UC 8.1 "Search Project Line-Item List". The system will search for and retrieve the Line-Item List in which the quote must be generated for.
	Step 2: The Operations Managers requests to generate a new quote.	Step 3: System displays the line items, quantities on the fixed-priced list with checkboxes.
	Step 4: The Operations Manager checks the line items, quantities he wants, along with their prices. He then inputs the suppliers he wants to buy from. [ALT]	Step 5: The quote will be created in Excel and will include several sheets, namely: <u>The Cover Sheet</u> • Client Name • Region • BS Number From Client table • Site Name • Budget Code • Mast Type • Design Load • Equipment Housing • Site Size

		From Project table • Name From Company Information table • Quotation Number • Date of Quotation • Quote Revision To Client Quote table <u>The Civils Summary</u> • Name From Company Information table • BS Number • Site Name • Region From Project table • Quotation Number • Date of Quotation • Quote Revision From Client Quote table • VAT Amount From VAT table <u>The Package Pricing</u> • Site Name • BS Number From Project table • SAP Material ID • Material Number • Package Name From Price Line-Item table • Unit • Unit Price • Quantity From Price Line-Item table
		Step 6: The system requests confirmation of the quote and the Operations Manager confirms the details in the quote [ALT]
		Step 7: System finalizes and saves the quote to the Client_Quote table [ALT]
		Step 8: System notifies Operations Manager that the quote has been created successfully.
		Step 9: The system displays the created quote
	Step 10: Operations Manager sends the quote to the client for confirmation	Step 11: The system will update status to “Awaiting Purchase Order” in the Project table
ALTERNATE COURSES:	Step 4: The line item wanted is not on the list. The Operations Manager adds list item, with the quantity wanted.	

	Step 6: Operations Manager declines the confirmation of quote contents. The system displays an error message. Return to Step 2.
	Step 7: Unsuccessful quote generation and saving. Operations Manager is notified of unsuccessful quote generation. Return to Step 2.
CONCLUSION:	This use case concludes when a quote has been created and sent to the client successfully
POST-CONDITION:	A quote is created and added to the Client_Quote table. The status is updated to “Awaiting Purchase Order” in the Project table
BUSINESS RULES	• Only the Operations Manager can compile the quote. • A TSS must be completed before a quote can be created
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	• None

Gohvan Construction SystemAuthor (s): Tshepang MashaoDate: 01/04/2021Version: 1.0

USE CASE NAME:	Search Quote	USE CASE TYPE
USE CASE ID:	2.2	Business Requirements: ☐
PRIORITY:	High	System Analysis: ☐
SOURCE:	Gohvan Construction	System Design: ☐
PRIMARY BUSINESS ACTOR	User (PBA) [Director, Operations Manager, Procurements and Logistics Officer and Financial Officer]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The user provides search criteria to search for a quote. The system will capture the search criteria and display the results. The Operations Manager will then select the quote he desired to search for.	
PRE-CONDITION:	The user must be logged into the system. The quote must exist on the system.	
TRIGGER:	A user desires to search for a quote	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The user desires to search for an existing quote and selects the option to search for the quote.	Step 2: The system prompts the user to search for the quote on the system using the following attributes: • QuoteID • QuoteName • Description From the Client_Quote table
	Step 3: The user selects criteria to search for the quote. [ALT]	
	Step 4: The user provides search criteria	
	Step 5: The user selects the icon to prompt the system to search for the quote	Step 6: The system verifies the provided criteria, and ensures that the information filled in is in the correct format. [ALT]
		Step 7: The system displays a list of all the quotes using Use Case 2.3 "View Quote" that match the provided search criteria with its information • QuoteID • QuoteName

		QuoteDescription From Client Quote table [ALT]
	Step 8: The user selects the quote they desire to view.	Step 9: The system displays all the relevant quote information mentioned in Step 7.
ALTERNATE COURSES:	Step 3: This use case is invoked by another use case. The system receives the quote id as a search parameter from the other use case.	
	Step 6a: Provided information is not valid. Display error message. Return to step 3.	
	Step 6b: Provided information is not in the correct format. Display error message. Return to step 3.	
	Step 7: No quotes are displayed as no quotes matched the provided search criteria. Display notification and prompt user to enter search criteria. Return to Step 3.	
CONCLUSION:	This use case concludes when the searched quote and its details are displayed successfully.	
POST-CONDITION:	The user has successfully searched for a quote.	
BUSINESS RULES	Only the Operations Manager, Procurements and Logistics Officer and Financial Officer can search for a quote. ***	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan Construction System**Author (s):** Tshepang Mashao**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Capture Purchase Order	USE CASE TYPE
USE CASE ID:	2.3	Business Requirements: ☐
PRIORITY:	High	System Analysis: ☐
SOURCE:	Gohvan Construction	System Design: ☐
PRIMARY BUSINESS ACTOR	Client	
PRIMARY SYSTEM ACTOR	Financial Officer	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the event of the client's Purchase Order being captured on the system by the Financial Officer. The purchase order is stored on the system and it concludes once the Financial Officer has been notified that the purchase order was saved successfully and once the status of the purchase order is updated.	
PRE-CONDITION:	The client has received the quotation. The Financial Officer is logged into the system	
TRIGGER:	The client sends the purchase order to the Financial Officer	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The client sends the purchase order to the Financial Officer	
	Step 2: The Financial Officer wants to capture the purchase order	Step 3: The system prompts the Financial Officer to provide the Purchase Order.
	Step 4: The Financial Officer provides/uploads the Purchase Order	Step 5: The system prompts the user to confirm details
	Step 6: The Financial Officer selects the option to confirm the Purchase Order on the system [ALT]	Step 7: The system adds the Purchase Order to the "Client_Purchase_Order" table.
		Step 8: The system notifies the Financial Officer that the Purchase Order has been successfully captured onto the system. [ALT]
		Step 9: The Purchase Order status is updated to "Awaiting Client Site-Go-Ahead" in the Project table
ALTERNATE COURSES:	Step 6: The Financial Officer does not confirm details. Return to Step 2.	

	Step 8: The system fails to capture the Purchase Order on the system. The system notifies the Financial Officer that an error has occurred. Terminate use case.
CONCLUSION:	The use case concludes when the system notifies the Financial Officer that the Purchase Order was successfully captured on the system.
POST-CONDITION:	The Project status is updated
BUSINESS RULES	Only the Financial Officer can capture the Purchase Order onto the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

1.4.3 Administration Subsystem

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Create Health and Safety file	USE CASE TYPE Business Requirements: ☒ System Analysis: .. System Design: ..
USE CASE ID:	3.1	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Health and Safety Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	Client	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the process the Health and Safety Officer will go through to create a Health and Safety file containing Health and Safety documents. The use case begins when the Health and Safety officer needs to create a Health and Safety file. The use case concludes when the Health and Safety officer has created and sent the file to the client.	
PRE-CONDITION:	Health and Safety officer needs to be logged into the system.	

TRIGGER:	A health and safety file is required.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Health and Safety officer wants to upload Health and Safety file.	Step 2: The system then displays a screen where the Health and Safety officer can upload the zipped Health and Safety file as well as a name and description of the Health and Safety file.
	Step 3: The Health and Safety officer uploads the zipped Health and Safety file as well as provides a name and short description of the file. [alt]	Step 4: The system captures and validates the zipped file, its name and short description and stores it in the Health and Safety table with the HS_ID, File, Name and Description attributes as well as saves the created date in the Created_date attribute. [alt]
		Step 5: The system notifies Health and Safety officer the file has been uploaded.
ALTERNATE COURSES:	Alt Step 3: The Health and Safety officer cancels the upload of the zipped file, name, and description. The system returns the Health and Safety officer to the project page.	
	Alt Step 4: The Health and Safety officer did not upload the zipped file correctly or at all with the name and short description. The system notifies there is an error and asks the Health and Safety officer to re-enter the incorrect information. Return to step 3.	
CONCLUSION:	The Health and Safety file has been uploaded to the system.	
POST-CONDITION:	There is a Health and Safety file available.	

BUSINESS RULES	• Only the Health and Safety officer may upload the Health and Safety file. • The client needs to receive a copy of the Health and Safety file • User needs to be logged into the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Search Health and Safety file	USE CASE TYPE Business Requirements: ☒ System Analysis: .. System Design: ..
USE CASE ID:	3.2	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Health and Safety Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	• None	
OTHER INTERESTED STAKEHOLDERS:	• None	
DESCRIPTION:	This use case describes the process a Health and Safety officer will go through to find a specific Health and Safety file. The use case begins when the Health and Safety officer wants to search for a specific Health and Safety file. The use case concludes when the Health and Safety officer downloads and views the Health and Safety file	

PRE-CONDITION:	Needs to be a health and safety file with the correct criteria on the system.	
TRIGGER:	A health and safety file is needed by the Health and Safety officer.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Health and Safety officer wants to search for a Health and Safety File	Step 2: The system displays a screen where the Health and Safety officer can enter either the date of the Health and Safety file or the Name of the Health and Safety or Both.
	Step 3: The Health and Safety officer enters the date and/or name of the desired Health and Safety file. [alt]	Step 4: The system captures the entered information and searches the <u>Health and Safety</u> table's <u>Created date</u> and/or <u>name</u> attributes to find one that corresponds with the entered information. [alt]
		Step 5: The system displays the Health and Safety file <u>Name</u> , <u>Description</u> . The system retrieves these attributes from the <u>Health and Safety</u> table.
	Step 6: The Health and Safety officer wants to download the Health and Safety file. [alt]	Step 7: The system retrieves the file from the <u>Health and Safety</u> table from the <u>File</u> attribute and allows the user to download the zipped file.
	Step 8: The Health and Safety officer receives the desired Health and Safety file.	

ALTERNATE COURSES:	Alt step 3: The Health and Safety officer cancels the search for a Health and Safety document. The system returns to the home screen.
	Alt step 4: The system finds no records of any Health and Safety file in the Health and Safety table and displays an error message to the Health and Safety officer saying no results are found. Return to step 3.
	Alt Step 6: The Health and Safety officer cancels the viewing of the Health and Safety file. The system returns to the project page.
CONCLUSION:	The user receives the desired Health and Safety file.
POST-CONDITION:	The desired Health and Safety file has been received.
BUSINESS RULES	• User needs to be logged into the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• There is a Health and Safety file meeting the criteria uploaded on the system
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Capture Health and Safety Confirmation	USE CASE TYPE Business Requirements: ☒ System Analysis: .. System Design: ..
USE CASE ID:	3.3	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Client	
PRIMARY SYSTEM ACTOR	Health and Safety Officer	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes how the client sends their confirmation of the Health and Safety file and the Health and Safety officer captures the confirmation. The use case begins when the client sends the confirmation to the Health and Safety officer. The use case ends when the Health and Safety officer captures the confirmation onto the system.	

PRE-CONDITION:	The client needs to send the confirmation before it can be captured.	
TRIGGER:	The client sends the Health and Safety officer confirmation of the Health and Safety file.	
TYPICAL COURSE	Actor Action	System Response
	Step 1: The Health and Safety officer receives the confirmation and wants to capture the Health and Safety confirmation. [alt]	Step 2: The system then displays a screen that allows the user to upload the confirmation document of the client.
	Step 3: The Health and Safety officer uploads the Confirmation document. [alt]	Step 4: The system captures and validates the information. [alt]
		Step 5: The system prompts the user to confirm that they want to upload the confirmation file.
	Step 6: The Health and Safety officer confirms the prompt. [alt]	Step 7: The system captures the information and updates the <u>Health and safety</u> table's <u>Confirmation status</u> and <u>Confirmation file</u> .
		Step 8: The system notifies the Health and Safety officer that the status has been changed and that the file has been uploaded correctly.
ALTERNATE COURSES:	Alt Step 1: The client denies the Health and Safety document. The Health and safety officer needs to create a new one (Invoke use case 3.1 Create Health and Safety File) then wait for the confirmation of the Health and safety file again.	

	Alt Step 3: The Health and Safety officer cancels the upload of the confirmation file. Return to project screen
	Alt Step 4: The entered information is invalid, and the system prompts the Health and Safety officer to change the information. Return to Step 3.
	Alt Step 6: The Health and Safety officer cancels the submission of the status and file. Return to step 3.
CONCLUSION:	The confirmation of the health and safety file has been uploaded and the status has been changed to Confirmed.
POST-CONDITION:	The Health and Safety file is correct and ready for use.
BUSINESS RULES	• The Health and Safety file needs to be correct and up to date to be valid. • User needs to be logged into the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• The client will send their decision on the Health and Safety file to the Health and Safety officer
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Upload Formal Drawing	USE CASE TYPE Business Requirements: ☒ System Analysis: .. System Design: ..
USE CASE ID:	3.4	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Drafts Person	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Client	
DESCRIPTION:	This use case describes the process where the drafts person uploads the formal drawing they have created for a specific site. The use case begins when the drafts person wants to upload the formal drawing. The use case concludes when the drafts person has uploaded the formal drawing.	
PRE-CONDITION:	The site go-ahead needs to be confirmed before a formal drawing can be made.	

TRIGGER:	The drafts person wants to upload the formal drawing.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The drafts person wants to upload formal drawing.	Step 2: The system displays a screen where the drafts person can upload the formal drawing file, name and short description.
	Step 3: The drafts person uploads the formal drawing file, name and short description. [alt]	Step 4: The system captures and validates the uploaded file, name and description. [alt]
		Step 5: The system prompts the drafts person to confirm the uploaded file, name and short description.
	Step 6: The drafts person confirms the prompt. [alt]	Step 7: The system captures the file and entered information and uploads it to the <u>Drawing</u> table's <u>Name</u> , <u>Description</u> , <u>Drawing ID</u> and <u>File</u> attributes. The system also captures the date the upload was made to the <u>Date Created</u> attribute of the table. The system also saves the drawing type in the <u>Drawing Type ID</u> attribute as a formal drawing that it gets from the <u>Drawing Type</u> table.
		Step 8: The system notifies the drafts person that the file has been uploaded as well as the name and short description.
	Step 9: The drafts person sends the client the formal drawing for review.	-

ALTERNATE COURSES:	Alt Step 3: The drafts person cancels the uploading of the formal drawing. System displays the project screen.
	Alt Step 4: The system has a validation error with the uploaded file and/or the name and description. The system notifies the drafts person of the error. Return to step 3
	Alt Step 6: The drafts person declines the confirmation of the upload of the formal drawing.
CONCLUSION:	The formal drawing has been uploaded.
POST-CONDITION:	The client needs to review the drawing and present feedback.
BUSINESS RULES	• The site go-ahead needs to be confirmed before a formal drawing can be made. • Only the drafts person can upload a formal drawing. • User needs to be logged into the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	None
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Upload second cut drawing	USE CASE TYPE Business Requirements: ☒ System Analysis: "" System Design: ""
USE CASE ID:	3.5	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Client	
PRIMARY SYSTEM ACTOR	Draft's person	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the process of receiving feedback from the client about the formal drawing and the drafts person making a second cut drawing based on the feedback in which the drafts person will upload the second cut drawing to the system. The use case begins when the client gives feedback on the formal drawing. The use case concludes when the drafts person uploads the second cut drawing to the system.	
PRE-CONDITION:	The formal drawing needs to have been uploaded to the system.	

TRIGGER:	The client provides feedback on the formal drawing.	
TYPICAL COURSE	Actor Action	System Response
	Step 1: The drafts person wants to upload second cut drawing	Step 2: The system displays a screen where the drafts person can upload the second cut drawing file, name and short description.
	Step 3: The drafts person uploads the second cut drawing file, name and short description. [alt]	Step 4: The system validates the uploaded file, name and description. [alt]
		Step 5: The system prompts the drafts person to confirm the uploaded file, name and short description.
	Step 6: The drafts person confirms the prompt. [alt]	Step 7: The system captures the file and entered information and uploads it to the <u>Drawing</u> table's <u>Name</u> , <u>Description</u> , <u>Drawing ID</u> and <u>File</u> attributes. The system also captures the date the upload was made to the <u>Date Created</u> attribute of the table. The system also saves the drawing type in the <u>Drawing Type ID</u> attribute as a second cut drawing that it gets from the <u>Drawing Type</u> table.
		Step 8: The system notifies the drafts person that the file has been uploaded as well as the name and short description.
ALTERNATE COURSES:	Alt Step 4: The drafts person cancels the uploading of the second cut drawing. System displays the project screen.	

	Alt Step 5: The system has a validation error with the uploaded file and/or the name and description. The system notifies the drafts person of the error. Return to step 2
	Alt Step 7: The drafts person declines the confirmation of the upload of the second cut drawing.
CONCLUSION:	The second cut drawing has been uploaded
POST-CONDITION:	Uploaded second cut drawing.
BUSINESS RULES	• Only the drafts person can upload a second cut drawing. • Client needs to give feedback on formal drawing before second cut can be made. • User needs to be logged into the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• The client gives feedback on the formal drawing.
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Search As-built document	USE CASE TYPE Business Requirements: ☒ System Analysis: "" System Design: ""
USE CASE ID:	3.6	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Health and Safety Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the process in which the Health and Safety Officer searches for a specific As-built document on the system. The use case begins when the Health and Safety Officer wants to find a specific As-built document. The use case concludes when the Health and Safety Officer downloads and views the specific As-built document.	
PRE-CONDITION:	There needs to be an As-built with the certain criteria already on the system.	

TRIGGER:	The Health and Safety Officer is looking for a specific As-built document.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Health and Safety Officer wants to search As-built document	Step 2: The system displays a screen where the Health and Safety Officer can enter either or all of the following criteria: the date the as-built was created, the name of the As-built document or the name of the project the As-built document belongs to.
	Step 3: The Health and Safety Officer enters the date and/or name and/or project name of the desired As-built document. [Alt]	Step 4: The system captures the entered information and searches the <u>As-built</u> table's <u>Created date</u> and/or <u>Name</u> and/or <u>Project name</u> attributes to find one that corresponds with the entered information. [alt]
		Step 5: The system displays the As-built document <u>Name</u> , <u>Description</u> , and a download button. The system retrieves these attributes from the <u>As-built</u> table.
	Step 6: The Health and Safety Officer wants to download to the As-built document. [alt]	Step 7: The system retrieves the file from the <u>As-Built</u> table from the <u>File</u> attribute and allows the user to download the zipped file.
	Step 8: The Health and Safety Officer receives the downloaded As-built document.	
ALTERNATE COURSES:	Alt Step 3: The Health and Safety Officer cancels the search for a As-built document. The system returns to the home screen.	

	Alt Step 4: The system finds no records of any As-built document in the As-built table and displays an error message to the Health and Safety Officer saying no results were found. Return to Step3.
	Alt Step 6: The Health and Safety Officer cancels the viewing of the As-built document. The system returns to the home screen.
CONCLUSION:	The system displays the desired As-built document.
POST-CONDITION:	The displays to the Health and Safety Officer the desired As-built document.
BUSINESS RULES	User needs to be logged into the system
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	There is an As-built document with the specific criteria on the system.
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 02/05/2021**Version:** 1.0

USE CASE NAME:	Create As-Built Document	USE CASE TYPE Business Requirements: ☒ System Analysis: .. System Design: ..
USE CASE ID:	3.7	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Health and Safety Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the health and safety officer creating the As-built document which is a compilation of all relevant information and reports regarding a specific project. The use case begins when the health and safety officer wants to create the As-built document. The use case concludes when the health and safety has created the As-built document.	
PRE-CONDITION:	Completed site photos need to be uploaded to the system.	

TRIGGER:	An As-built document is required.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The health and safety officer wants to create an As-built document.	Step 2: The system reads and validates Project_Status attribute from the Project table. [Alt]
		Step 3: Prompt user to confirm As-built document creation.
	Step 4: User confirms prompt	Step 5: System reads from Construction-Site table : • Area • Coordinates • Site_Address • Site_Contact_Person • Type_of_Installation • Site_Size • Size_of_Equipment_Housing • Mast_Type • Mast_Height • Fencing • Covering • Locality_Map Drawing Table: • Site_Layout • Equipment_housing • Security Compliance Documents Table: • Compliance_Document Construction Photos table: • Earthing Health and Safety table: • Confirmation_File Report table:

		• Site_Acceptance_Schedule • Radio_frequency_Document <u>Completion_Photos</u> table: • Project_photos <u>Project</u> table: • Item code • Serial Number • Aircon Description • CoolingSystem document To gather all relevant information for As-built.
		Step 6: The system displays a screen where the user can add another section to the As-Built document.
	Step 7: The Health and Safety officer adds another section to the As-built document.[alt]	Step 8: The system captures and validates the added section.[alt]
		Step 9: System combines all read attributes and added section/s to a pdf document with a specific format.
		Step 10: System creates the As-built document and saves the file in the File attribute of the As-built table as well as creates the AsBuilt_ID and Date_Created .
		Step 11: System notifies and displays the As-Built document to the user.
ALTERNATE COURSES:	Alt Step 2: Validation error. Incorrect project status has been read. Terminate use case. Alt Step 7a: The user cancels adding a new section. Move to step 9.	

CONCLUSION:	Alt Step 7b: The user wants to add another section. Repeat step 7. Alt Step 8: Validation error. Incorrect entered information for an extra section. Ask user to re-enter extra section details. Return to step 7.
	The Health and Safety officer has created an As-built File.
POST-CONDITION:	The project is fully completed.
BUSINESS RULES	• User needs to be logged into the system • Only Health and Safety officer can create the As-Built File
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• Construction of the site needs to be completed.
ASSUMPTIONS:	• None
OPEN ISSUES:	None

1.4.4 Construction Subsystem

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Capture "Site-Go-Ahead"	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.1	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Client (PBA)	
PRIMARY SYSTEM ACTOR	Operations Manager (PSA)	
OTHER PARTICIPATING ACTORS:	• Procurement and logistic Officer (ERA) • Health and Safety Officer (ERA) • Draftsperson (ERA)	
OTHER INTERESTED STAKEHOLDERS:	• none	
DESCRIPTION:	The client will email the operations manager that construction on the site may commence, the operations manager will capture the Email in a screen shot and upload the screenshot to the system to activate the project status and indicate that the construction site is under progress on the system. This update will indicate to the Procurement and Logistics Officer, Health and Safety Officer and Draftsperson that the site construction may commence.	
PRE-CONDITION:	• TSS report must be created. • Client must have sent the Purchase order indicating that quotations created were correct, thus budgets are set out for the construction project. • User must be logged onto the system	
TRIGGER:	Operations manager receives an email allowing site go-ahead.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The Operations manager selects Capture “Site-Go-Ahead”	Step 2: The system prompts the Operations manager to provide the screenshot of the “Site-Go-Ahead” email received from the customer.
	Step 3: The Operations manager selects and provides the system prompt with the screenshot of the “Site-Go-Ahead” email and correlating Site Acceptance information: • Compliance Document Description • Compliance Document Name	Step 4: The system will display a message that the “Site-Go-Ahead” screenshot has been captured successfully. [ALT]
		Step 5: System prompts user to confirm captured “Site-Go-Ahead” details.
	Step 6: The Operations Manager confirms the selected “Site-Go-Ahead” screenshot. [ALT]	Step 7: System captures the confirmation of the selected “Site-Go-Ahead” screenshot.
		Step 8: The system will update the site progress status in the Construction_Site table. The Project Status Attribute will be updated in the Project table. Both entries are obtained via foreign keys in the relevant lookup tables. The status updates will begin the beginning phase of construction. The Screenshot of the site progress email will be stored in the Compliance_Document table, a new Compliance_Document_ID will be

		generated for the Site-Go-Ahead document with the following details: • Compliance Document Name • Date Uploaded • Compliance Document Description • Compliance Document
		Step 9: The system will then notify the Procurement and logistic Officer, Health and Safety Officer and Draftsperson that Site-Go-Ahead has been approved and construction process may commence.
ALTERNATE COURSES:	ALT Step 5: The system capture process fails to capture the screenshot of the “Site-Go-Ahead” screenshot. The system will notify the Operations manager on the failed capture and return the Operations manager to step 1 .	
	ALT Step 6: The Operations Manager does not confirm the captured “Site-Go-Ahead” screenshot or rejects the confirmation. The system then removes the captured “Site-Go-Ahead” screenshot and returns the user to step 2 .	
CONCLUSION:	The use case will conclude once the Procurement and logistic Officer, Health and Safety Officer and Draftsperson are notified on the Site-Go-Ahead for the construction project status update.	
POST-CONDITION:	• The Site-Go-Ahead email is captured and stored on the system.	
BUSINESS RULES	• Only the Operations manager can capture the Site-Go-Ahead email onto the system.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none	
ASSUMPTIONS:	• none	
OPEN ISSUES:	• none	

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Allocate Team Site		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.2		
PRIORITY:	high		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	Client		
PRIMARY SYSTEM ACTOR	Operations Manager		
OTHER PARTICIPATING ACTORS:	• none		
OTHER INTERESTED STAKEHOLDERS:	• General employees • Site Managers • Client • Human Resource Management • Health and Safety Officer		
DESCRIPTION:	This use describes the process the Operations manager and system will go through when an existing team is allocated to a project to then begin construction. The Operations Manager will select the desired team for the specified project. Once the Teams are allocated to the project, Construction may begin on the construction site.		
PRE-CONDITION:	• Project status is updated once Site-Go-Ahead is received, indicating that teams need to be allocated to the specific project.		
TRIGGER:	Operations Manager requests to assign a team to the project after receiving Site-Go-Ahead		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: Operations Manager requests to assign team to project.	Step 2: System checks is any teams have already been assigned to Construction	

		Project. The system reads from the Construction_Site_Team table to determine if any teams have been allocated to the construction site. [ALT]
		Step 3: System displays an empty table with no Teams assigned to the construction project. The system prompts the user to add an initial team to the construction project.
	Step 4: The Operations manager selects to add an initial team to the construction project	Step 5: The System captures response to add an initial team to the construction project.
		Step 6: The system searches for all teams registered within the system and invokes use case 7.2 “Search Team” The results are displayed in a table format to the user. The following attributes of the team are displayed: • Team Number • Team Site Manager • assigned projects
		Step 7: The system prompts the user select the desired team for the construction project.
	Step 8: The Operations manager selects the desired team for the construction project.	Step 9: The system captures the user’s response for the desired team. The system prompts the user to confirm the desired team that will be allocated to the construction project.
	Step 10: The Operations Manager confirms the team to be	Step 11:

	allocated to the construction project. [ALT]	The system captures the confirmation response and assigns the team to the construction project. A new entry in the Construction_Site_Team table is created with the team_ID obtained from the search team use case. The following details are captured in the creation of the Construction site team: • Team ID • Construction Site ID • Team Name • Date Assigned
		Step 12: System notifies Operations Manager and Health and Safety Officer that the Team has been successfully linked to the construction project.
		Step 13: The system displayed all Teams currently assigned to the construction project. The teams are read from the Construction_Site_Team table. The table displays the following attributes for each team: • Team ID • Team Name • Date Assigned • Team Site Manager
ALTERNATE COURSES:	ALT Step 2:	There already is an existing team allocated to the construction process. This indicates that the user wishes to add an additional team to the construction project. The use case skips to step 6 and proceeds normally.
	ALT Step 10:	The operations Manager rejects confirmation to allocate team to construction project. The use case returns to step 2
CONCLUSION:	This use case concludes once the Operations Manager has been notified that the Team has been successfully linked to the construction project.	
POST-CONDITION:	• At least one team is assigned to a construction project.	
BUSINESS RULES	• More than one team can be assigned to a construction project. • Only Operations Manager can assign a team to a construction project.	

IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none
ASSUMPTIONS:	• Is already an existing Team
OPEN ISSUES:	• none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Update Team Site Allocation	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.3	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Operations Manager	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	• none	
OTHER INTERESTED STAKEHOLDERS:	• Director • General employees • Site Managers • Human resource Management • Health and Safety Officer • Client	
DESCRIPTION:	This use case describes the process the Operations manager and system will go through when the Operations Manager wishes to removes a team from the Project due to unforeseen circumstances.	
PRE-CONDITION:	• Team must be allocated to an existing and active project. • Operations Manager must be logged into the system.	
TRIGGER:	The Operations Manager wants to remove a team from construction project.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Operations Manager requests to remove team from construction project.	Step 2: The system reads from the Construction_team_Site table to display all teams assigned to the

		construction site. The following attributes of the team are displayed: • Team ID • Team Name • Date Assigned • Team Site Manager
		Step 3: The system prompts the user to select desired team to be removed from Construction_team_Site.
	Step 4: The Operations Manager selects the desired team to be removed from the system.	Step 5: The system captures the selected team and prompts the user to confirm that the selected team is to be removed from the Construction_team_Site table.
	Step 6: The Operations Manager confirms the captured team is to be removed from the system. [ALT]	Step 7: The system captures the confirmation provided by the user. The system will remove the selected from the Construction_team_Site table.
		Step 8: The system reads from Construction_team_Site table to check if there is at least one team assigned to the construction project. [ALT]
		Step 9: The system notifies the Operation Manager on successful update on the assigned teams to construction Manager.
ALTERNATE COURSES:	ALT Step 6: The operations Manager rejects confirmation to update the assigned team to construction project. The use case returns to step 2	
	ALT Step 8: The System reads no assigned teams to the Construction_Team_Site table. The system will notify the Operations Manager that there are currently no assigned teams to the construction project and Invoke use case 4.4 “Allocate Team Site”. The use case is then concluded.	

CONCLUSION:	The use case concludes when the selected team is removed from the Construction_team_Site table.
POST-CONDITION:	• There must be at least one team allocated to a sight, otherwise the user will be redirected to use case 4.4 “Allocate Team Site” to add in a new team allocation.
BUSINESS RULES	• A construction project has to have at least one team assigned. • Only the Operations Manager can update allocated teams to the construction site.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none
ASSUMPTIONS:	• There is already a team assigned to a construction project and has an entry in the Construction_team_Site table.
OPEN ISSUES:	• none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Upload Compliance Documents	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.4	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Client	
PRIMARY SYSTEM ACTOR	Health and Safety Officer	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	- Operations Manager - Director - Procurement and logistics officer - Human resource management	
DESCRIPTION:	This use case narrative describes the process the system will go through when the Health and Safety Officer wishes to upload the various Compliance documents unique to the specific construction project.	
PRE-CONDITION:	Client needs to send Health and Safety Officer compliance documents needed for the construction site, throughout the life cycle of the construction process.	
TRIGGER:	Client sends Health and Safety Officer the compliance documents needed for the active construction site.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Health and Safety Officer requests to upload compliance	Step 2: The system invokes use case 4.5 “Search Project”

	documents relating to the specific construction site.	The system will display the project information.
		Step 3: The system will prompt the user to upload the compliance document received from the client and enter compliance details.
	Step 4: The Health and Safety Officer will select appropriate compliance document sent from the client and enter the following information for the compliance document: • Compliance Document Name • Compliance Document description • Compliance Document (the document itself)	Step 5: The system will capture and validate the selected compliance documents against the required document types read from the Compliance document table. [ALT] document.
		Step 6: The system will prompt the Health and Safety Officer to confirm if the captured
	Step 7: The Health and Safety Officer confirms that the captured compliance document is correct. [ALT]	Step 8: The system will create a new entry in the Compliance document table from the captured and confirmed compliance document information uploaded to the system. A new Compliance Document ID is generated once the entry has been generated and the health and safety Officer is notified that the compliance document has successfully been uploaded.
ALTERNATE COURSES:	ALT Step 5: The captured compliance documents are not of the correct data type. The system displays an error notification displaying the error type and returns the user back to step 3.	
	ALT Step 7: The Health and Safety Officer does not confirm the uploaded documents or rejects the confirmation. The system then removes the captured document and returns the user to step 3.	

CONCLUSION:	The use case concludes once the compliance documents have been uploaded and created in the Compliance document table.
POST-CONDITION:	• The construction site compliance document has been uploaded to the Compliance document table.
BUSINESS RULES	• Only Health and safety Officer may upload compliance documents for the construction site. • Each construction site will have unique compliance documents relating specifically to that construction site. • The Client (Vodacom) is responsible for creating the compliance documents and submitting them to the Health and Safety Officer. • Compliance documents are not always needed for construction projects.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none
ASSUMPTIONS:	• none
OPEN ISSUES:	• none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Search Project		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.5		
PRIORITY:	high		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	User		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case entails the process the system will go through when the user requires to search for a specific project that is currently active on the system. The user will enter the details of the project for the system to then read the details of the project from the associated tables.		
PRE-CONDITION:	- User must be logged onto the system - The project must exist on the system to view.		
TRIGGER:	The user wants to search for a project.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The user requests to search for a project.	Step 2: The system responds by prompting the user to enter a search criterion for the desired project.	

	Step 3: The user will enter the details of the desired project by either • Project Name • Site Name • Site Type • BS Number	Step 4: The system captures the entered search criteria and validates the entered data. [ALT]
		Step 5: The system will read from the Project table and the display all the results obtained from the read result according to the provided search criteria. The following results are displayed: • Project Number • BS Number • Project Name • Date Started [ALT]
		Step 6: The system prompts the user to select the desired project from the search Criteria.
	Step 7: The user selects the desired project displayed from the read results listed.	Step 7: The system captures the selected project result to be displayed.
		Step 5: The system reads from the Project table and displays the data accordingly to the user: • Project Name • Date started • Site location • Project status • BS Number • Site Size • Region • Project Status
ALTERNATE COURSES:	ALT Step 4: The entered search criteria are not valid or do not exist within the system. The system displays an error message to the user stating that the details entered are not correct or that the project search criteria does not exist within the system	

	The system will return the user to step 2 .
	ALT Step 5: The search criteria for the desired project does not exist within the Project table. The User is notified that the Project does not exist. The system will return the user to step 2 .
CONCLUSION:	The use case concludes when the system reads the data and displays the search results to the user.
POST-CONDITION:	• The searched project is retrieved and displayed to the user.
BUSINESS RULES	• Only management accounts are allowed to search for projects.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none
ASSUMPTIONS:	• none
OPEN ISSUES:	• none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Create site progress description	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐	
USE CASE ID:	4.6		
PRIORITY:	high		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	Site Manager		
PRIMARY SYSTEM ACTOR	Operations Manager		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	- Client - Director - Construction Team - Health and Safety Officer		
DESCRIPTION:	This use case describes the process that the system and operations manager will go through when the construction site progress is to be updated. The site Manager will update the operations manager on the progress of the site via a call and photos. The Operations Manager will then create a site progress description entry in the system to keep track of the progress made on the construction site.		
PRE-CONDITION:	- The Site Manager updates the Operations Manager on progress made to the construction site. - Photos on the construction site are sent to the manager		
TRIGGER:	The Operations Manager requests to update and create a new entry on the construction site progress.		
TYPICAL COURSE OF EVENTS:	Actor Action Step 1:	System Response Step 2:	

	The Operations Manager requests to create a new site progress description	The system invokes use case 4.5 “Search Project” The system displays the project details viewed.
		Step 3: The system prompts the user to enter and attach the following details on the construction progress: • Progress Title • Progress Description • Construction photos (Can attach multiple)
	Step 4: The Operations Manager enters the details for the site progress description	Step 5: The system captures the entered details and validates the information given and that all fields have been entered into the fields. [ALT]
		Step 6: The system prompts the user to confirm the details for the site progress description.
	Step 7: The Operations Manager confirms the details entered and to be submitted for the site progress description. [ALT]	Step 8: The system captures the confirmation and creates a new entry in the Construction_Photos and Site_Progress_Description tables. New IDs for the site progress description and construction photos are generated. The new entries are linked to the Construction_Site table via a foreign key. The following attributes are created in the Site_Progress_Description and Construction_Photos tables: • Status Title • Status Description • Date Updated • Construction Photo (Construction_Photos)
		Step 9: The system notifies the Operations Manager via email on the site progress description that has been created. The

		site progress description is displayed to the user.
ALTERNATE COURSES:	ALT Step 5: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 3.	
	ALT Step 7: The Operations Manager does not confirm that the information captured is correct. The system returns to step 3	
CONCLUSION:	This use case is concluded when the Operations Manager is notified on the creation of the site progress description.	
POST-CONDITION:	Site progress status is updated.	
BUSINESS RULES	- Site Manger has to provide the Operations Manager with photos on the progress made to the construction site. - Only the Operations Manager can update the site progress description on the system.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	none	
ASSUMPTIONS:	none	
OPEN ISSUES:	none	

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	View Site Progress description		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.7		
PRIORITY:	high		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	Operations Manager		
PRIMARY SYSTEM ACTOR	Operations Manager		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	- Director - Quality control officer - Client - Procurement and Logistics Officer - Electrician		
DESCRIPTION:	This use case describes the process the system will go through when primarily the Operations manager or any interested stake holder would like to view the progression of the construction site relating to a specific project.		
PRE-CONDITION:	- The user must be logged into the system. - A construction site must have Site-Go-Ahead		
TRIGGER:	The user wishes to view site progress.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The user requests to view site progress on a construction site.	Step 2: The system invokes use case 4.3 “Search Project”	

		The system displays the project details viewed.
		Step 3: System will prompt user to View Site progress.
	Step 4: The user selects View site progress descriptions.	Step 5: The system will read and display all current and previous additions made to the relevant construction project with the most recent additions to the progress status being displayed first. Data is read from the Construction_site table, Construction_Photo tables and the Site_Progress_Description table. The following information is displayed: • Status title • Status description • Construction photos • Date updated • Site Name • Current Status (most recent progress description update) • Construction start date
ALTERNATE COURSES:	None	
CONCLUSION:	This use case concludes once the Site progress description is	
POST-CONDITION:	• The Operations Manager views the site progress descriptions.	
BUSINESS RULES	• Must be at-least one entry at all time in the active site progress description.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none	
ASSUMPTIONS:	• none	
OPEN ISSUES:	• none	

Author (s) Michael Vosloo

Date: 05/15/2021

Version: 1.1

USE CASE NAME:	Upload Complete Site photos	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.8	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Site Manager	
PRIMARY SYSTEM ACTOR	Operations Manager	
OTHER PARTICIPATING ACTORS:	• Client • Health and safety Officer	
OTHER INTERESTED STAKEHOLDERS:	• Director • Quality control officer • suppliers • Procurement and Logistics Officer	
DESCRIPTION:	This use case describes the process the system will go through once the construction is fully complete on the construction site. The Operations manager will take photos of the fully completed site and upload it into the system. Once the final photos for the completed site are uploaded to the system the Site progress description will automatically be updated to “complete” and the use case for uploading of the Radio Frequency report (RF report) will be activated for the user to upload said report.	
PRE-CONDITION:	• The operations Manager must be logged into the system • The site Manager must let the Operations manager know that site construction has been completed.	
TRIGGER:	The Operations Manager receives a notification from the Site Manager that construction has been completed.	
TYPICAL COURSE OF EVENTS:	Actor Action Step 1:	System Response Step 2:

	The Operations Manager requests to upload complete site photos.	The system prompts the user the user to select the desired photos to be uploaded.
	Step 3: The Operations selects the desired photos to be uploaded to the system.	Step 4: The system captures the selected photos to be uploaded to the system.
		Step 5: The system validates captured photos against existing photo types read from the Completion_Photos table. [ALT]
		Step 6: The Operations Manager is prompted to confirm the captured photos to then be uploaded to the Completion_Photos table.
	Step 7: The Operations Manager confirms that the captured completion photos are correct. [ALT]	Step 8: System captures the confirmation of the completion photos.
		Step 9: The completion site photos will be added into the Completion_Photos table, each photo generating their own unique ID, the following attributes are present in the Completion_Photos table: • Completion Photo ID • Completion Photo (actual phot) • Project ID (Foreign key)
		Step 10: The Project status attribute will automatically be updated in the Project table to “Construction complete”
		Step 11: The system will notify the Health and Safety Officer on the completion of site progress photos being uploaded to the system.
ALTERNATE COURSES:	ALT Step 5: The captured Completion photos are not of the correct data type. The system displays an error notification displaying the error type and returns the user back to step 2.	
	ALT Step 7:	

	The Operations Manager does not confirm the captured completion photos or rejects the confirmation. The system then removes the captured completion photos and returns the user to step 2.
CONCLUSION:	This use case concludes when the Completed site Photos are updated and the respective use case are activated (Use case 4.8 “Upload Radio Frequency report”)
POST-CONDITION:	- The completion construction site photos have been uploaded to the Completion_Photos table - The Radio Frequency report has been activated and available for upload.
BUSINESS RULES	- Operations Manager can either take photos personally or upload photos from an existing gallery. - Radio Frequency report can only be uploaded once Construction has been marked fully complete.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	none
ASSUMPTIONS:	User is on the project home page
OPEN ISSUES:	none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Upload Radio Frequency report	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.9	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Operations Manager	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	- Financial Officer - Client	
OTHER INTERESTED STAKEHOLDERS:	Director	
DESCRIPTION:	This use case describes the process the Operations Manager will go through once the Construction photos are uploaded to the system. The system will capture the already created Radio Frequency report and store the report in the system. Once the report has been captured and the necessary actors are notified. The ninety percent claim can then be request from the client, as well as to request the site inspection from the quality control officer.	
PRE-CONDITION:	- Site completion photos must be uploaded to the system. 100% completion on construction site.	
TRIGGER:	The Operations Manager requests to upload the Radio Frequency report	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The Operations Manager requests to upload the Radio Frequency report.	Step 2: The system prompts the user to select the desired Radio Frequency report to be uploaded.
	Step 3: The Operations Manager selects the desired Radio Frequency report to be uploaded to the system and enters the report Name	Step 4: The system captures the selected Radio Frequency report and validates the captured Radio Frequency report. [ALT]
		Step 5: The system prompts the user to enter the Cooling system details that will be associated with the Radio Frequency report. The prompt the user to enter the following attributes: - Item code - Serial Number - Description - Document invoice (is a file/invoice of the colling system)
	Step 6: The user enters the cooling system details needed for the Radio Frequency report.	Step 7: The system confirms and validates all details entered are correct [ALT]
		Step 8: The system prompts the user to confirm the selected Radio Frequency report to be uploaded to the system and that the entered details for the Colling system are correct.
	Step 9: The Operations Manager confirms that the captured Radio Frequency report and cooling system information is correct. [ALT]	Step 10: The system captures the confirmation response of the correct Radio Frequency report and cooling system details.
		Step 11: The system will upload and create a new entry in the Report table and

		generate a new ID for the newly uploaded Radio Frequency report. The report type foreign key in the Report table., with the report type being "Radio Frequency report". Project Status will be updated in the Project table as well as the system will update the captured and validated cooling system details to the Project table. The following attributes will be created when the Radio Frequency report is uploaded: • Report ID • Report Name • Date (date uploaded) • Report (the actual report being uploaded) • Report Type (Foreign Key)
		Step 12: The system will notify the user that the Radio Frequency report has been successfully uploaded to the system and that the cooling details have been successfully updated in the Project table.
		Step 13: The system will notify the Financial officer on the uploading and capturing of the Radio Frequency report and the Quality Control Officer is notified on the full completion of the construction site and radio frequency installation via the Radio Frequency report.
ALTERNATE COURSES:	ALT Step 4:	The captured Radio Frequency Report is not of the correct data type. The system displays an error notification displaying the error type and returns the user back to step 2.
	ALT Step 7:	The captured Cooling details are not of the correct data type. The system displays an error notification displaying the error type and returns the user back to step 5.
	ALT Step 9:	

	The Operations Manager does not confirm the captured Radio Frequency Report or rejects the confirmation. The system then removes the captured completion photos and returns the user to step 2 .
CONCLUSION:	This use case concludes once the Operational Manager, Quality Control Officer and Financial Officer are notified.
POST-CONDITION:	• Operations Manager is notified on Radio Frequency report upload. • Financial Manager is notified on Radio Frequency report upload. • Quality Control Officer is notified on Radio Frequency report upload. • Client is notified via Operations Manager and Financial Manager that Radio Frequency report is concluded.
BUSINESS RULES	• Only the Operations Manager can upload the Radio Frequency report. • The client has to be aware of Radio Frequency report once construction site is completed. • Radio Frequency report has to be uploaded before generating of invoice may begin. • Radio Frequency report has to be uploaded before Site inspection from the Quality Control Officer can take place.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none
ASSUMPTIONS:	• Process to start the generating of invoices on construction project can commence
OPEN ISSUES:	• none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Search Radio Frequency report		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.10		
PRIORITY:	high		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	User		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	• Operations Manager • Health and Safety Officer • Director • Quality Control Officer • Financial Officer		
OTHER INTERESTED STAKEHOLDERS:	• Client		
DESCRIPTION:	This use case describes the process the User and system will go through when the user desires to search and view the Radio Frequency report. The Radio Frequency report is searched from the system and then displayed to the user in a pdf format.		
PRE-CONDITION:	• Radio Frequency report is uploaded to the Report table. • Financial Officer was notified on upload of Radio Frequency report. • Quality Control Officer was notified on upload of Radio Frequency reports. • User must be logged into the system		
TRIGGER:	The user requests to view Radio Frequency Report.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	

	The user requests to view the Radio Frequency report.	The system invokes use case 4.5 “Search Project” The system will display the project details.
		Step 3: The system will prompt the user to View Radio Frequency Report.
	Step 4: The user responds and selects the View Radio Frequency Report.	Step 4: The system will read the Radio Frequency report from the Report table. The system will read the report where the project ID obtained from the Search Project use case matches the foreign key in the Report table and the system will also identify which report is the Radio Frequency report by reading the correct report type. [ALT]
		Step 5: The system will display the Radio Frequency Report read from the Report table to the user in pdf format.
ALTERNATE COURSES:	ALT Step 3: The searched for construction project does not have a Radio Frequency report uploaded to the system. The user cannot be prompted to view the radio Frequency Report. The user is notified that the system does not have the current searched for projects radio frequency report uploaded to the system. The use case is concluded.	
CONCLUSION:	This use case concludes when the Radio Frequency report is read from the Report table and displayed to the user.	
POST-CONDITION:	The Radio Frequency Report has been displayed to the user.	
BUSINESS RULES	Radio Frequency report has to be used for invoicing to begin	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	none	
ASSUMPTIONS:	The Radio Frequency Report is uploaded to the system.	
OPEN ISSUES:	none	

Author (s) Michael Vosloo

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USE CASE NAME:	Request Site Visit	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.11	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Site Manager	
PRIMARY SYSTEM ACTOR	Operations Manager	
OTHER PARTICIPATING ACTORS:	Quality Control Officer	
OTHER INTERESTED STAKEHOLDERS:	- Client - Director - Financial Officer	
DESCRIPTION:	This use case describes the process the Operations Manager will go through once the Site Manager notifies the Operations manager that construction has been fully completed, the Complete construction photos have been uploaded and the Radio Frequency report has been uploaded. The Operations manager will request the system to notify the Quality Control Officer to come and request the site inspection, to then start the process to start creating final documents for the future use cases.	
PRE-CONDITION:	- Radio Frequency report has been uploaded - Complete Construction Photos have been uploaded. - Site Manager notifies Operations Manager that construction is fully complete.	
TRIGGER:	The Operations Manager wishes to request site inspection by Quality Control Officer	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: Operations Manager request site visit from the quality control officer.	Step 2: The system captures the request for site visit from Quality Control Officer.
		Step 3: The system will read the <i>project status</i> from the Project table This is done to determine if the necessary statuses are met in order to request site visit. The system will read data from the aforementioned table to determine if the project status preceding the Request Site visit status is correct. [ALT]
		Step 4: The system will prompt the user to confirm to request the site visit from the Quality Control Officer.
	Step 5: The Operations Manager will confirm to proceed with the request for site visit. [ALT]	Step 6: The system will capture the user's response to proceed with the request of site visit from the Quality Control Officer.
		Step 7: The system will invoke use case 11.5 "Generate acceptance Document" The Acceptance document is read from the Acceptance_Document table and displayed to the user. The following details are displayed along with the Acceptance Document: • Acceptance Document Name • Date Created • Date Updated • Acceptance Documents (Actual acceptance document)
		Step 8: The System will notify the Quality Control officer via email and sms that the Operations Manager has requested a site visit for the specific construction project and that the basic acceptance

		document has been created for the snags to be listed on site visit and inspection.
		Step 9: The system will update <i>the project status</i> foreign key in the Project table to indicate that site visit has requested.
		Step 10: The system will display to the Operations Manager and Quality Control officer that the site visit has been requested and the basic acceptance document has been created and is stored on the system for viewing and editing to list possible snags on the construction site.
ALTERNATE COURSES:	ALT Step 3: The required documents have not been uploaded to the system thus the correct status has not been updated to indicate that the Requesting of site visit may commence. The system will notify the Operations Manager what required documents and reports are to be generated before the site visit may be requested. The use case will conclude.	
	ALT Step 5: The Operations Manager does not confirm to request Site visit or rejects the confirmation. The system returns the user to step 2.	
CONCLUSION:	This use case concludes when the Operations Manager is notified via email that a site visit has been requested for inspections and to list snags on the construction site.	
POST-CONDITION:	- The basic Acceptance document is created and populated with the necessary and relevant project details. - The Quality Control Officer is notified via email on request for site visit.	
BUSINESS RULES	Only the Operations Manager can request a site visit from the Quality control officer.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	none	
ASSUMPTIONS:	- Radio Frequency report has been uploaded - The User is view data on the desired project view.	
OPEN ISSUES:	none	

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Edit Acceptance Document	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.12	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Quality Control Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	• Operations Manager	
OTHER INTERESTED STAKEHOLDERS:	• Client • Financial Officer • Director • Site Manger • Construction team	
DESCRIPTION:	This use case describes the process the Quality Control Officer will go through when the Site visit is taking place, the Quality Control Officer will fill out the form in the Acceptance Document to log down the snags notified on the site visit that was requested by the Operations Manager. The quality Control Officer can either select a snag that has a common occurrence through a list of common snags or the Quality Control officer can create a new snag specific to that site problem. All snags listed on the Acceptance document will be specific to the construction site. Once all snags have been listed on the Acceptance document, the Quality Control Officer will notify the Construction teams on site to fix the snags. The Director will then be notified on the acceptance document.	
PRE-CONDITION:	• The acceptance document is created on the system • The Quality Control Officer is on site performing the site inspection.	

TRIGGER:	The Quality Control Officer requests to log a new snag onto the acceptance document.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Quality Control Officer requests to log a new snag onto the acceptance document.	Step 2: The system captures the users request invokes use case 4.5 “Search Project”
		Step 3: The system will display the already generated Acceptance document. A form will be generated and the following Acceptance document/site details will be displayed: • Site Name • Acceptance Date • Site Type • BS No. • Breaker Size • Cable Length • Container Type • Nav Light • Signs Installed • Container Size • Mast Type • Aircon Size • Manhole Installed This data is obtained from the already generated Acceptance document in the Acceptance_Document table and the Project table.
		Step 4: The system will prompt the user to confirm that acceptance documents are correct.
	Step 5: The Quality Control Officer confirms that Acceptance	Step 6: The system captures the users’ confirmation on the correct site details in the Acceptance Document

	document details are correct [ALT]	
		Step 7: The system will generate a new form for snags on the construction site to be listed. The system will provide the user the option to select from a list of common and pre-defined snags that are read from the Common_Snag table. The option to create a note on the selected snag is present when selecting pre-defined snag item. [ALT]
	Step 8: The user will select the desired snags from the list of pre-defined snags to be enter into the Acceptance document. [ALT]	Step 9: The system will capture the selected snags and custom entered snags into the system and display them in a table format with the following attributes: • Snag Item • Snag Description • Snag Note
		Step 10: The system will prompt the user to confirm the snags listed are correct.
	Step 11: The Quality Control Officer confirms snags entered are correct. [ALT]	Step 12: The system will capture the confirmation provided by the user and store the captured snags in the Project_Snag_List and Project_Snag tables with the attributes:
		Step 13: The system will combine the previously generated Acceptance Document and the newly created snag list into a new document The newly combined Acceptance document is update in the Acceptance_Document table.
		Step 14: The system will notify the Operations Manager and quality control officer on

		the newly created Acceptance document.
ALTERNATE COURSES:	ALT Step 5: The Operations Manager does not confirm that the Acceptance document is correct or rejects the confirmation. The system then prompts the user to fill out and update a form with the following attributes read from the Acceptance_Docuement table: • Site Name • Acceptance Date • Site Type • BS No. • Breaker Size • Cable Length • Container Type • Nav Light • Signs Installed • Container Size • Mast Type • Aircon Size • Manhole Installed The user will update the attributes to the correct details and submit the form to the user. The use case will then return to step 3.	
	ALT Step 7: The system offers the user to enter a custom snag item to specific project and construction site. The System will prompt the user to enter the details of the snags with the following attributes: • Snag Item • Snag Description • Snag Note Use case will proceed to ALT Step 8.	
	ALT Step 8: The user will provide the details on the custom snag list to be added to the Acceptance Document. The use case will proceed to step 9	
	ALT Step 11: The Operations Manager does not confirm that the snag item list is correct or rejects the confirmation. The system will return the user to step 7	
CONCLUSION:	This use case concludes when the Operations Manager and Site Manager are notified that snags have been successfully added to the Acceptance Document.	

POST-CONDITION:	• The Acceptance document is combined with the snag list and updated in the Acceptance_Document table.
BUSINESS RULES	• Only the Quality Control Officer can update and create snags on the Acceptance document • The Quality Control officer must be on site to log snags onto the acceptance document.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• Basic Acceptance document with no snags is uploaded to the system.
OPEN ISSUES:	• none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Search Accept Document		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.13		
PRIORITY:	high		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	User		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	• None		
OTHER INTERESTED STAKEHOLDERS:	• Quality Control Officer • Director • Operations Manager • Client • Construction Team • Health and Safety • Procurement and logistics officer		
DESCRIPTION:	This use case describes the process the user and system will go through when the user requests to view the Acceptance document to view details on the construction site and possible snags on the construction site that have been identified and logged by the quality Control officer.		
PRE-CONDITION:	• The user must be logged into the system • The Acceptance document is created and loaded onto the system in the Acceptance_Document table.		
TRIGGER:	The user requests to search and view the Acceptance Document		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	

	The user requests to view the Acceptance Document.	The system will prompt the user to enter a search criterion for the desired acceptance document.
	Step 3: The user will enter the desired acceptance document search criteria.	Step 4: The system will capture and validate the search criteria provided by the user. [ALT]
		Step 5: The system will read from the Acceptance_Document table and display the results obtained from the read result. The following attributes are read: • Site Name • Acceptance Date • Site Type • BS No. • Breaker Size • Cable Length • Container Type • Nav Light • Signs Installed • Container Size • Mast Type • Aircon Size • Manhole Installed [ALT]
		Step 6: The system will prompt the user to select the desired Acceptance document displayed from the results displayed.
	Step 7: The user will select the desired Acceptance document from the displayed results.	Step 8: The system will display the desired Acceptance document from the search result. The site details are displayed in the Acceptance document as well as the snag list for the specific site the acceptance document is linked to.
ALTERNATE COURSES:	ALT Step 4:	

	The captured search criteria are not valid. The system will display a notification to the user displaying that the captured criteria is invalid or incorrect. The system returns to step 2 .
	ALT Step 5: The captured and valid search criteria for the desired Acceptance Document does not exist within the Acceptance Document table. The user system notifies the owner that the searched for Acceptance document does not exist within the system. The use case is concluded.
CONCLUSION:	The use case concludes once the Acceptance documents the user searched for is displayed to the user.
POST-CONDITION:	- The Acceptance document is read from the Acceptance_Document table. - The Acceptance document is displayed to the user.
BUSINESS RULES	none
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	none
ASSUMPTIONS:	none
OPEN ISSUES:	none

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Confirm Acceptance Document	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.14	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Site Manager	
PRIMARY SYSTEM ACTOR	Quality Control Officer	
OTHER PARTICIPATING ACTORS:	• Client	
OTHER INTERESTED STAKEHOLDERS:	• Director • Operations Manager • Construction Team • Financial Officer • Health and Safety Officer	
DESCRIPTION:	This use case describes the process the Quality Control Officer and the system will go through when the snags have been completed and the Quality Control officer has confirmed that the snags have been completed. The Quality Control Officer will confirm on the system that the snags have been completed and that the Construction Site is ready for the client visit accompanied by the Quality Control Officer. The system will capture the Confirmation of the Acceptance document and notify the Quality Control officer to request a site visit by the Client for site sign off.	
PRE-CONDITION:	• The Acceptance Document must be uploaded to the system. • The Quality Control Officer must confirm snags have been completed. • The Site Manager informs the Quality Control Officer that snags have been completed.	

TRIGGER:	The Quality control officer wants to confirm that the snags have been completed.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The quality Control Officer requests to confirm Acceptance Document	Step 2: The system invokes use case 4.15 "Search Acceptance Document" The system will display the acceptance document.
		Step 3: The system will read the snags from the Project_Snag_List table and display the results obtained from the project snag list in a table with the following items: • Snag Item • Snag Description • Snag Note • Complete Check
		Step 4: The system will prompt the user to mark the completed snags presented on the list of snags in the table.
	Step 5: The Quality Control Officer will mark the completed snag items presented on the list.	Step 6: The system will capture the snags marked complete on the snag item list table.
		Step 7: The system will check that all snags presented on the table have been marked complete. [ALT]
		Step 8: The system requests confirmation that all snags have been marked complete.
	Step 9: The Quality Control Officer confirms all snags have been completed. [ALT]	Step 10: The system captures the confirmation that all snags have been completed.

		Step 11: The system will update the project status in the Project table to indicate that the construction site is ready for client visit.
		Step 12: The system will notify the Quality control officer and Operations Manager to request a site visit from the client.
ALTERNATE COURSES:	ALT Step 7: There are still snags presented on the table that have to be completed. The system will return to step 3 .	
	ALT Step 9: The Quality Control Officer does not confirm or rejects that all snags have been completed. The system will return the step 3 .	
CONCLUSION:	This use case will conclude once the Project Status has been updated and the Quality Control Officer has been notified to request a site visit from the client.	
POST-CONDITION:	• The Project Status has been updated. • Snags have been fully completed. • Client site visit has been requested.	
BUSINESS RULES	• Only the Quality Control Officer can confirm the acceptance document. • An inspection must take place to confirm the snags caught on the Acceptance Documents.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none	
ASSUMPTIONS:	• none	
OPEN ISSUES:	• none	

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Capture Site Sign Off	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.15	
PRIORITY:	high	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Client	
PRIMARY SYSTEM ACTOR	Quality Control Officer	
OTHER PARTICIPATING ACTORS:	Financial Officer	
OTHER INTERESTED STAKEHOLDERS:	- Director - Operations Manager	
DESCRIPTION:	This use case describes the process the Quality Control Officer and System will go through once the client site visit has happened (Accompanied by the quality control officer). The Quality Control Officer will upload the Site Acceptance Schedule to the system indicating that the client has signed off on the construction site and the final 10% invoice may be claimed. The Financial Officer will be notified that Site sign off has taken place and can begin the final claim process.	
PRE-CONDITION:	- The Client site visit has taken place. - The client has sent the Quality Control Officer the Site Acceptance Schedule (Site Sign off)	
TRIGGER:	The Quality Control Officer requests to capture the site sign off.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The quality Control Officer requests to upload Site acceptance document `	Step 2: The system invokes use case 4.5 “Search Project” The system will display the project details.
		Step 3: The system will prompt the user to upload the site acceptance schedule (the official site sign-off document.
	Step 4: The Quality Control Officer will upload the desired Site acceptance schedule for the related project.	Step 5: The system will capture and validate the selected site acceptance schedule. The system reads from the Report and Report_Type table to validate the selected document. [ALT]
		Step 6: The system will prompt the user for confirmation to upload the Site Acceptance schedule to the Report table.
	Step 7: The Quality Control officer confirms the selected document to be uploaded to the system. [ALT]	Step 8: The system will capture the user’s confirmation and create a new entry into the Report table generating a new Report ID for the uploaded Site Acceptance Schedule. The Uploaded document will have a foreign key indicating that it is the Site Acceptance document.
		Step 9: The system will update the project status in the Project table indicating that the site sign off has been completed and the final claim process can begin.
		Step 10: System invokes use case 4.13 “Search Acceptance Document” The system will then merge the site acceptance schedule (Site sign-off) with the Acceptance document that was read from the result of the invoke.

		The site acceptance schedule will be added to the bottom of the acceptance document. And the Acceptance_Document table will be updated with the correct foreign key of the site Acceptance schedule primary key. Indicating that the two documents have been merged.
		Step 11: The system will notify the Quality Control officer that the acceptance document has been updated with the site acceptance schedule.
		Step 11: The system notifies the Financial Officer on the site sign off and the update on the project status in the Project table to then begin the final claim process.
ALTERNATE COURSES:	ALT Step 5: The selected site acceptance schedule document is not correct or invalid. The system notifies the user on the error and returns the user to step 3 .	
	ALT Step 7: The Quality Control Officer does not confirm or rejects the confirmation to upload the selected site acceptance schedule. The use case concludes.	
CONCLUSION:	The use case concludes when the site acceptance schedule is uploaded and the Financial Officer is updated on the project status being that site has been sign-off by the Client.	
POST-CONDITION:	• The Project status is updated • The Construction site is completely finished. • The Financial Officer is updated on site sign-off.	
BUSINESS RULES	• Only the Quality Control officer can upload the site acceptance schedule. • The financial Officer must be updated on the site sign-off • The client has to send the Quality Control officer the Site Acceptance schedule.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• none	
ASSUMPTIONS:	• Client has sent the site acceptance schedule to the Quality Control Officer	
OPEN ISSUES:	• none	

Author (s) Michael Vosloo

Date: 05/15/2021Version: 1.1

USE CASE NAME:	Capture Commission report	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	4.16	
PRIORITY:	medium	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Operations Manager	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	Client	
OTHER INTERESTED STAKEHOLDERS:	- Director - Financial manager - Quality Control Officer	
DESCRIPTION:	This use case describes the process the Operations Manager will go through when the Commission document is received from the client	
PRE-CONDITION:	- The Client sends the Commission report to the Operations Manager - The Site sign off has been completed.	
TRIGGER:	The Operations Manager receives the Commission report for the project.	
TYPICAL COURSE	Actor Action	System Response
	Step 1: The Operations Manager requests to upload the commission report received from the client.	Step 2: The system invokes use case 4.5 "Search Project" The system will display the project details.

OF EVENTS:		Step 3: The system will prompt the user to upload the site acceptance schedule (the official site sign-off document).
	Step 4: The Operations manager will upload the desired commission report for the related project.	Step 5: The system will capture and validate the selected commission report. The system reads from the Report and Report_Type table to validate the selected document. [ALT]
		Step 6: The system will prompt the user for confirmation to upload the commission report to the Report table.
	Step 7: The Operations manager confirms the selected document to be uploaded to the system. [ALT]	Step 8: The system will capture the user's confirmation and create a new entry into the Report table generating a new Report ID for the uploaded Site Acceptance Schedule. The Uploaded document will have a foreign key indicating that it is the commission report. The Following attributes are created when the Commission report is uploaded: • Report ID (Primary key) • Report • Report Name • Date Uploaded • Report Type ID (Foreign Key)
		Step 9: The system will notify the Operations Manager that the Commission report has been uploaded to the system.
ALTERNATE COURSES:	ALT Step 5: The selected commission report is not correct or invalid. The system notifies the user on the error and returns the user to step 3 .	
	ALT Step 7: The Operations Manager does not confirm or rejects the confirmation to upload the selected commission report. The use case concludes.	
CONCLUSION:	The Commission report is uploaded to the system.	

POST-CONDITION:	• The Operations Manager is notified that the Commission report is uploaded to the system.
BUSINESS RULES	• Only the Operations Manager can upload the commission report to the system.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• The client has sent the commission report to the Operations Manager
OPEN ISSUES:	• none

1.4.5 Invoicing Subsystem

Gohvan Construction**Author (s):** Vincent Yu**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Search Invoice		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	5.1		
PRIORITY:	High		
SOURCE:	Gohvan Construction's Elicitation		
PRIMARY BUSINESS ACTOR	Financial Officer (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	NONE		
OTHER INTERESTED STAKEHOLDERS:	Managing Director		
DESCRIPTION:	This use case describes the event when the Financial Officer wants to view an Invoice associated to a project. The system will display the Invoice and the details associated with the Invoice.		
PRE-CONDITION:	- The Financial Officer needs to be logged onto the system. - Invoice already generated and stored in the system.		
TRIGGER:	The Financial Officer wants to search for a specific Invoice.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The Financial Officer wants to search for a project's Invoice	Step 2: The system requests the Financial Officer for the Project search parameter.	

	Step 3: The Financial Officer enters the requested search parameter [Project ID or Project Name].	Step 4: The system captures and validates the search parameter [Project ID or Project Name] supplied by the User is in the appropriate format and is completed. [ALT]
		Step 5: The system Invokes use case 4.5 Search Project.
		Step 6: The system retrieves the Invoice result based on the search parameter supplied by the Financial Officer from the Invoice table: • Invoice Number • Invoice • Date sent • Date paid The Invoice is displayed. [ALT]
ALTERNATE COURSES:	ALT Step 4: The entered search parameter is not in the correct format or not completed. The system displays a notification of the validation error to the financial officer. Return to Step 2	
	ALT Step 6: There is no invoice in the system that corresponds to the entered search parameter. The system notifies the financial officer that no search results were found in the system. Terminate this use case	
CONCLUSION:	The use case concludes when the Invoice is displayed.	

POST-CONDITION:	• The invoice is displayed
BUSINESS RULES	• Only the Financial Officer has access to searching invoices.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

Gohvan ConstructionAuthor (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Send Invoice	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	5.2	
PRIORITY:	High	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	Financial Officer (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case describes the event when The Financial Officer wants to send an invoice to the client. The system will generate an invoice, associated to a specific project and send it to the Financial Officer. The Financial Officer will check the invoice to ensure the invoice is accurate. Once the check is complete the Invoice is sent to the client for approval.	
PRE-CONDITION:	- Financial Officer needs to be logged on to the system. - Financial Officer needs to be in the specific project to download invoices. An RF Report needs to be present to generate the initial claim invoice (90%). Both RF Report and Client site sign-off need to be present to generate the final claim invoice (10%).	
TRIGGER:	The Financial offer would like to send an invoice to the client.	

TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Financial Officer requests to send Initial Claim Invoices to the client. [ALT]	Step 2: The system reads the client's Purchase Order (PO) PO Amount, Client details, Site details. associated with the project from the Client Purchase Order, Client and Site table with the following attributes: • PO Amount • Client Name • Client Address • Vat no. • Registration no. • Site name Using these attributes, the system generates an Initial Claim Invoice. This Initial Claim caters for 90% of the total invoice amount. [ALT]
		Step 4: The system displays the pre-generated invoice with its details: • Invoice Number • Invoice • Invoice type The system prompts the Financial Officer to check and confirm if the Invoice is correct or not.
	Step 5: The Financial Officer compares the generated invoice to the projects associated quotes. The Financial Officer confirms the details on the Invoice are correct. [ALT]	Step 6: The system saves the invoice in the Invoice table. • Invoice Number • Invoice • Invoice type The system prompts the Financial Officer to download the Invoice.
	Step 7: Once invoice is confirmed, The Financial Officer would like to download the Invoice	Step 8: The system sends the Invoice to the Financial Officer.

	The system prompts the Financial Officer to send the invoices to the client.
ALTERNATE COURSES:	ALT Step 1a: The Financial Officer requests to send Final Claim Invoices to the client. ALT Step 2a: The system pulls the PO Amount, Client details, Site details. associated with the project from the Client Purchase Order table with the following attributes: • PO Amount • Client Name • Client Address • Vat no. • Registration no. • Site name Using these attributes, the system generates an Initial Claim Invoice. This Initial Claim caters for 10% of the total invoice amount. ALT Step 5: The Financial Officer confirms the invoice is incorrect. Terminate use case.
CONCLUSION:	This use case concludes when the invoice is sent to the client.
POST-CONDITION:	• Invoice is sent to the client for approval and acceptance.
BUSINESS RULES	• Every project should only have two invoices (Initial 90% and Final 10% Claims). • RF Report for the project needs to be uploaded, before Invoicing can begin. • Only the Financial Officer has access to generating invoices.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

Gohvan ConstructionAuthor (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Capture Proof of Payment	USE CASE TYPE	
USE CASE ID:	5.3	Business Requirements: ☐	
PRIORITY:	High	System Analysis: ☐	
SOURCE:	Gohvan Construction's Elicitation	System Design: ☐	
PRIMARY BUSINESS ACTOR	Financial Officer (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	NONE		
OTHER INTERESTED STAKEHOLDERS:	Managing Director		
DESCRIPTION:	This use case describes the event where the Financial Officer is notified on the Taulia's Portal that an Invoice has been paid to the company. The Financial Officer needs to capture this status on the Taulia Portal as proof of payment (POP).		
PRE-CONDITION:	- Financial Officer has to be logged into the system. - The Invoice has been approved by client and the receipt number is associated to the corresponding invoice.		
TRIGGER:	The Financial Officer wants to capture the status of an already processed invoice.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	
		The system requests for the Proof of payment attachment.	

	The Financial Officer wants to capture the Proof of Payment of an Invoice.	
	Step 3: The Financial Officer uploads the screenshot of the invoice's status, from the Taulia Portal, as proof of payment.	Step 4: The system displays the proof of payment uploaded by the Financial Officer. The system will prompt the Financial Officer to enter the following attributes: • POP_Date • POP_Amount These attributes are from the Proof of Payment table.
	Step 5: The Financial officer enters the POP details: [POP date, POP amount]	Step 6: The system captures and validates the POP details: [POP date, POP amount] supplied by the Financial Officer is in the appropriate format and is completed. [ALT]
		Step 7: The system requests the Financial Officer to verify that the correct Proof_of_Payment was uploaded to the correct invoice and project.
	Step 8: The Financial Officer confirms that the correct POP has been uploaded. [ALT]	Step 9: The system stores the proof of payment in the Proof_of_Payment table, with the following attributes: • POP_ID • POP • POP_Date • POP_Amount
		Step 10: The system notifies the Financial Officer the POP was saved successfully. The system changes the invoices status to "Paid".

ALTERNATE COURSES:	ALT Step 6: The entered POP details are not in the correct format or not completed. The system displays a notification of the validation error to the financial officer. Return to Step 2
	ALT Step 8a: The Financial Officer verifies that the incorrect POP was uploaded. (Return to Step 2) ALT Step 8b: The Financial verifies that the incorrect POP was uploaded, and wishes to exit the use case. The system notifies the Financial Officer that no Proof of Payment information was captured. Terminate use case.
CONCLUSION:	The use case concludes once the proof of payment is uploaded and the status for the invoice has updated.
POST-CONDITION:	• The Invoice is paid • The Status of the Invoice changes to “Paid” or “received”
BUSINESS RULES	• Once Invoice is approved. It should be paid within 7 – 10 days. • Only the Financial Officer has access to capturing invoice statuses.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

Gohvan ConstructionAuthor (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Capture Claim	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	5.4	
PRIORITY:	High	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	Financial Officer (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	The Client has approved the received invoice and sends a receipt number associated to the invoice. The financial officer needs to log this receipt number on Gohvan system. The financial officer will also use this receipt number to process the claim on Taulia.	
PRE-CONDITION:	- The Financial Officer needs to be logged onto the system. - Invoice already generated and sent to client.	
TRIGGER:	The Client has approved the invoice and sent the Receipt number.	
TYPICAL COURSE	Actor Action	System Response
	Step 1: The Financial Officer has captured the claim on the	Step 2: The system requests the Financial Officer for the Receipt Number. The

	Taulia Portal. Now the Financial officer wishes to capture the receipt number to the appropriate invoice.	system stores the receipt number in the Invoice table under the attribute: • Inv_Receipt_Number
	Step 3: The Financial Officer enters the receipt number.	Step 4: The system captures and validates the receipt number entered by the Financial Officer is in the appropriate format and is completed. [ALT]
		Step 5: The system prompts the financial officer to verify the receipt number is correct.
	Step 6: The Financial Officer confirms the prompt. [ALT]	Step 7: The system updates the attributes: • Receipt number In the Invoice table. The system notifies the Financial Officer the Receipt number has been successfully captured.
ALTERNATE COURSES:	ALT Step 4: The entered search parameter is not in the correct format or not completed. The system displays a notification of the validation error to the financial officer. Return to Step 2	
	ALT Step 6a: The Financial Officer confirms that the receipt number is incorrect. Return to step 3. ALT Step 6b: The Financial Officer confirms that the receipt number is incorrect, and wishes to exit the use. The system notifies the Financial Officer that the receipt number was not captured. Terminate use case.	

CONCLUSION:	The use case concludes once the receipt number is captured and the invoice's status is updated.
POST-CONDITION:	• The invoice's status is changed to "Processing" •
BUSINESS RULES	• Only the Financial Officer has access to capturing claims.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

1.4.6 Human Resource Subsystem

Gohvan Construction System**Author (s):** Tshepang Mashao**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Add Employee	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.1	
PRIORITY:	Critical	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The use describes the event where the officer fills out a form that requires all employee details, including name, surname, cell number, ID/Passport number, tax number, home address/postal address and email address information that has already been given by the employee. The officer then uses that information to add the employee to the system, and the use case concludes.	
PRE-CONDITION:	The officer must be logged onto the system. The employee form with all relevant details must be filled in	
TRIGGER:	The officer wants to add a new employee to the system	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The officer requests to add the employee.	
	Step 2: The officer selects the option to add an employee.	Step 3: The system then prompts the officer to capture the following details: - Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address - Security Question - Password

		To the Employee table Employee Skills To the Employee Skills table
	Step 4: The officer fills in all the relevant details mentioned in Step 3 from the filled-in employee form	
	Step 5: The officer selects the option to save the employee on the system	Step 6: The system verifies all the required field have been filled in, and that all the fields have the correct format and contains valid details. [ALT]
		Step 7: The system will prompt the officer to confirm the details.
	Step 8: The officer selects the option to confirm all details. [ALT]	Step 9: The system confirms that the employee has no record on the system. [ALT]
		Step 10: The system creates a new employee and stores it in the Employee table with a new Employee ID. The new employee is given as: - Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address To the Employee table - Employee Skills To the Employee Skills table - Employee Type To the Employee Type table The system also generates an Employee ID.
		Step 11: The system notifies the officer that the employee was added successfully on the system [ALT]

ALTERNATE COURSES:	Step 6: The details provided by the officer is not valid. Display error notification. Return to step 2.
	Step 8: The officer does not confirm the details. Terminate use case.
	Step 9: The employee already has a record on the system. Display error notification. Terminate use case.
	Step 11: The employee was not added successfully. Display error message. Terminate use case.
CONCLUSION:	The use case concludes when a notification that the employee has been successfully added is displayed
POST-CONDITION:	The officer has successfully added as an employee
BUSINESS RULES	- Only the officer may add an employee on the system - An employee cannot be added to the system twice
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None
	None

Gohvan Construction**Author (s):** Tshepang Mashao**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Update Employee	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.2	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The use describes the event where the officer fills out a form that requires all employee details, including name, surname, cell number, ID/Passport number, tax number, home address/postal address and email address information that has already been given by the employee. The officer then uses that information to add the employee to the system, and the use case concludes.	
PRE-CONDITION:	The officer is logged in	
TRIGGER:	The officer would like to update an employee on the system.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The officer would like to update an existing employee.	
	Step 2: The officer provides info to search for the employee.	Step 3: The system invokes Use Case 6.3 Search Employee. [ALT]
	Step 4: The officer selects the option to update the selected employee's information.	Step 5: The system displays a list of the following details on the employee: • Employee Name • Employee Surname • Cell Number • ID/Passport number • Tax number • Home address • Postal address • Email address From the Employee table • Employee Skills From the Employee Skills table • Employee Type From the Employee Type table
	Step 6: The officer updates the relevant employee's information.	
	Step 7: The officer selects the option to save the updated employee information.	Step 8: The system verifies that all the applicable fields have been filled in, are in the correct format and that all fields contain valid details. [ALT]
		Step 9: The system will prompt the user to confirm changes.
	Step 10: The officer confirms that changes can be made. [ALT]	Step 11: The system updates the relevant employee's details in the appropriate tables mentioned in Step 5.
		Step 12: The system notifies the officer that the employee information has been successfully updated. [ALT]

ALTERNATE COURSES:	Step 8: The information provided is not valid, details were not provided and/or not in the correct format. Indicate the issue. Return to step 5.	
	Step 10: The officer does not confirm changes. Terminate use case.	
	Step 12: Employee information updated unsuccessfully. Display error message. Terminate use case.	
CONCLUSION:	This use case concludes when the officer is notified that the updates have been made successfully.	
POST-CONDITION:	The user has successfully updated the employee's information.	
BUSINESS RULES	None	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan ConstructionAuthor (s): Tshepang MashaoDate: 01/04/2021Version: 1.1

USE CASE NAME:	Search Employee	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.3	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the event of the Human Resource Officer searching for an employee. The officer can search for an employee by entering search criteria and selecting the employee that the officer wanted to search for. This use case concludes when the system displays all the employee's details.	
PRE-CONDITION:	- The officer is logged in - The employee exists on the system.	
TRIGGER:	The officer would like to search for an employee.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The officer wants to search for an employee.	Step 2: The system displays a list of all the employees on the system as well as the following details: - Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address From the Employee table - Employee Skills From the Employee Skills table - Employee Type From the Employee Type table
	Step 3: The officer selects which information he wants to search the employee with.	
	Step 4: The officer provides the information to search by	
	Step 5: The officer selects the option to initiate the search	Step 6: The system verifies that all the required fields are filled in, contains valid details and are in the correct format. [ALT]
		Step 7: The system displays all the employee's that match the search criteria given by the officer, with the information from the tables in Step 2.
	Step 8: The officer selects the client they want to view.	Step 9: The displays all the relevant employee details mentioned in Step 2.
ALTERNATE COURSES:	Step 6: The information provided is not valid, details were not provided and/or not in the correct format. Indicate the issue.	
	Step 7: No data is displayed because no information matched the search criteria entered. The system notifies the officer and prompts the officer to re-enter the search criteria, returning to Step 3.	
CONCLUSION:	The use case concludes when the details of the employee searched for is displayed	

POST-CONDITION:	The officer has successfully searched an employee.
BUSINESS RULES	None
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

Gohvan ConstructionAuthor (s): Tshepang MashaoDate: 01/04/2021Version: 1.1

USE CASE NAME:	Upload Employee Documents	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.4	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The system must allow the user to upload employee documents to the system. The user can attach the employee's certifications and health and safety certificates to the employee's file.	
PRE-CONDITION:	The officer must be logged onto the system	
TRIGGER:	The officer requests to upload employee documents.	
TYPICAL COURSE	Actor Action	System Response
SOF EVENTS:	Step 1: The officer requests to upload an employee document.	Step 2: The system prompts the officer to upload an employee document.

	Step 3: The officer uploads the employee document.	
		Step 4: The system stores the uploaded employee document form in the Employee Compliance Document table. [ALT]
		Step 5: The system prompts the officer to enter an expiry date for the document
	Step 6: The officer provides the expiry date for the document	Step 7: The system validates that the entered date is in the correct format and stores the expiry date as: • Expiry Date To the Employee Compliance Document table [ALT]
		Step 8: The system displays a message that the document was uploaded successfully.
ALTERNATE COURSES:	Step 4: A database error occurs in the upload process. Display error message. Return to Step 3.	
	Step 7: The details are not in the correct format. Display error message. Return to Step 6.	
CONCLUSION:	The system displays a message that the document was uploaded successfully.	
POST-CONDITION:	• An employee document is uploaded and stored in the Employee table. • The database must maintain data integrity after the employee document is uploaded.***	
BUSINESS RULES	• None	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• More than one document can be uploaded at a time	
ASSUMPTIONS:	• None	
OPEN ISSUES:	• None	

Gohvan Construction**Author (s):** Tshepang Mashao**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Update Employee Document	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.5	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	Certain employee certificates expire and need to be tracked and updated accordingly. The user must be able to search for specific documents/certificates and replace expired certificates with new certificates	
PRE-CONDITION:	- The officer must be logged into the system. - The employee document that must be updated must exist.	
TRIGGER:	The officer requests to update an employee document	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The officer requests to update an employee document.	Step 2: The system invokes Use Case 6.6 "Search Employee Document"

		Step 3: The system displays the employee document searched for
		Step 4: The system prompts the user to upload a new employee document.
	Step 5: The officer uploads the employee document.	Step 6: The system captures and validates the employee document. [ALT]
		Step 7: The system stores the uploaded employee document form in the Employee Compliance Document table [ALT]
		Step 8: The system prompts the officer to enter an expiry date for the document
	Step 9: The officer provides the expiry date for the document	Step 10: The system validates that the entered date is in the correct format and stores the expiry date as: Expiry Date To the Employee Compliance Document table [ALT]
		Step 11: The system displays a message that the document was uploaded and updated successfully.
ALTERNATE COURSES:	Step 6: The employee document is invalid. Display error message. Return to Step 3.	
	Step 7: A database error occurs in the upload process. Display error message. Return to Step 3.	
	Step 10: The details are not in the correct format. Display error message. Return to Step 6.	
CONCLUSION:	This use case concludes when a message that the document was uploaded and updated successfully is displayed.	
POST-CONDITION:	- A new employee document is uploaded and stored in the Employee Compliance Document table. - The database must maintain data integrity after the employee document is uploaded.	
BUSINESS RULES	Only the officer can update the employee document	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan Construction**Author (s):** Tshepang Mashao**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Search Employee Document	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.6	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The Human resource manager wants to search for an employee's existing documents. The user can search for an employee document by finding the employee and searching for the document by name or document code. The documents related to search must be displayed and the system must allow the user to access the documents.	
PRE-CONDITION:	• The officer is logged onto the system • The employee document searched for exists	
TRIGGER:	The officer requests to search for an employee document	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The officer requests to search for an employee document	Step 2: The system prompts the user to enter search criteria of the employee document that the officer requests
	Step 3: The officer provides search criteria for the employee document	Step 4: The system captures the search criteria provided and validates the information, ensures that it is filled in and in the correct format. [ALT]
		Step 5: The system retrieves all the employee documents that match the search criteria provided from the Employee Compliance Document table [ALT]
	Step 6: The officer selects the employee document he requested to search for	Step 7: The system displays the employee document.
ALTERNATE COURSES:	Step 4: The details provided by the officer is not valid, not in the correct format or not filled in. Display appropriate error message. Return to Step 2.	
	Step 5: No employee documents match the search criteria provided. Display error message. Return to Step 3.	
CONCLUSION:	The system retrieves and displays the employee document from the Employee Compliance Document table.	
POST-CONDITION:	- The officer can view information of the employee document. - The searched employee document has been found.	
BUSINESS RULES	None	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan Construction

Author (s): Tshepang MashaoDate: 01/04/2021Version: 1.1

USE CASE NAME:	Register New Account	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.7	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	The officer goes through a process of creating an account by which they need to create a unique username and password for their account.	
PRE-CONDITION:	The required information has already been filled in in a form.	
TRIGGER:	The officer requests to register a new account	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The officer requests to register an account.	Step 2: The system prompts the officer to capture the following details: - Employee Name - Employee Surname - Cell Number - ID/Passport number

		• Tax number • Home address • Postal address • Email address • Security Question • Password • Role In the User table
	Step 3: The officer inputs the details required in Step 2.	Step 4: The system validates and verifies details entered by the officer. [ALT]
		Step 5: The system checks that the user does not already exist on the system and saves the account details. [ALT]
		Step 6: The system prompts the officer to confirm all details entered.
	Step 7: The officer confirms all details entered. [ALT]	Step 8: The system stores the new account details and registers the new account in the Employee table
		Step 9: The system informs the officer that the account is successfully registered
ALTERNATE COURSES:	Step 4: The system fails to verify the details entered. Display error message. Return to Step 3.	
	Step 5: The user already exists on the system. Display error message. Terminate use case.	
	Step 7: The officer does not confirm details. Return to Step 3.	
CONCLUSION:	This use case ends once the new account has been registered successfully on the system	
POST-CONDITION:	The account is successfully registered	
BUSINESS RULES	• The username and password must be business appropriate • Only the management team will have an account	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None	
ASSUMPTIONS:	• All accounts are for employees of Gohvan Construction	
OPEN ISSUES	• None	

Gohvan Construction**Author (s):** Tshepang Mashao**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Search Account		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.8		
PRIORITY:	Moderate		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	Human Resource Officer		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case describes the event of a Human Resources Officer searching for an account on the system. The system retrieves the information from the Employee table and then displays the account for the Officer to view.		
PRE-CONDITION:	The officer is logged onto the system		
TRIGGER:	The officer wants to search for an account on the system		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The officer wants to search for an account on the system.		

	Step 2: The officer selects to search for an account	Step 3: The system prompts the officer to enter search criteria to search for the account: • User ID • User Name From User table
	Step 4: The officer enters the search criteria	Step 5: The system displays a list of accounts that match the search criteria entered by the officer. [ALT]
	Step 6: The officer selects an account that the officer wants to view	Step 7: The system displays all the relevant account details, namely: • Employee Name • Employee Surname • Cell Number • ID/Passport number • Tax number • Home address • Postal address • Email address • Security Question • Password • Role From the Employee table
ALTERNATE COURSES:	Step 5: The search resulted in no information being displayed as no data match the details provided. Return to step 4.	
CONCLUSION:	This use case concludes when the officer has searched for the relevant account and its details are displayed successfully	
POST-CONDITION:	The officer has successfully searched for an account	
BUSINESS RULES	• None	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None	
ASSUMPTIONS:	• None	
OPEN ISSUES:	None	

Gohvan ConstructionAuthor (s): Tshepang MashaoDate: 01/04/2021Version: 1.1

USE CASE NAME:	Edit Employee Account Details	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	6.9	
PRIORITY:	Moderate	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Human Resource Officer	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the event where the officer wants to update the details of an account on the system. The system retrieves the original information and allows the Human Resource Officer to edit the details as desired. The new details are then saved into the Employee table after the confirmation of the details has been accepted.	
PRE-CONDITION:	The account requested to be updated exists	
TRIGGER:	The officer requests to update account details.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The officer requests to update account details.	Step 2: The system invokes UC 6.8 Search Account
	Step 3: The officer selects which field to edit and provides the appropriate details	Step 4: The system verifies the entered details by ensuring that it is in the correct format, filled in and valid. [ALT]
		Step 5: The system prompts the officer to confirm the updated information
	Step 6: The officer confirms the edited information. [ALT]	Step 7: The system stores the edited information in the Employee table.
		Step 8: The system notifies the officer that all details were modified successfully [ALT]
ALTERNATE COURSES:	Step 4: Details are not verified, in the correct format, valid or filled in. Display appropriate error message. Return to step 3.	
	Step 6: The officer does not confirm the details. Return to Step 3.	
	Step 8: Details updated unsuccessfully. Display appropriate notification. Return to Step 3.	
CONCLUSION:	The account details are now edited.	
POST-CONDITION:	The employee account details are now edited. The employee can now log onto the system	
BUSINESS RULES	None	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

1.4.7 Team Subsystem

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Create Team	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	7.1	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Operations Manager (PBA)	
PRIMARY SYSTEM ACTOR	Human Resource Officer (PSA)	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the human resource manager will follow when they want to create a new construction team. The system will capture and validate the team information if the information was validated successfully the system will store it in the TEAM table. A construction team consists of employees that are stored in the EMPLOYEE table.	
PRE-CONDITION:	The Human resource manager must be logged into the system.	
TRIGGER:	The operations manager requests for a new team to be created by the human resource manager.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The operations manager requests for a new team to be created.	
	Step 2: The human resource manager receives this request and wants to create a new team.	Step 3: The system invokes use case 6.3 “search employee”. The system displays the list of employees that the user can add to the team. The system prompts the user to enter the required team details: • Team Employees • Site Manager
	Step 4: The human resource manager fills in the necessary information requested by the system.	Step 5: The system captures and validates the information supplied by the user by checking if all necessary fields have been filled in and whether it was entered in the correct format. [ALT]
		Step 6: The system prompts the user to confirm that the information captured is correct.
	Step 7: The human resource manager confirms that the captured information is correct. [ALT]	Step 8: The system adds a new team into the TEAM table and EMPLOYEE TEAM table with details captured from the user and notifies the user that the team has been added successfully. [ALT]
ALTERNATE COURSES:	ALT Step 5: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 3.	
	ALT Step 7:	

	The Human Resource Officer does not confirm that the information captured is correct. The system returns to step 3.
	ALT Step 8: The system does not successfully add the Team information to the TEAM and TEAM EMPLOYEE table. The system notifies the user that the Team has not been added successfully. The system terminates this use case.
CONCLUSION:	This use case concludes when the human resource manager has created a new Team successfully.
POST-CONDITION:	The team has been added to the TEAM table and EMPLOYEE TEAM table successfully.
BUSINESS RULES	Only the human resource manager is allowed to create a new team.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Search Team	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	7.2	
PRIORITY:	Medium	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	The User (PBA) [the management director, director, operations manager, human resource officer and the health and safety officer]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the user will follow when they want to search for a team or when the system invokes this use case.	
PRE-CONDITION:	The User must be logged into the system.	
TRIGGER:	The user wants to search for a team.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The User wants to search for an existing team.	Step 2:

		The system prompts the user to enter one of the following search parameters: Team Number
	Step 3: The User enters the requested search parameter.	Step 4: The system captures and validates the search parameter supplied by the user. [ALT]
		Step 5: The system retrieves the search result based on the search parameter supplied by the user from the TEAM table. [ALT]
	Step 6: The User selects the team from the search result.	Step 7: The following information is displayed from the TEAM table: - Team Number - Team Site manager - List of employees
ALTERNATE COURSES:	ALT Step 4: The captured search parameters are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
	ALT Step 5: The team that the user searched does not exist within the database. The system notifies the user that no search results were found. The system will terminate this use case.	
CONCLUSION:	This use case concludes when the system retrieves and displays the team search results.	
POST-CONDITION:	The searched team is retrieved and displayed.	
BUSINESS RULES	Only the users mentioned above are allowed to search the teams.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Update Team	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	7.3	
PRIORITY:	Medium	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	Operations Manager (PBA)	
PRIMARY SYSTEM ACTOR	Human Resource Officer (PSA)	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the human resource manager will follow when they want to update an existing team. The system will capture and validate the team information if the information was validated successfully the system will update the team in the TEAM table.	
PRE-CONDITION:	- The user must be logged into the system. - The team that the user wishes to update must exist in the database	
TRIGGER:	The human resource manager wants to update an existing Team.	

TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The operations manager requests for a team to be updated.	
	Step 2: The human resource manager receives this request and wants to update a team.	Step 3: The system invokes Use Case 7.3 "Search Team".
		Step 4: The system prompts the user to update the following team details: • Team members • Site Manager
	Step 5: The user will enter the necessary changes and submit them.	Step 6: The system captures and validates that the updated team information is filled in and that it was entered in the correct format. [ALT]
		Step 7: The system prompts the user to confirm that the changes made to the team is correct.
	Step 8: The user confirms that the changes made to the team is correct. [ALT]	Step 9: The system updates the existing team in the TEAM table with the changes captured from the user and notifies the user that the team has been updated successfully. [ALT]
ALTERNATE COURSES:	ALT Step 6: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 4.	
	ALT Step 8:	

	The user does not confirm that the information captured is correct. The system returns to step 4.
	ALT Step 9: The system does not successfully update the Team information to the TEAM and TEAM EMPLOYEE table. The system notifies the user that the Team has not been updated successfully. The system terminates this use case.
CONCLUSION:	This use concludes when the human resource manager has successfully updated the Team.
POST-CONDITION:	The team has been updated in the TEAM table.
BUSINESS RULES	Only the human resource manager is allowed to update an existing team.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

1.4.8 Supplier Order Subsystem

Gohvan Construction

Author (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Search Project Line-Item List	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	8.1	
PRIORITY:	High	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	User (PBA) [Operations Manager and Financial Officer]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case describes the event when a user wants to search for a Project Line-Item List on the system. This use case can also be used/called by other use case.	
PRE-CONDITION:	The User needs to be logged on to the system.	
TRIGGER:	The User would like to search for a project's line-item list.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1:	Step 2: The system prompts the user to enter one of the following search parameters:

	The Operations Manager wants to search for a specific project line-item list.	- Project ID - Project name
	Step 3: The Operations Manager enters the requested search parameter: [Project ID or Project Name].	Step 4: The system captures and validates the search parameter: [Project ID or Project Name] supplied by the Operations Manager. [ALT]
		Step 5: The system retrieves the search result based on the search parameter supplied by the Operations Manager from the PROJECT_LINE_ITEM table. The following information is displayed from the PROJECT_LINE_ITEM table: - Project line-item ID - Project line-item description [ALT]
ALTERNATE COURSES:	ALT Step 4: The captured search parameters are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
	ALT Step 5: The system was unable to retrieve the requested record. The system notifies the user that the record was not found. Terminate use case.	
CONCLUSION:	This use case concludes when the system retrieves and displays the project line-item list search results.	
POST-CONDITION:	The searched project line-item list is retrieved and displayed.	
BUSINESS RULES	The project line-item list needs to be present on the system in order to be searched for.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan Construction**Author (s):** Vincent Yu**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Edit Project Line-Item List		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	8.2		
PRIORITY:	High		
SOURCE:	Gohvan Construction's Elicitation		
PRIMARY BUSINESS ACTOR	Operations Manager (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	- Managing Director - Financial Officer		
DESCRIPTION:	This use case describes the event when the Operations Manager wants to make necessary changes to the project's line-item list. Such as, adding items, removing items, and inputting the quantities.		
PRE-CONDITION:	- Operations Manager needs to be logged on to the system. - An TSS Report needs to be uploaded.		
TRIGGER:	The Operations Manager wants to edit the line-item list for a project.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The Operations manager wants to edit the project's line-item list.	Step 2: The system will invoke Use Case 8.1 Search Project Line-Item List.	

		Step 3: The system will prompt the Operations Manager to provide updates to the following attributes in the Project_Line_Item Table: Project line-item Quantity The system prompts the Financial Officer to add or delete line items. Only if it is necessary.
	Step 4: The Operations manager provides all the required updates: [Project line-item quantities, {additional line items, removing line items from the project line-item list}].	Step 5: The system captures and validates that the updated information supplied by the Operations Manager is in the appropriate format and all fields are completed. [ALT]
		Step 5: The system displays the updated attributes from the Project_Line_Item Table: Project line-item Quantity The system will prompt the Operations Manager to confirm the updated project line-item list.
	Step 6: The Operations Manager confirms that the project line-item list is correct. [ALT]	Step 7: The system will update the line-item list with the following attributes in the Project_Line_Item Table: Project line-item Quantity The system notifies the Operations Manager the Project line-item list has been successfully updated.
ALTERNATE COURSES:	ALT Step 5: The updated details are not in the correct format or not all the required fields are completed.	

	The system displays a notification of the validation error to the Operations Manager. Returns to Step 3.
	ALT Step 6a: The Operations Manager confirms that the changes are not correct. Return to Step 3. ALT Step 6b: The Operations Manager confirms that the changes are not correct and wishes to exit the use case. The system notifies the Operations Manager no changes have been made. The system prompts the Operations Manager for confirmation. The Operations Manager. Terminate Use Case.
CONCLUSION:	The use case concludes once The Operations Manager confirms the changes and the system saves the required edits.
POST-CONDITION:	The Project Line-Item List is updated
BUSINESS RULES	Only the Operations Manager has access to editing the project line-item list.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	
ASSUMPTIONS:	The price lists on the system are up to date with the current required prices.
OPEN ISSUES:	

Gohvan ConstructionAuthor (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Create Supplier Purchase Order	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	8.3	
PRIORITY:	High	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	Financial Officer (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case narrative describes the process the Financial Officer will follow when they want to create and send a new order to a supplier. The system will capture and validate the supplier's order information if the information was validated successfully the system will store it in the Supplier_Purchase_Order table. A supplier order consists out of line items that are stored in the Project_Line_Item table.	
PRE-CONDITION:	Financial Officer needs to be logged on to the system.	
TRIGGER:	The Operations Manager wants to send an order to a supplier.	
TYPICAL COURSE	Actor Action	System Response

	Step 1: The Financial Officer receives this request and wants to create a new supplier order.	Step 2: The system will invoke Use Case 8.2 Search Project Line-Item List.
		Step 3: The system invokes Use Case 9.2 Search Supplier.
		Step 4: The system retrieves the Project's Line-Item List from the PROJECT_LINE_ITEM table. The following information is displayed from the PROJECT_LINE_ITEM table: • Project line-item ID • line items ID • Project line items description • Quantity The system has the retrieved all Supplier information from the Supplier table. • Supplier ID • Supplier Name
		Step 5: The system prompts the Financial Officer to group the line-items and assign the associated supplier to the grouped line items. Each group of line items represents a "supplier order"
	Step 6: The Financial Officer groups and assigns the correct suppliers and line-items.	Step 7: The system displays the grouped orders with the associated suppliers. The system prompts the Financial Officer to verify and confirm all the supplier orders are correct.
	Step 8: The Financial Officer confirms that the orders are correct and the suppliers are correctly assigned. [ALT]	Step 9: The system creates and adds the new supplier orders into the Supplier_Purchase_Order table with details captured from the user: • Supplier PO ID • Supplier PO • Supplier ID

		• Date • PO Amount The system notifies the user that the orders have been added successfully.
		Step 10: The system retrieves the suppliers' orders from the Supplier_Purchase_Order and send the orders to the Financial Officer.
ALTERNATE COURSES:	ALT Step 10a: The Financial Officer confirms that the orders are not correct. Return to Step 3. ALT Step 10b: The Financial Officer confirms the orders are incorrect and wishes to exit the use case. The system notifies the Financial Officer that no orders have been created and exits the use case. Terminate use case.	
CONCLUSION:	The use case concludes when the supplier orders are stored in the system and the supplier orders are sent to the relevant suppliers.	
POST-CONDITION:	• The system sent supplier purchase orders to the financial officer.	
BUSINESS RULES	• Only the financial officer has access to create supplier purchase orders.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None	
ASSUMPTIONS:	• None	
OPEN ISSUES:	• None	

Gohvan Construction**Author (s):** Vincent Yu**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Capture Supplier Quote	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	8.4	
PRIORITY:	High	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	Financial Officer (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	NONE	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case describes the event when a supplier sends a quotation to the Financial Officer. The Financial Officer will either accept or reject the quote. The system will capture and store the accepted quote.	
PRE-CONDITION:	Financial Officer needs to be logged on to the system.	
TRIGGER:	The Supplier sends a quotation for the financial officer to accept or reject.	
TYPICAL COURSE	Actor Action	System Response
	Step 1: The Financial Officer received a quote from a supplier, and	Step 2: The system prompts the Financial Officer to upload the quote.

OF EVENTS:	wishes to capture the quote on the system	
	Step 3: The Financial Officer uploads the quote to the relevant	Step 4: The system invokes use case 9.2 Search Supplier.
		Step 5: The system displays the uploaded quote. The system prompts the Financial Officer to supply the following details from the quote: • Quote Number • Date • Total Amount • Supplier name/ Supplier ID
	Step 6: The Financial Officer provides the required fields: • Quote Number • Date • Total Amount • Supplier name/ Supplier ID	Step 7: The system captures and validates that the updated information supplied by the Operations Manager is in the appropriate format and all fields are completed. [ALT]
		Step 8: The system displays the quote and entered details. The system prompts the Financial Officer to confirm the information is correct and accurate.
	Step 9: The Financial Officer confirms that the quote and the details entered are correct. [ALT]	Step 10: The system adds the new supplier quote into the Supplier_Quote table with details captured from the Financial Officer: • Quote Number • Date • Total Amount

	Supplier ID The system notifies the Financial Officer that the quote has been added successfully.
ALTERNATE COURSES:	ALT Step 6: The updated details are not in the correct format or not all the required fields are completed. The system displays a notification of the validation error to the Operations Manager. Returns to Step 4.
	ALT Step 7: The Financial Officer confirms that the quote is incorrect. The Financial Officer will notify the supplier about the incorrect quotation. The system notifies the Financial Officer that the quote was not captured. Terminate Use Case.
CONCLUSION:	The use case concludes when the supplier quote is captured and stored on the system
POST-CONDITION:	The supplier quote is uploaded
BUSINESS RULES	Only the Financial Officer can capture and upload quotes.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	NONE
ASSUMPTIONS:	NONE
OPEN ISSUES:	NONE

1.4.9 Supplier Subsystem

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Add Supplier	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	9.1	
PRIORITY:	Medium	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	The Procurement and Logistics Officer (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the Procurement and Logistics Officer will follow when they want to create a new supplier. The system will capture and validate the supplier information if the information was validated successfully the system will store it in the SUPPLIER table.	
PRE-CONDITION:	Procurement and Logistics Officer must be logged into the system.	
TRIGGER:	The Procurement and Logistics Officer wants to add a new supplier.	

TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Procurement and Logistics Officer wants to create a new supplier.	Step 2: The system prompts the user to enter the required supplier details: • Supplier Name, • Phone number • Payment details • Business address • Email address
	Step 3: The Procurement and Logistics Officer fills in the necessary information requested by the system	Step 4: The system captures and validates the information supplied by the user by checking if all necessary fields have been filled in and whether it was entered in the correct format. [ALT]
		Step 5: The system prompts the user to confirm that the information captured is correct.
	Step 6: The Procurement and Logistics Officer confirms that the captured information is correct. [ALT]	Step 7: The system adds a new supplier into the SUPPLIER table with details captured from the user and notifies the user that the supplier has been added successfully. [ALT]
ALTERNATE COURSES:	ALT Step 4: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
	ALT Step 6: The Procurement and Logistics Officer does not confirm that the information captured is correct. The system returns to step 2.	
	ALT Step 8: The system does not successfully add the Supplier information to the SUPPLIER table. The system notifies the user that the Supplier has not been added successfully. The system terminates this use case.	

CONCLUSION:	This use case concludes when the Procurement and Logistics Officer has created a new supplier successfully.
POST-CONDITION:	• The supplier has been added to the SUPPLIER table successfully.
BUSINESS RULES	• Only the Procurement and Logistics Officer must be able to add new suppliers.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Search Supplier		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	9.2		
PRIORITY:	Low		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	The User (PBA) [management director, director, operations manager, Financial officer and the Procurement and Logistics Officer.]		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case narrative describes the process the user will follow when they want to search for a Supplier or when the system invokes this use case.		
PRE-CONDITION:	The User must be logged into the system.		
TRIGGER:	The user wants to search for a supplier.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The User wants to search for an existing supplier.	Step 2: The system prompts the user to enter one of the following search parameters:	

		Supplier Name
	Step 3: The User enters the requested search parameter.	Step 4: The system captures and validates the search parameter supplied by the user. [ALT]
		Step 5: The system retrieves the search result based on the search parameter supplied by the user from the SUPPLIER table. [ALT]
	Step 6: The User selects the Supplier from the search result.	Step 7: The following information is displayed from the SUPPLIER table: - Supplier's name, - Supplier type
ALTERNATE COURSES:	ALT Step 4: The captured search parameters are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
	ALT Step 5: The Supplier that the user searched does not exist within the database. The system notifies the user that no search results were found. The system will terminate this use case.	
CONCLUSION:	This use case concludes when the system retrieves and displays the supplier search results.	
POST-CONDITION:	The searched supplier is retrieved and displayed.	
BUSINESS RULES	Only the users mentioned above are allowed to search the supplier.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan ConstructionAuthor (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Update Supplier		USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	9.3		
PRIORITY:	Medium		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	The Procurement and Logistics Officer (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case narrative describes the process the Procurement and Logistics Officer will follow when they want to update an existing supplier. The system will capture and validate the supplier information if the information was validated successfully the system will update the supplier in the SUPPLIER table.		
PRE-CONDITION:	- The user must be logged into the system. - The supplier that the user wishes to update must exist in the database.		
TRIGGER:	The Procurement and Logistics Officer wants to update an existing supplier.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	

	The user wants to update an existing Supplier.	The system invokes Use Case 9.2 "Search Supplier".
		Step 3: The system prompts the user to update the following supplier details: • Supplier's name, • Supplier type • Phone number • Payment details • Business address • Email address
	Step 4: The user will enter the necessary changes and submit them.	Step 5: The system captures and validates that the updated supplier information is filled in and that it was entered in the correct format. [ALT]
		Step 6: The system prompts the user to confirm that the changes made to the supplier is correct.
	Step 7: The user confirms that the changes made to the supplier is correct. [ALT]	Step 8: The system updates the existing supplier in the SUPPLIER table with the changes captured from the user and notifies the user that the supplier has been updated successfully. [ALT]
ALTERNATE COURSES:	ALT Step 5: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 3.	
	ALT Step 7: The user does not confirm that the information captured is correct. The system returns to step 3.	
	ALT Step 8: The system does not successfully update the Supplier information to the SUPPLIER table. The system notifies the user that the Supplier has not been updated successfully. The system terminates this use case.	
CONCLUSION:	This use concludes when the Procurement and Logistics Officer has successfully updated the Supplier.	

POST-CONDITION:	• The supplier has been updated in the SUPPLIER table
BUSINESS RULES	• Only the Procurement and Logistics Officer is allowed to update an existing supplier.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	None

Gohvan ConstructionAuthor (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Upload Supplier documents	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	9.4	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	The Procurement and Logistics Officer (PBA)	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case narrative describes the process the Procurement and Logistics Officer will follow when they want to upload the relevant supplier documentation to the SUPPLIER table.	
PRE-CONDITION:	- The User must be logged into the system. - The supplier must exist in the database.	
TRIGGER:	The Procurement and Logistics Officer wants to upload compliance to an existing supplier.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The Procurement and Logistics Officer wants to upload	Step 2: The system invokes Use Case 9.2 "Search Supplier".

	compliance to an existing supplier.	
		Step 3: The system prompts the user to upload the relevant supplier documentation.
	Step 4: The Procurement and Logistics Officer uploads the relevant supplier documentation.	Step 5: The system captures the relevant supplier documentation.
		Step 6: The system prompts the user to confirm that they want to upload the supplier documentation and that the documentation is correct.
	Step 7: The user confirms that they want to upload the supplier documentation and that the documentation is correct. [ALT]	Step 8: The system uploads the relevant supplier compliance documents into the SUPPLIER DOCUMENT table and notifies the user that the supplier compliance documents have been uploaded successfully. [ALT]
ALTERNATE COURSES:	ALT Step 7: The user does not confirm that they want to upload the supplier documentation and that the documentation is correct. The system returns to step 3.	
	ALT Step 8: The system does not successfully add the Supplier documentation information to the SUPPLIER table. The system notifies the user that the Supplier documents has not been added successfully. The system terminates this use case.	
CONCLUSION:	This use concludes when the Procurement and Logistics Officer has successfully uploaded the supplier compliance documents to the SUPPLIER DOCUMENT table.	
POST-CONDITION:	The supplier compliance documents have been uploaded into the SUPPLIER DOCUMENT table	
BUSINESS RULES	Only the Procurement and Logistics Officer is allowed to upload the supplier compliance documents.	

IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	None

1.4.10 Inventory Management Subsystem

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Add line-item	USE CASE TYPE	
USE CASE ID:	10.1	Business Requirements: ☐	
PRIORITY:	Medium	System Analysis: ☐	
SOURCE:	Gohvan Construction	System Design: ☐	
PRIMARY BUSINESS ACTOR	The Procurement and Logistics Officer (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case narrative describes the process the Procurement and Logistics Officer will follow when they want to add a new line-item. The system will capture and validate the line-item information if the information was validated successfully the system will store it in the LINE-ITEM table.		
PRE-CONDITION:	Procurement and Logistics Officer must be logged into the system.		
TRIGGER:	The Procurement and Logistics Officer wants to add a new line-item.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	

	The Procurement and Logistics Officer wants to create a new line-item.	The system prompts the user to enter the required new-item details: • Name, • Description • Line-item type • Site type • Price
	Step 3: The Procurement and Logistics Officer fills in the necessary information requested by the system	Step 4: The system captures and validates the information supplied by the user by checking if all necessary fields have been filled in and whether it was entered in the correct format. [ALT]
		Step 5: The system prompts the user to confirm that the information captured is correct.
	Step 6: The Procurement and Logistics Officer confirms that the captured information is correct. [ALT]	Step 7: The system adds a new line-item into the LINE-ITEM table with details captured from the user and notifies the user that the line-item has been added successfully. [ALT]
ALTERNATE COURSES:	ALT Step 4: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
	ALT Step 6: The Procurement and Logistics Officer does not confirm that the information captured is correct. The system returns to step 2.	
	ALT Step 7: The system does not successfully add the Line-Item information to the LINE-ITEM table. The system notifies the user that the Line-Item has not been added successfully. The system terminates this use case.	
CONCLUSION:	This use case concludes when the Procurement and Logistics Officer has added a new line-item successfully.	
POST-CONDITION:	• The line-item has been added to the LINE-ITEM table successfully.	

BUSINESS RULES	Only the Procurement and Logistics Officer must be able to add new line-items.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Amore Rossouw**Date:** 01/04/2021**Version:** 1.0

USE CASE NAME:	Search line-item	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐	
USE CASE ID:	10.2		
PRIORITY:	Medium		
SOURCE:	Gohvan Construction		
PRIMARY BUSINESS ACTOR	The Procurement and Logistics Officer (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case describes the process the Procurement and Logistics Officer will follow when they want to search for a line-item.		
PRE-CONDITION:	The User must be logged into the system.		
TRIGGER:	The user wants to search for a line-item.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1: The User wants to search for an existing line-item.	Step 2: The system prompts the user to enter one of the following search parameters: Line-item Name	

	Step 3: The User enters the requested search parameter.	Step 4: The system captures and validates the search parameter supplied by the user. [ALT]
		Step 5: The system retrieves the search result based on the search parameter supplied by the user from the LINE-ITEM table. [ALT]
	Step 6: The User selects the Supplier from the search result.	Step 7: The following information is displayed from the LINE-ITEM table: • Name, • Description • Line-item type • Site type • Price
ALTERNATE COURSES:	ALT Step 4: The captured search parameters are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
	ALT Step 5: The Supplier that the user searched does not exist within the database. The system notifies the user that no search results were found. The system will terminate this use case.	
CONCLUSION:	This use case concludes when the system retrieves and displays the line-item search results.	
POST-CONDITION:	• The searched line-item is retrieved and displayed.	
BUSINESS RULES	• Only the Procurement and Logistics Officer is allowed to search a line-item.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None	

ASSUMPTIONS:	• None
OPEN ISSUES:	None

Gohvan ConstructionAuthor (s): Amore RossouwDate: 01/04/2021Version: 1.0

USE CASE NAME:	Update line-item	USE CASE TYPE	
USE CASE ID:	10.3	Business Requirements: ☐	
PRIORITY:	Medium	System Analysis: ☐	
SOURCE:	Gohvan Construction	System Design: ☐	
PRIMARY BUSINESS ACTOR	The Procurement and Logistics Officer (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	None		
OTHER INTERESTED STAKEHOLDERS:	None		
DESCRIPTION:	This use case narrative describes the process the Procurement and Logistics Officer will follow when they want to update an existing line-item. The system will capture and validate the line-item information, if the information was validated successfully the system will update the line-item in the LINE-ITEM table.		
PRE-CONDITION:	- The user must be logged into the system. - The line-item that the user wishes to update must exist in the database.		
TRIGGER:	The Procurement and Logistics Officer wants to update an existing line-item.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	

	The user wants to update an existing line-item.	The system invokes Use Case 10.3 "Search line-item".
		Step 3: The system prompts the user to update the following line-item details: • Name, • Description • Line-item type • Site type • Price
	Step 4: The user will enter the necessary changes and submit them.	Step 5: The system captures and validates that the updated line-item information is filled in and that it was entered in the correct format. [ALT]
		Step 6: The system prompts the user to confirm that the changes made to the line-item is correct.
	Step 7: The user confirms that the changes made to the line-item is correct. [ALT]	Step 8: The system updates the existing line-item in the LINE-ITEM table with the changes captured from the user and notifies the user that the line-item has been updated successfully. [ALT]
ALTERNATE COURSES:	ALT Step 5: The captured details are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 3.	
	ALT Step 7: The user does not confirm that the information captured is correct. The system returns to step 3.	
	ALT Step 8: The system does not successfully update the Line-Item information to the LINE-ITEM table. The system notifies the user that the Line-Item has not been added successfully. The system terminates this use case.	

CONCLUSION:	This use case concludes when the Procurement and Logistics Officer has successfully updated the line-item.
POST-CONDITION:	• The line-item has been updated in the LINE-ITEM table
BUSINESS RULES	• Only the Procurement and Logistics Officer is allowed to update an existing line-item.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	None

1.4.11 Report Subsystem

Gohvan Construction**Author (s):** Vincent Yu**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Generate Project Progress Report	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	11.1	
PRIORITY:	Low	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	User (PBA) [Operations Manager and Director]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case describes the event when a user wants to generate a project progress report. This report will include project details of the site, the sites current status, and the construction in progress log. These details will be consolidated and sent to the user on request.	
PRE-CONDITION:	The user needs to be logged in the system.	
TRIGGER:	The user wishes to generate a site progress report.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1:	Step 2:

	The User would like to generate a site progress report.	The system is prompt to generate a site progress report.
		Step 3: The system reads the site details from the Construction Site table: • Site Type • Site construction progress status
		Step 4: The system reads the project details from the Project table: • Project Name • Project status • Site name • Site size • Region
		Step 5: The system consolidates the read details and generates a report with the following attributes: • Project Name • Site Name • Region • Site Type • Start Date • Project status • Site construction progress status
		Step 6: The system prompts the user to download the report.
	Step 7: The user requests to download the generated report.	Step 8: The system sends the generated report to the user and automatically creates a new record to save the report in the Reports table. • Report ID • Report • Date • Report Type ID
ALTERNATE COURSES:	• None	
CONCLUSION:	This use case concludes when the report is sent to the User.	

POST-CONDITION:	• The Project progress report is sent to the user. • The Project progress report is stored in the system.
BUSINESS RULES	• The system can only generate reports if there are project and site details on the system.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

Gohvan ConstructionAuthor (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Generate Site Type Report	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	11.2	
PRIORITY:	Low	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	User (PBA) [Operations Manager and Director]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case describes the event when a user wants to generate a site type report. This report will include the different types of sites with the number of completed sites and the sites that are still in progress / construction. These details will be consolidated and sent to the user on request.	
PRE-CONDITION:	The user needs to be logged in the system.	
TRIGGER:	The user wishes to generate a site type report.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1:	Step 2:

	The User would like to generate a site type report.	The system is prompt to generate a site type report.
		Step 3: The system reads the site details from the Construction Site table. • Site type • Site status
		Step 4: The system reads the project details from the Project table. • Project status • Date started • Date completed
		Step 5: The system consolidates the read details and generates a report with the following attributes: • Site type (Each type on a different page.) • Number of sites completed • Number of sites in progress • Date started • Date completed
		Step 6: The system prompts the user to download the report.
	Step 7: The user requests to download the generated report.	Step 8: The system sends the generated report to the user and automatically creates a new record to save the report in the Reports table. • Report ID • Report • Date • Report Type ID
ALTERNATE COURSES:	• None	
CONCLUSION:	This use case concludes when the report is sent to the User.	
POST-CONDITION:	• The Site Type report is sent to the user. • The Site Type report is stored in the system.	
BUSINESS RULES	• The system can only generate reports if there are project and site details on the system.	

IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

Gohvan Construction**Author (s):** Vincent Yu**Date:** 01/04/2021**Version:** 1.1

USE CASE NAME:	Generate Team Site Completed Report	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	11.3	
PRIORITY:	Low	
SOURCE:	Gohvan Construction's Elicitation	
PRIMARY BUSINESS ACTOR	User (PBA) [Operations Manager and Director]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	Managing Director	
DESCRIPTION:	This use case describes the event when a user wants to generate a team site completed report. This report will include the details of the construction teams and the projects they completed within a date range provided by the user. These details will be consolidated and sent to the user on request.	
PRE-CONDITION:	The user needs to be logged in the system.	
TRIGGER:	The user wishes to generate a team site completed report.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1:	Step 2:

	The User would like to generate a team site completed report.	The system is prompt to generate a team site completed report. The system prompts the user to provide a date range for the report.
	Step 3: The user provides the desire date range:[dd/mm/yyyy – dd/mm/yyyy].	Step 4: The system captures and validates the provided date range: [dd/mm/yyyy – dd/mm/yyyy]. [ALT]
		Step 5: The system reads the team details from the Team table. Team Number
		Step 6: The system reads the employee details from the Employee table. - Employee name - Employee surname - Employee phone number
		Step 7: The system reads the site details from the Construction Site table. Site type
		Step 8: The system reads the project details from the Project table. - Project ID - Project Name - Project status - Date started - Date completed
		Step 9: The system consolidates the read details and generates a report with the following attributes: - Team number - Employee name - Employee surname - Employee phone number - Number of sites completed - Site type - Date range
		Step 10:

		The system prompts the user to download the report.
	Step 11: The user requests to download the generated report.	Step 12: The system sends the generated report to the user and automatically creates a new record to save the report in the Reports table. • Report ID • Report • Date • Report Type ID
ALTERNATE COURSES:	ALT Step 4: The captured search parameters are not valid. The system displays a notification indicating that the information received is incorrect or incomplete. The system returns to step 2.	
CONCLUSION:	This use case concludes when the report is sent to the User.	
POST-CONDITION:	• The Team Site Completed report is sent to the user. • The Team Site Completed report is stored in the system.	
BUSINESS RULES	• The system can only generate reports if there are project and site details on the system.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE	
ASSUMPTIONS:	• NONE	
OPEN ISSUES:	• NONE	

Gohvan ConstructionAuthor (s): Vincent YuDate: 01/04/2021Version: 1.1

USE CASE NAME:	Generate Employee Document Expiry Report	USE CASE TYPE	
USE CASE ID:	11.4	Business Requirements: ☐	
PRIORITY:	Low	System Analysis: ☐	
SOURCE:	Gohvan Construction's Elicitation	System Design: ☐	
PRIMARY BUSINESS ACTOR	Time (PBA)		
PRIMARY SYSTEM ACTOR	None		
OTHER PARTICIPATING ACTORS:	Human Resource Officer		
OTHER INTERESTED STAKEHOLDERS:	Managing Director		
DESCRIPTION:	This use case describes the event when the system automatically generates an employee document expiry report. This report will include employee details, the document details, and the expiry date of the documents. These details will be consolidated and sent to the Human Resource (HR) Officer monthly.		
PRE-CONDITION:	One month has passed		
TRIGGER:	The user wishes to generate a site progress report.		
TYPICAL COURSE OF EVENTS:	Actor Action	System Response	
	Step 1:	Step 2:	

	A month has passed, and the HR Officer is expecting an employee document expiry report.	The system is prompt to generate an employee document expiry report.
		Step 3: The system reads the employee details from the Employee table. - Employee ID - Employee Name - Employee Surname - Employee phone number
		Step 4: The system reads the employee compliance documents details from the Employee compliance documents table. - Employee compliance document ID - Employee compliance document description - Date of expiry
		Step 5: The system consolidates the read details and generates a report with the following attributes: - Document name - Expiry date - Employee details [Employee ID, employee name, employee surname, employee phone number]
		Step 6: The system prompts the user to download the report.
	Step 7: The user requests to download the generated report.	Step 8: The system sends the generated report to the user and automatically creates a new record to save the report in the Reports table. - Report ID - Report - Date - Report Type ID

ALTERNATE COURSES:	• None
CONCLUSION:	This use case concludes when the report is sent to the HR Officer.
POST-CONDITION:	• The Employee Document Expiry report is sent to the HR Officer. • The Employee Document Expiry report is stored in the system.
BUSINESS RULES	• The system can only generate reports if there are employee and employee compliance document details on the system.
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• NONE
ASSUMPTIONS:	• NONE
OPEN ISSUES:	• NONE

Gohvan ConstructionAuthor (s): Michael VolsooDate: 01/04/2021Version: 1.1

USE CASE NAME:	Generate Site Acceptance Document	USE CASE TYPE Business Requirements: ☐ System Analysis: ☐ System Design: ☐
USE CASE ID:	11.5	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	User (PBA) [Operations Manager and Quality Control Officer]	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	- Client - Director - Financial Officer	
DESCRIPTION:	This use case describes the process the system will go through once the site visit for the quality control officer has been requested. The system will generate the Site acceptance document. The site acceptance document is a combination of site details and quotation details. The system will generate the basic layout of the acceptance document that can be later edit in case there are any errors that are picked up.	
PRE-CONDITION:	The Site visit has been requested.	
TRIGGER:	The User requests to generate a site acceptance document.	
TYPICAL COURSE	Actor Action	System Response

OF EVENTS:	Step 1: The User requests to create a site acceptance document.	Step 2: The system invokes use case 4.5 “Search Project” The system captures project details the searched project.
		Step 3: The system reads from the project and Construction_Site table for the following details: • Site Name • Site type (Construction site table) • BS Number • Breaker Size • Cable length • Container type • Nav Light • Signs installed • Container size • Mast type • Aircon size • Manhole installed These details are obtained from the aforementioned tables and are displayed in the correct format for the initial page in the acceptance document, the details displayed are editable and are subject to change.
		Step 4: The system will prompt the User to confirm if the details obtained from the table are correct for the population of the site acceptance document.
	Step 5: The User confirms that the details obtained and displayed are correct for site acceptance document [ALT]	Step 6: The system captures the confirmation for the correctly obtained site details.
		Step 7: The system invokes use case 2.2 “Search Quote”

		The system captures the searched quote details and document (pdf format).
		Step 8: The system then combines the captured and confirmed site details with the searched quote document into one final document.
		Step 9: The system will create a new entry in the Acceptance_document table. This will generate a new Acceptance_Document_ID for the uploaded acceptance document. The Operations Manager is notified that the acceptance document has been created and uploaded to the system.
		Step 10: The system sends the created Acceptance document to the Operations Manager and Quality Control officer.
ALTERNATE COURSES:	ALT Step 5: The displayed details are not correct or the User rejects the confirmation. The User is prompted to enter the correct details for the site details. The newly entered details are validated and confirmed for the correct types. The system then the system updates the details in the Project and Construction_Site tables. The system returns the user to step 3 .	
CONCLUSION:	This use case is concluded when the Site Acceptance document is displayed to the Operations Manager.	
POST-CONDITION:	The Acceptance Document is uploaded to the system.	
BUSINESS RULES	- Only the Operations Manager or Quality Control Officer can Generate the site acceptance document. - The Site Acceptance document must be created for a site visit to take place.	

IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	• None
ASSUMPTIONS:	• None
OPEN ISSUES:	• None

1.4.12 User Management Subsystem

Gohvan ConstructionAuthor (s): Matthew VeltmanDate: 01/05/2021Version: 1.0

USE CASE NAME:	Login	USE CASE TYPE Business Requirements: .. System Analysis: ☒ System Design: ..
USE CASE ID:	12.1	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	User (PBA) {Internal employees of Gohvan Construction}	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the process whereby a user of the system would like to log into the system. The use case begins when the person enters their login details. If the users' login details are correct and match the details in the database, the use case will conclude by allowing the user to login to the system.	

PRE-CONDITION:	The person must have been registered onto the system by the Human Resources manager.	
TRIGGER:	User wants to log in to the system	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The user wants to login to the system.	Step 2: The system prompts the user to enter their login details.
	Step 3: User enters their login details (email and password) into the system.	Step 4: System captures and validates person login details by reading the correct <u>Email and Password</u> from the <u>User</u> table based on the <u>UserID</u> . [alt]
		Step 5: System logs person into the system.
ALTERNATE COURSES:	Alt Step 4: The entered user details does not match any user details in the Employee table. Causing a validation error. The system then asks the user to re-enter their details. Return to step 3.	
CONCLUSION:	System logs the person into the system.	
POST-CONDITION:	The person may access the areas of the system available to them.	
BUSINESS RULES	The user must be registered through the Human Resources manager	

IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None
ASSUMPTIONS:	None
OPEN ISSUES:	None

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 01/05/2021**Version:** 1.0

USE CASE NAME:	Logout	USE CASE TYPE Business Requirements: .. System Analysis: ☒ System Design: ..
USE CASE ID:	12.2	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	User (PBA) {Internal employees of Gohvan Construction}	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the process whereby the user that is currently logged into the system wants to log out of the system. The use case begins when the user clicks the logout button. The system will then ask the user to confirm that they want to logout of the system. The use case concludes when the user is logged out of the system.	
PRE-CONDITION:	The user needs to be logged in.	

TRIGGER:	The person wants to log out of the system.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The user wants to logout of the system	Step 2: The system prompts the user to confirm that they want to logout.
	Step 3: User confirms the logout. [alt]	Step 4: The system logs the user out.
ALTERNATE COURSES:	Alt Step 3: The user cancels the logout and remains logged into the system	
CONCLUSION:	The system logs the user out.	
POST-CONDITION:	The user cannot access the system until they login again.	
BUSINESS RULES	Users need to logout of the system as soon as they are done working on the system.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	
ASSUMPTIONS:	None	
OPEN ISSUES:	None	

Gohvan Construction**Author (s):** Matthew Veltman**Date:** 01/05/2021**Version:** 1.0

USE CASE NAME:	Reset password	USE CASE TYPE Business Requirements: " System Analysis: ☒ System Design: "
USE CASE ID:	12.3	
PRIORITY:	High	
SOURCE:	Gohvan Construction	
PRIMARY BUSINESS ACTOR	User (PBA) {Internal employees of Gohvan Construction}	
PRIMARY SYSTEM ACTOR	None	
OTHER PARTICIPATING ACTORS:	None	
OTHER INTERESTED STAKEHOLDERS:	None	
DESCRIPTION:	This use case describes the process a user goes through to start changing their password. The use case begins with the user forgetting their password. The use case concludes when the system begins the process of resetting the password.	
PRE-CONDITION:	The user needs to be registered on the system.	

TRIGGER:	The user has forgotten their password.	
TYPICAL COURSE OF EVENTS:	Actor Action	System Response
	Step 1: The user has forgotten their password.	Step 2: The system prompts the user to confirm that the user has forgotten their password.
	Step 3: The user confirms that they have forgotten their password. [Alt]	Step 4: The system prompts the user to reset their password.
	Step 5: The user confirms they want to reset their password. [Alt]	Step 6: The system prompts the user to enter their answer to a <u>security question</u> they set up during registration. The system reads the question from the <u>User</u> table.
	Step 7: The user enters their answer to the security question.	Step 8: The system captures and validates the answer given by the user with the answer in the <u>User</u> table <u>Security answer</u> attribute. [alt]
		Step 9: The system displays a form to allow the user to enter their new password as well as confirm the password.
	Step 10: User enters a new password and confirms the password.	Step 11: The system captures and validates the new password. [alt]
		Step 12: The system prompts the person to confirm that they want to reset the password.

	Step 13: The user confirms that they want to reset their password. [alt]	Step 14: The system updates the password in the User table by the Password attribute.
		Step 15: Notify user that password is reset.
ALTERNATE COURSES:	Alt Step 3: The user does not confirm that they have forgotten their password. System displays login screen.	
	Alt Step 5: The user does not confirm that they want to reset their password. System displays login screen.	
	Alt Step 8: The user entered an incorrect answer for the security question. System alerts the user that the answer was incorrect. Return to step 7.	
	Alt Step 11: The user entered a non-matching password to the confirm password. System alerts the user that the passwords that they entered do not match. Return to step 10.	
	Alt step 13: User cancels password reset. Terminate use case.	
CONCLUSION:	The user has reset their password	
POST-CONDITION:	The user logs into the system with the new password.	
BUSINESS RULES	The user needs to register on the system.	
IMPLEMENTATION CONSTRAINTS AND SPECIFICATIONS	None	

ASSUMPTIONS:	• The user is registered on the system
OPEN ISSUES:	None

Conclusion

This section of the functional specification deliverable contained the use case diagrams and the use case narratives. The use case diagrams showed the overall view of the system. The use case narratives showed in detail how the system will complete the required business processes.

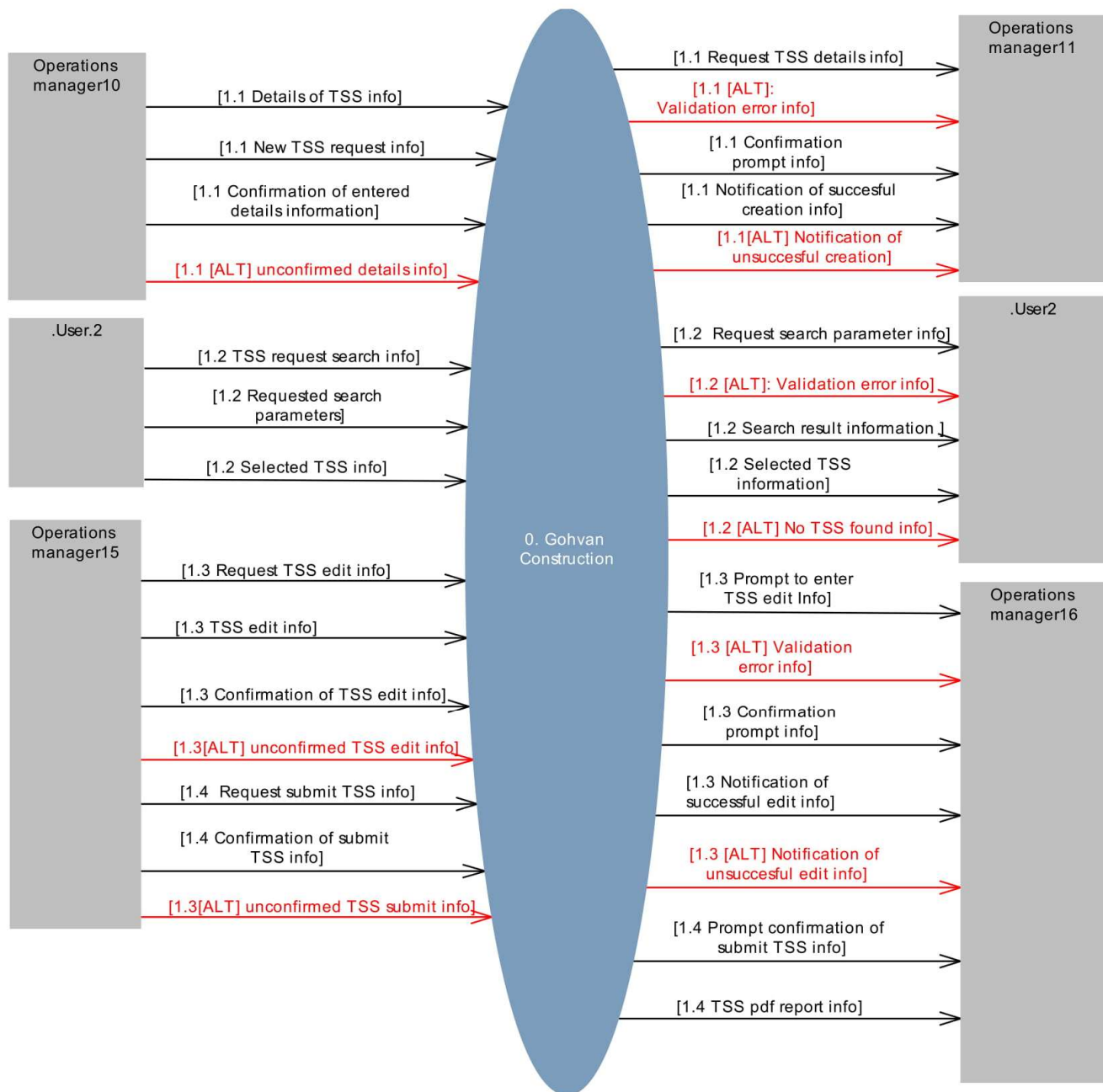
2. Process Models

Introduction

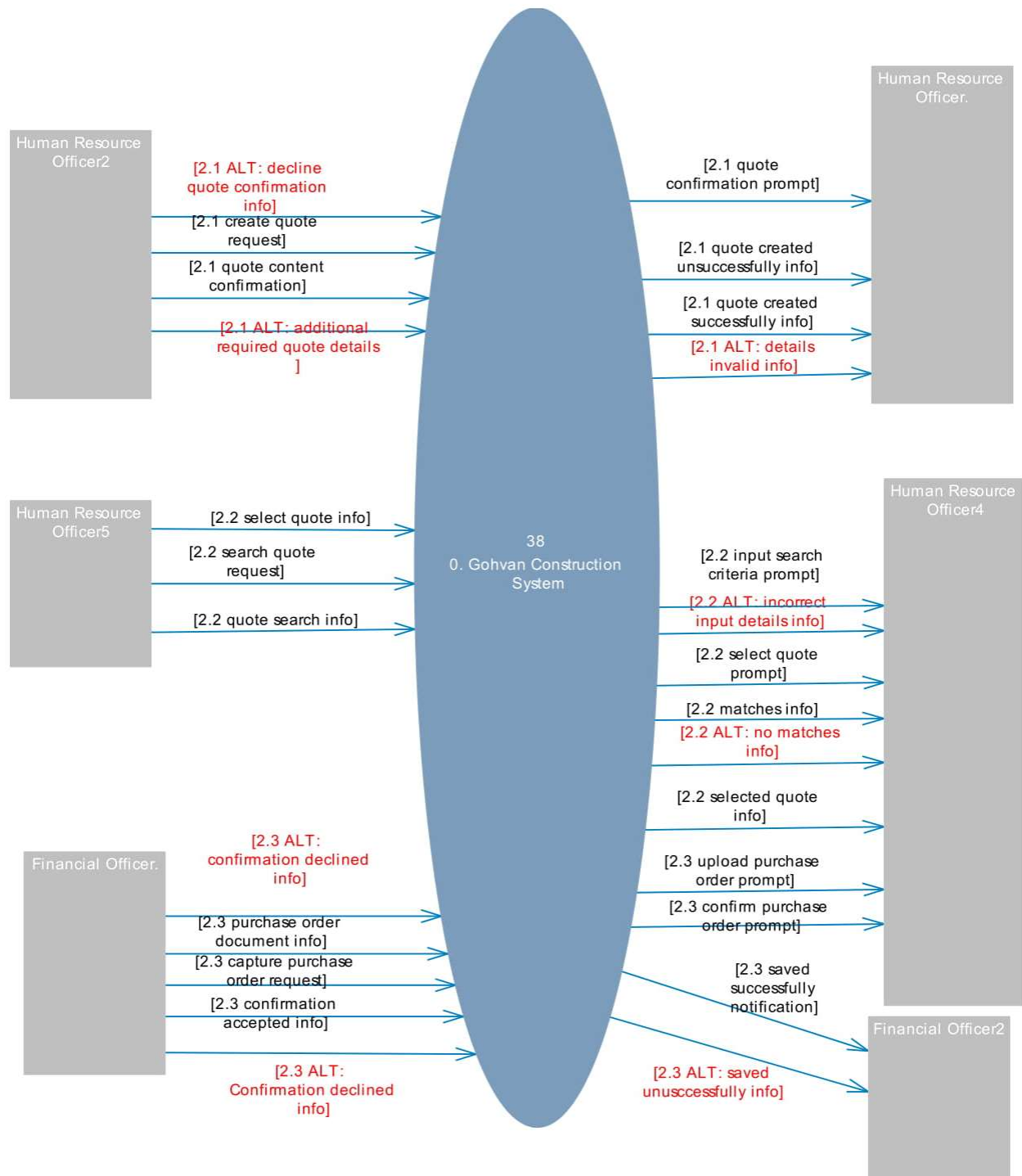
This section indicates context diagram which displays the data flows in and out of the system as a whole for Gohvan Construction.

2.1 Context Diagram

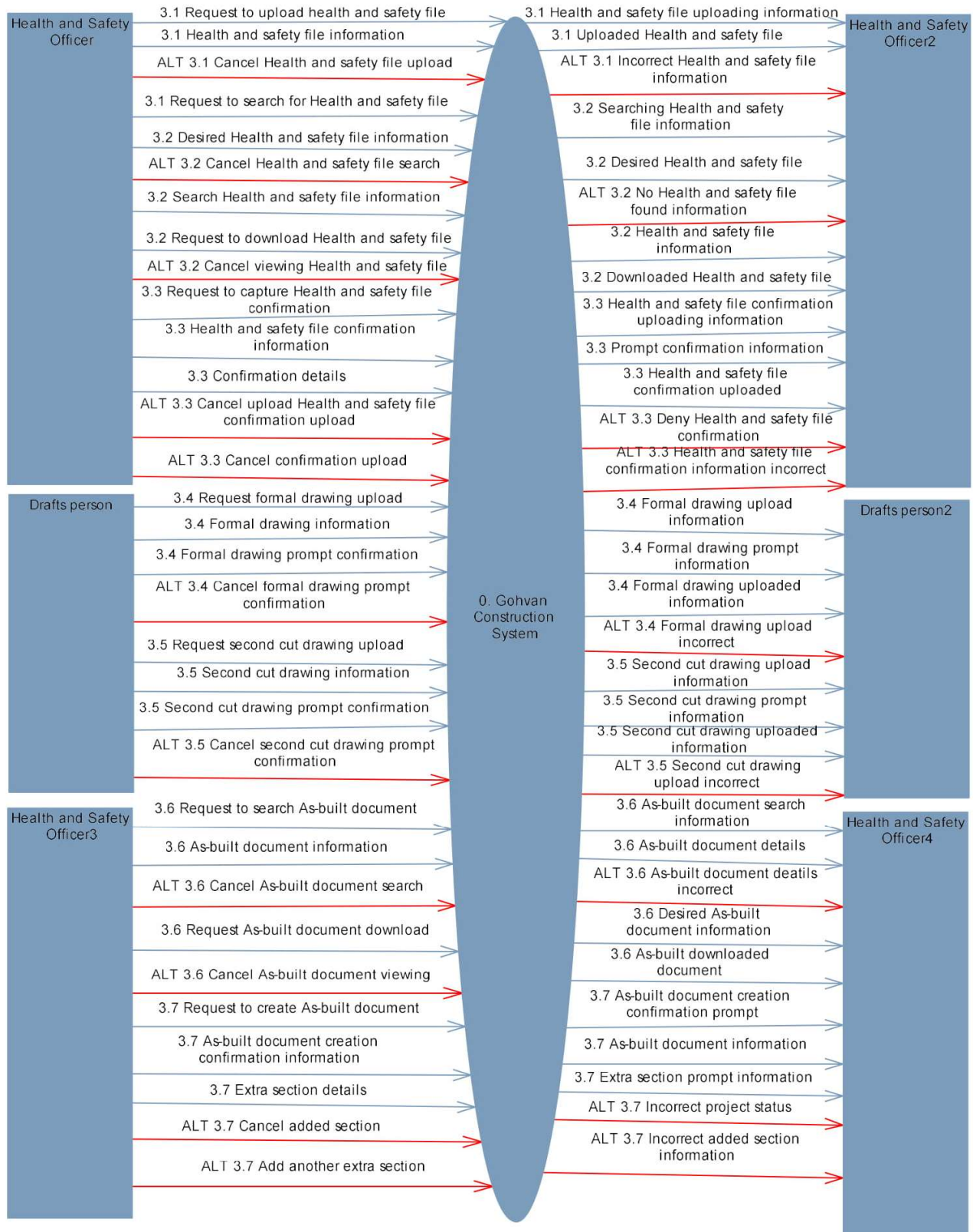
2.1.1 Establishment Subsystem



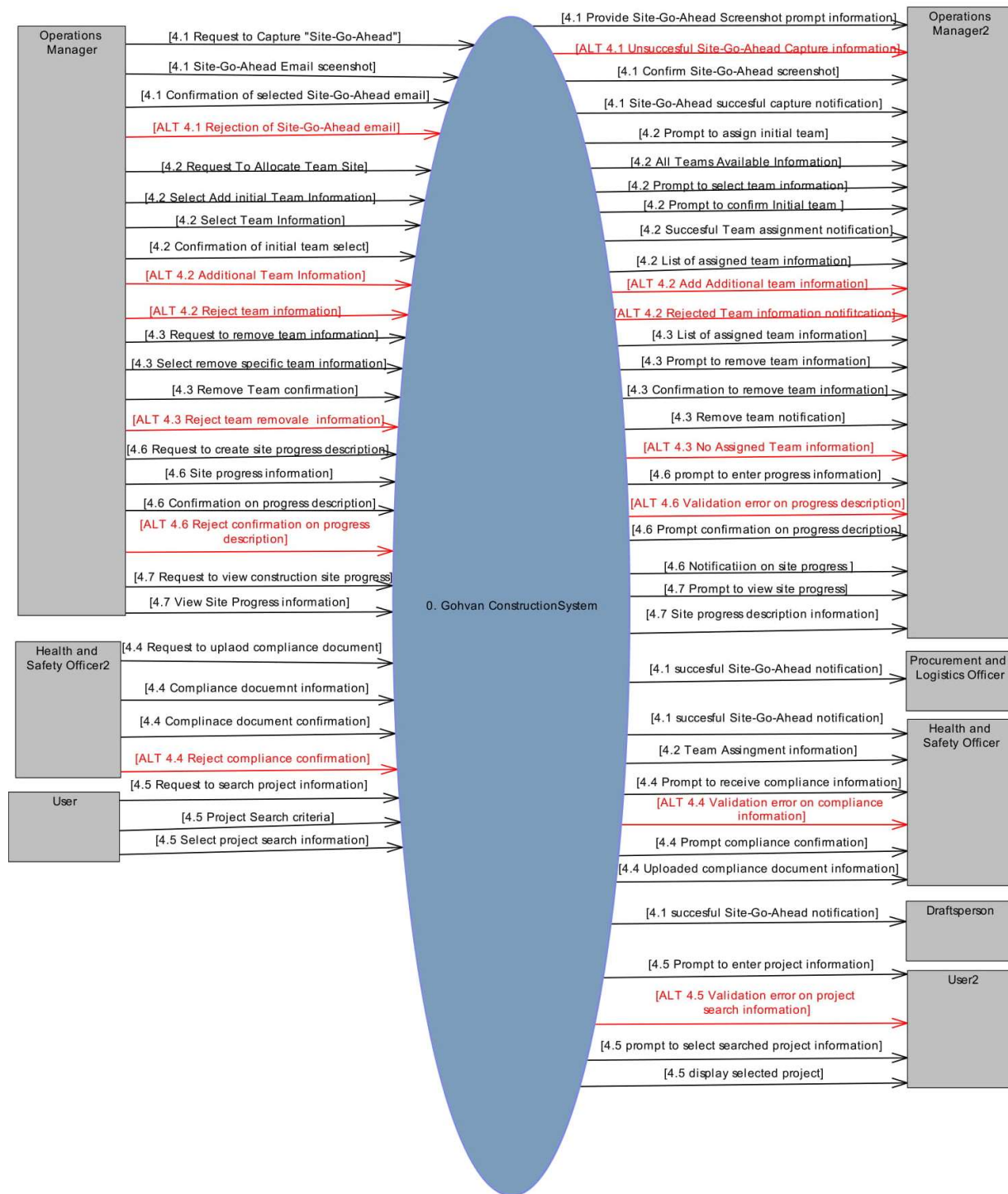
2.1.2 Quotation Subsystem

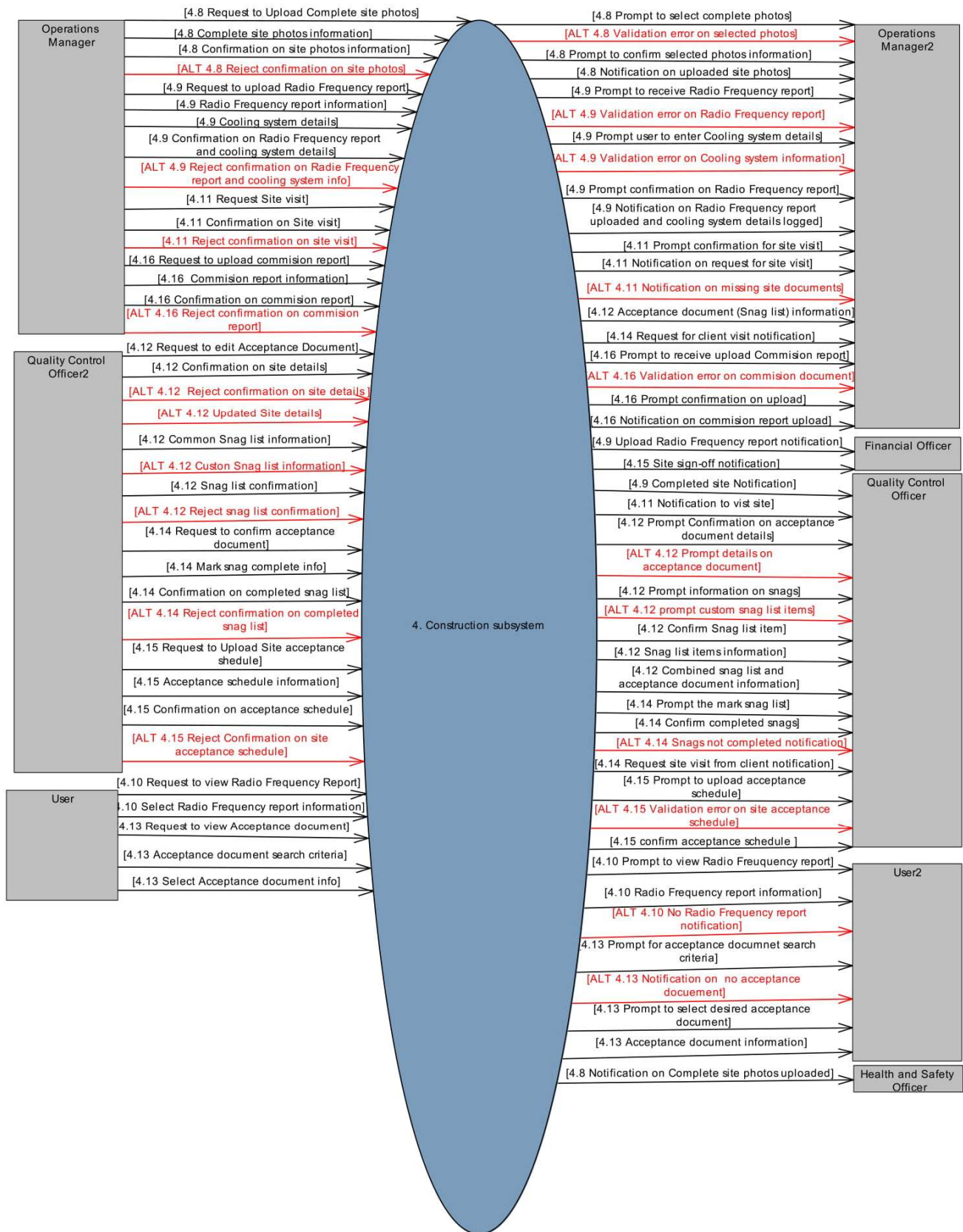


2.1.3 Administration Subsystem

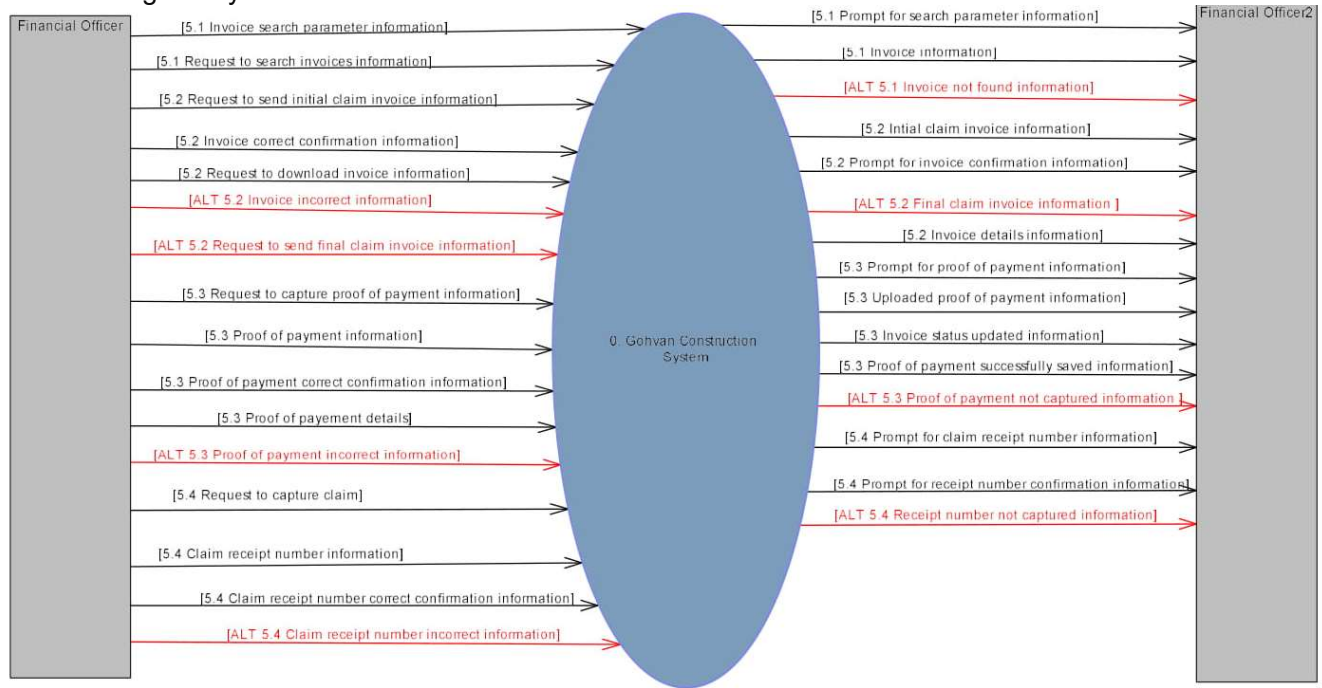


2.1.4 Construction Subsystem

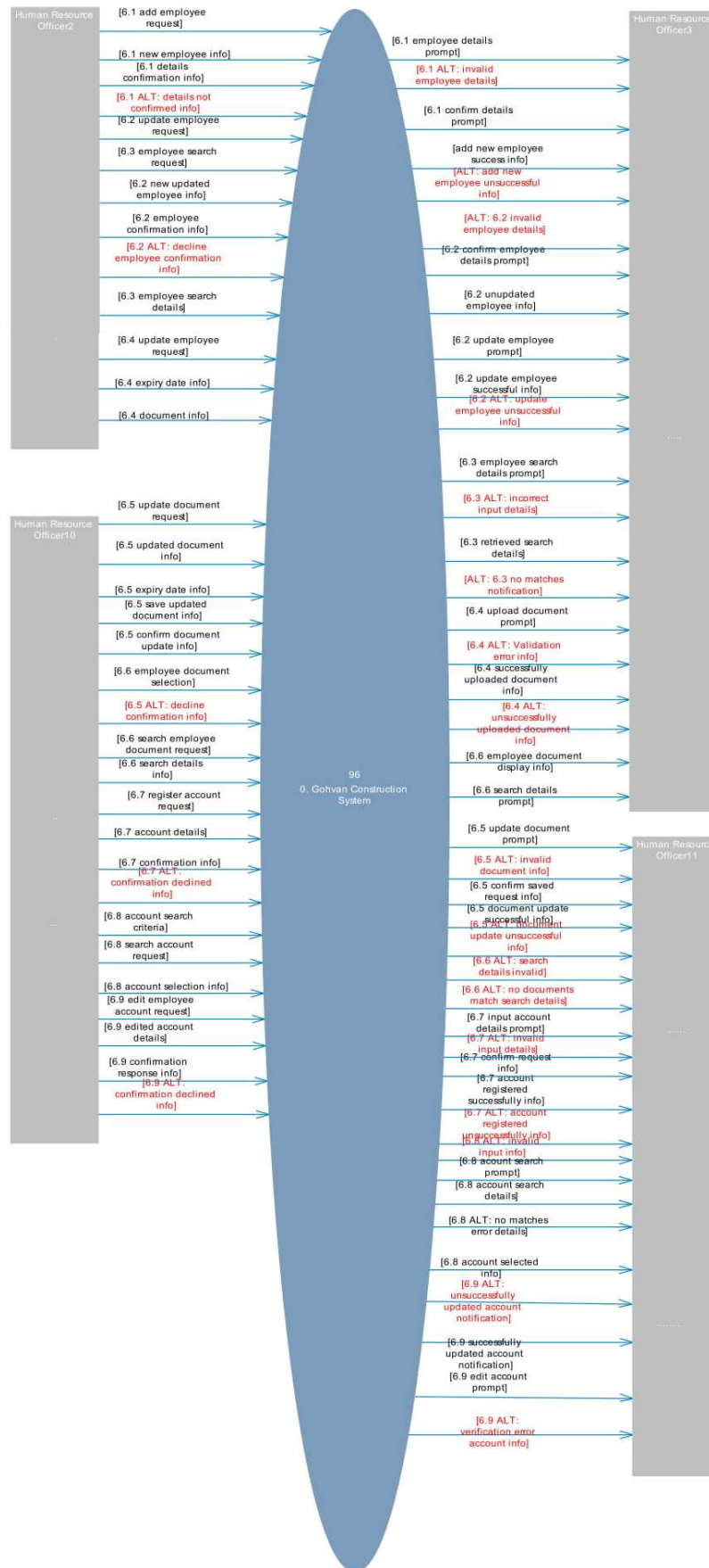




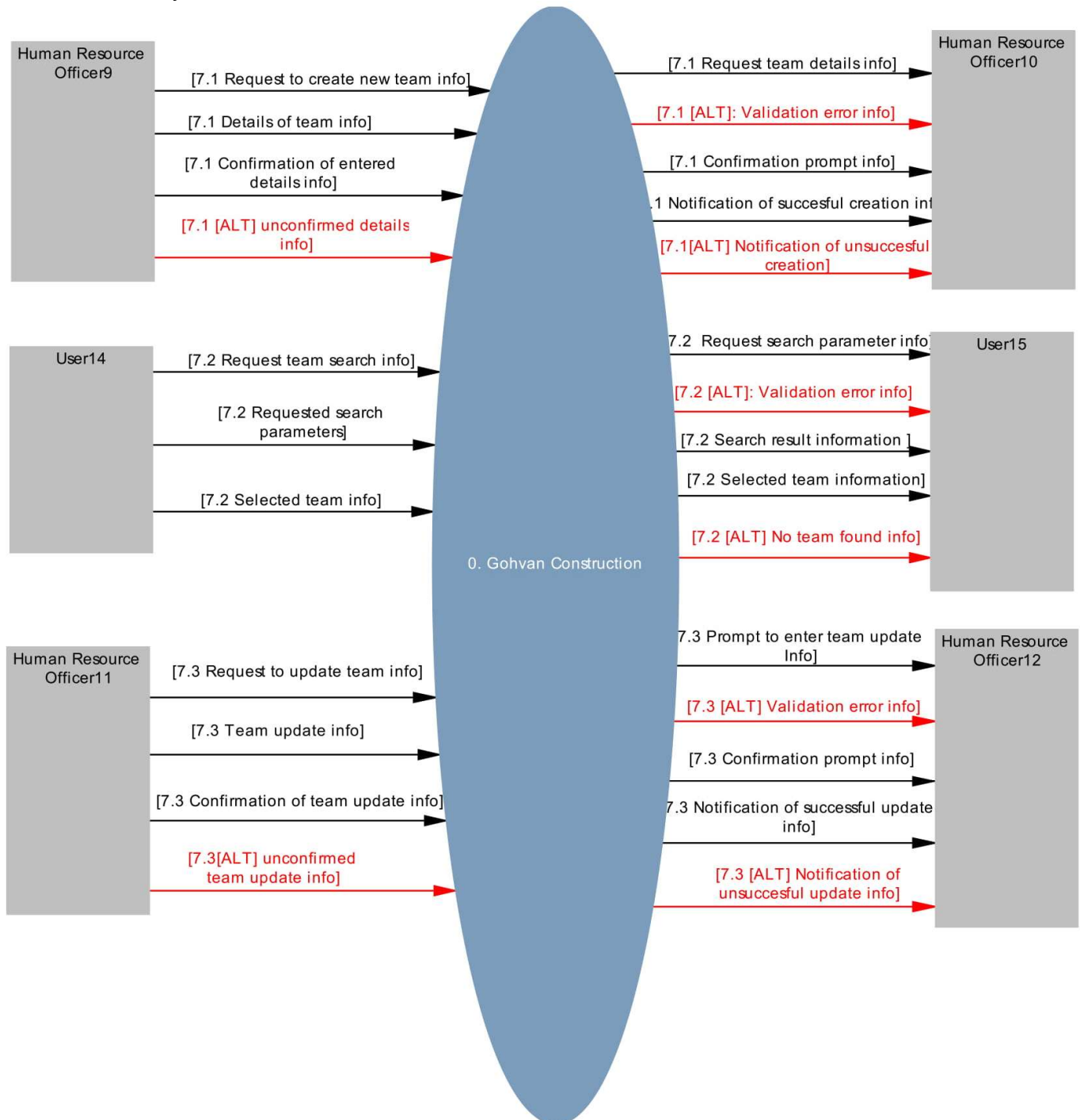
2.1.5 Invoicing Subsystem



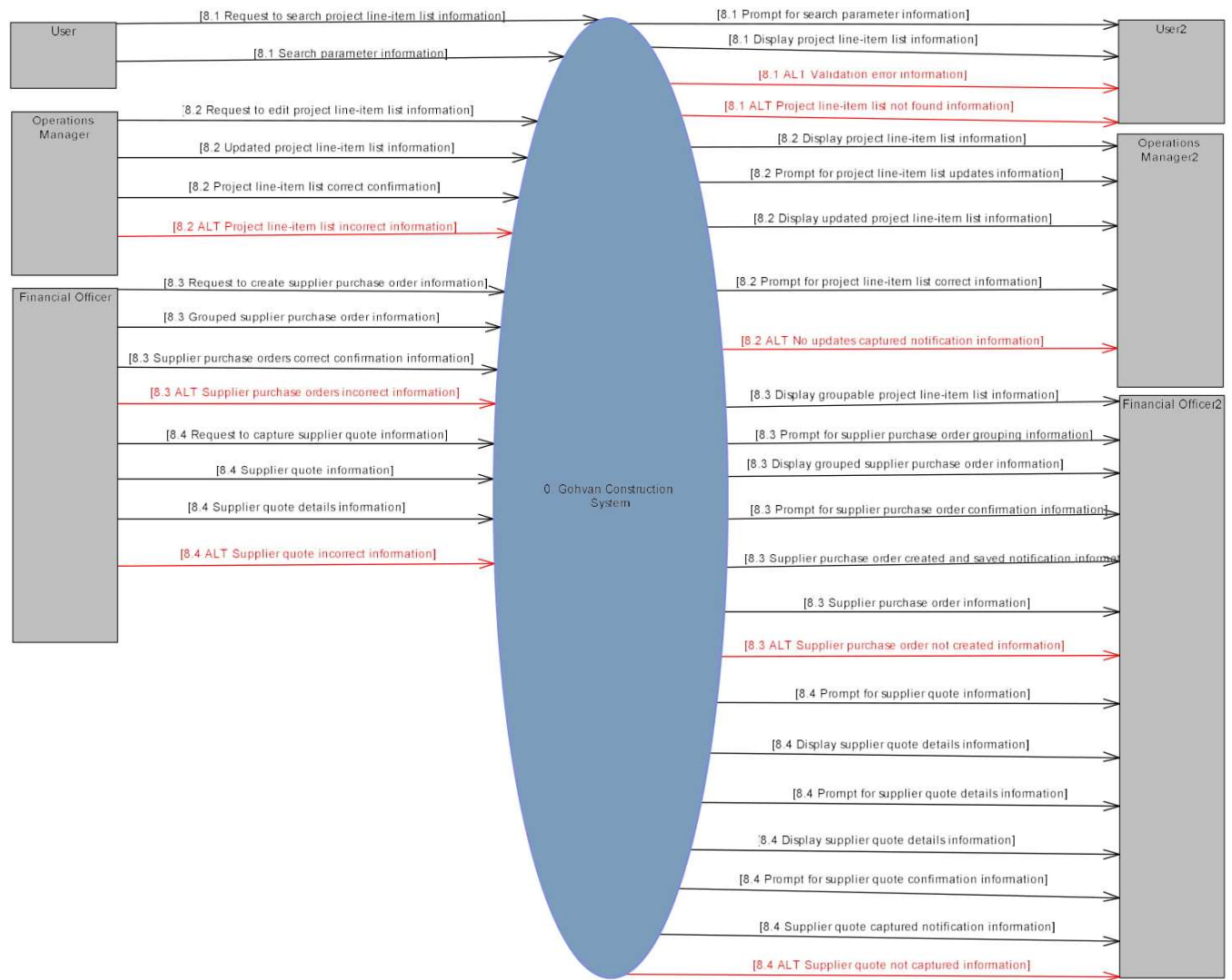
2.1.6 Human Resource Subsystem



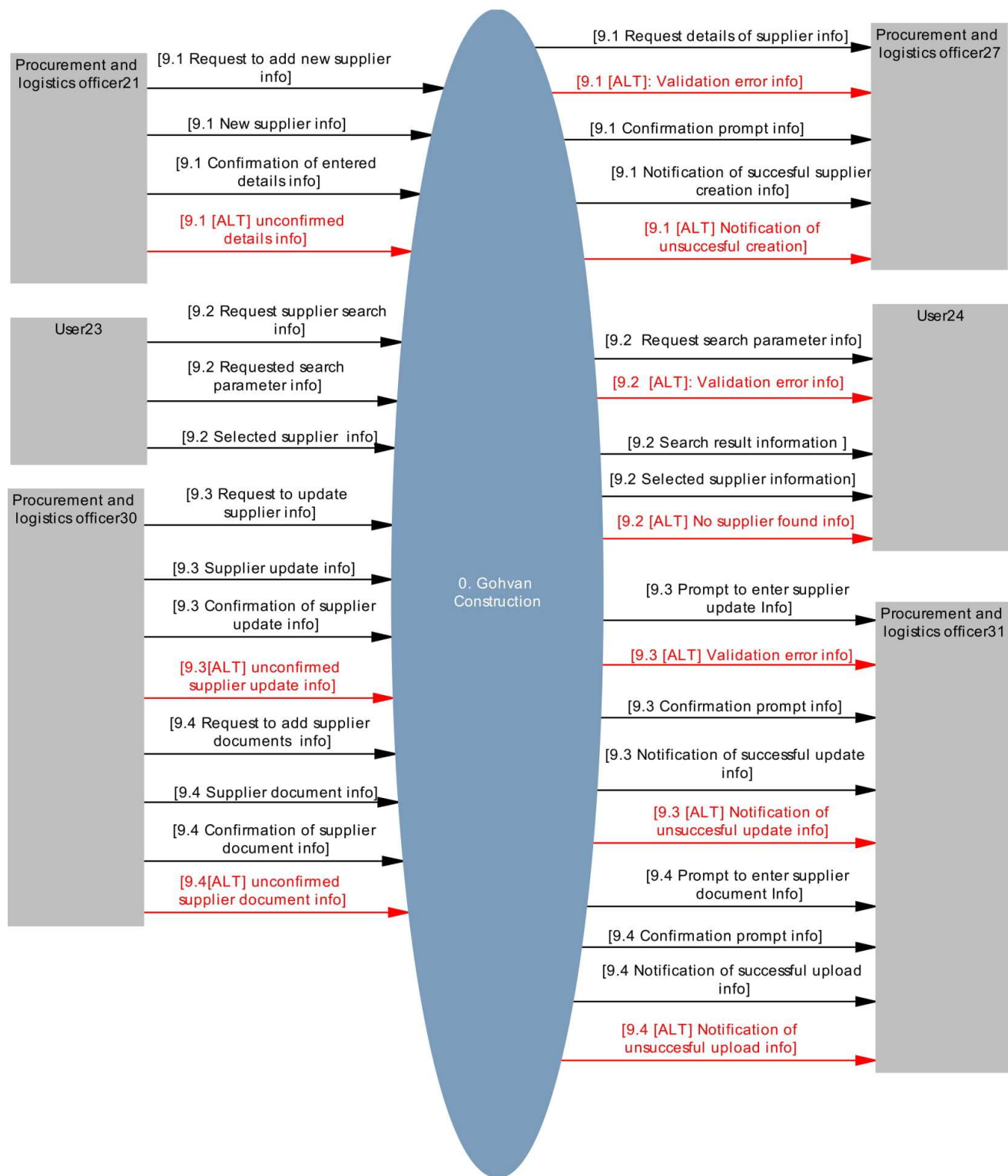
2.1.7 Team Subsystem



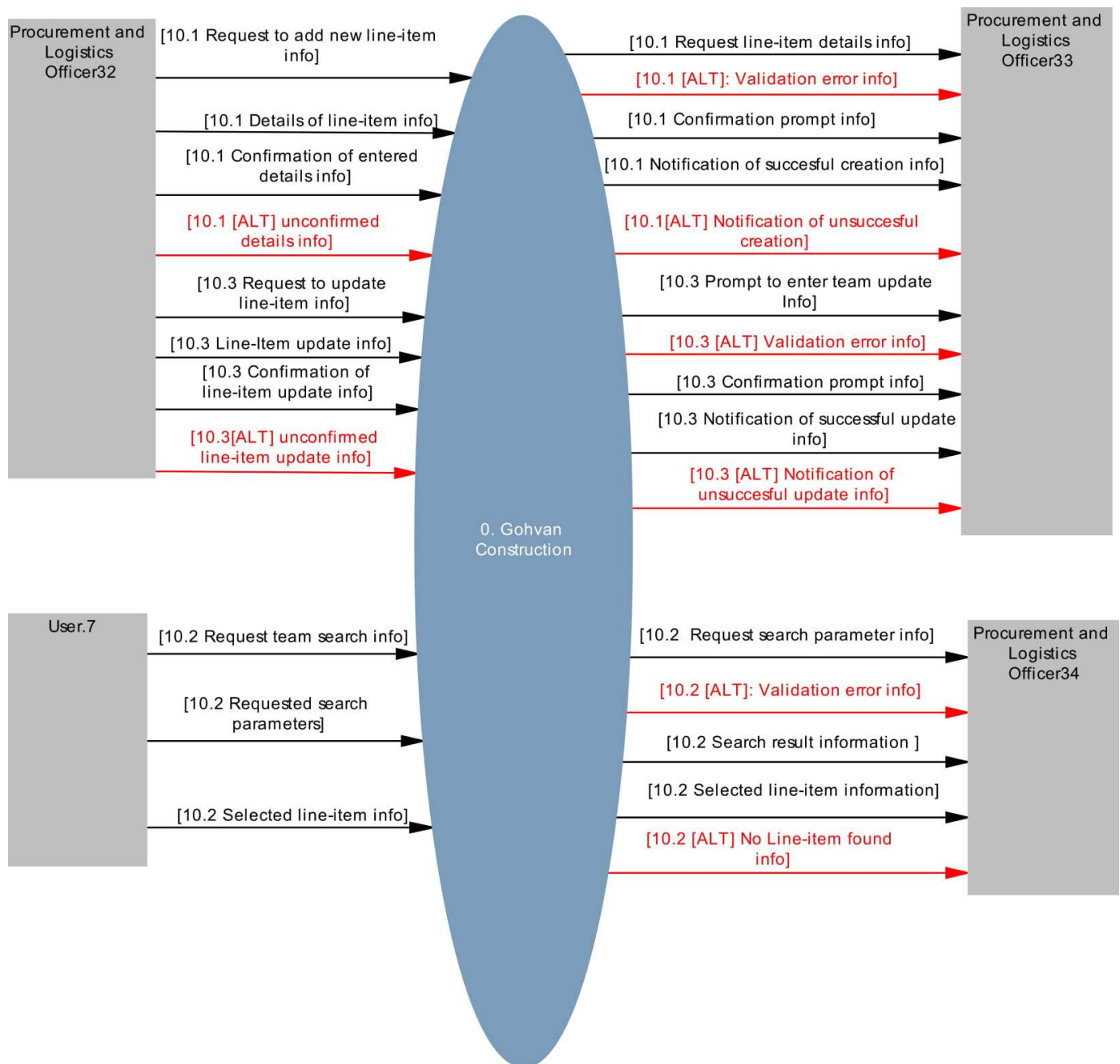
2.1.8 Supplier Order Subsystem



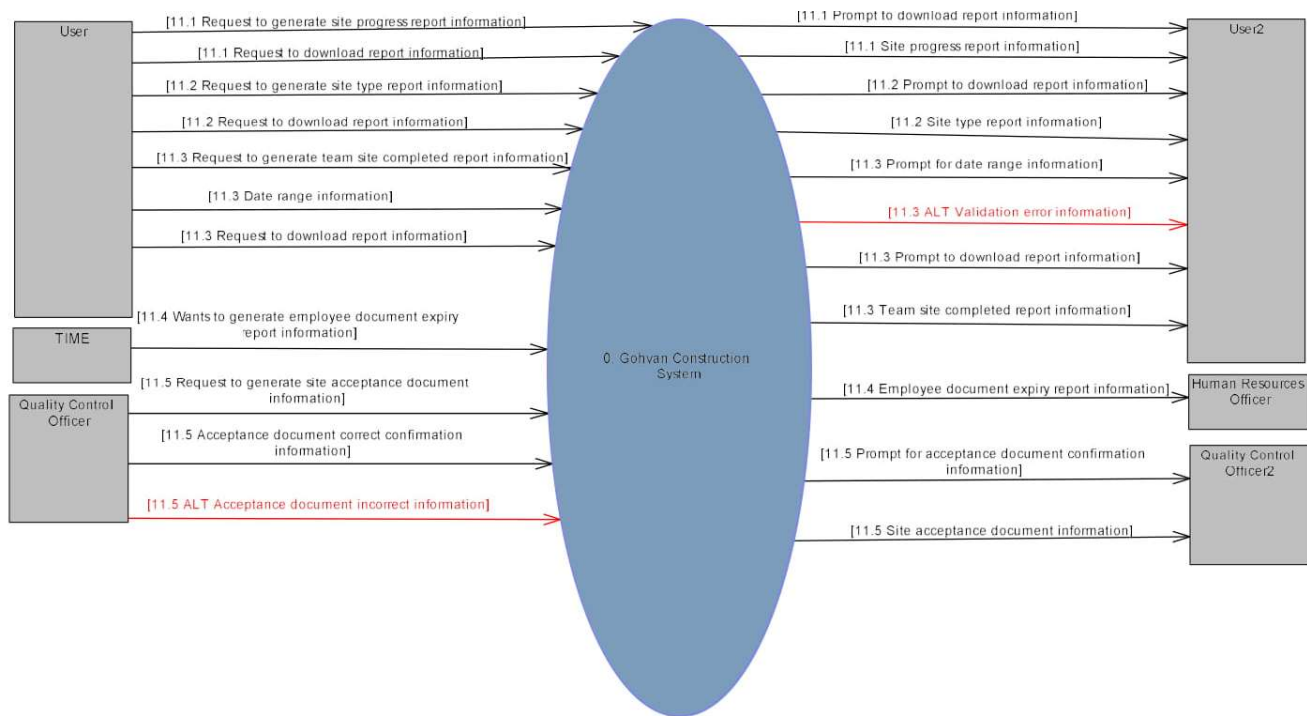
2.1.9 Supplier Subsystem



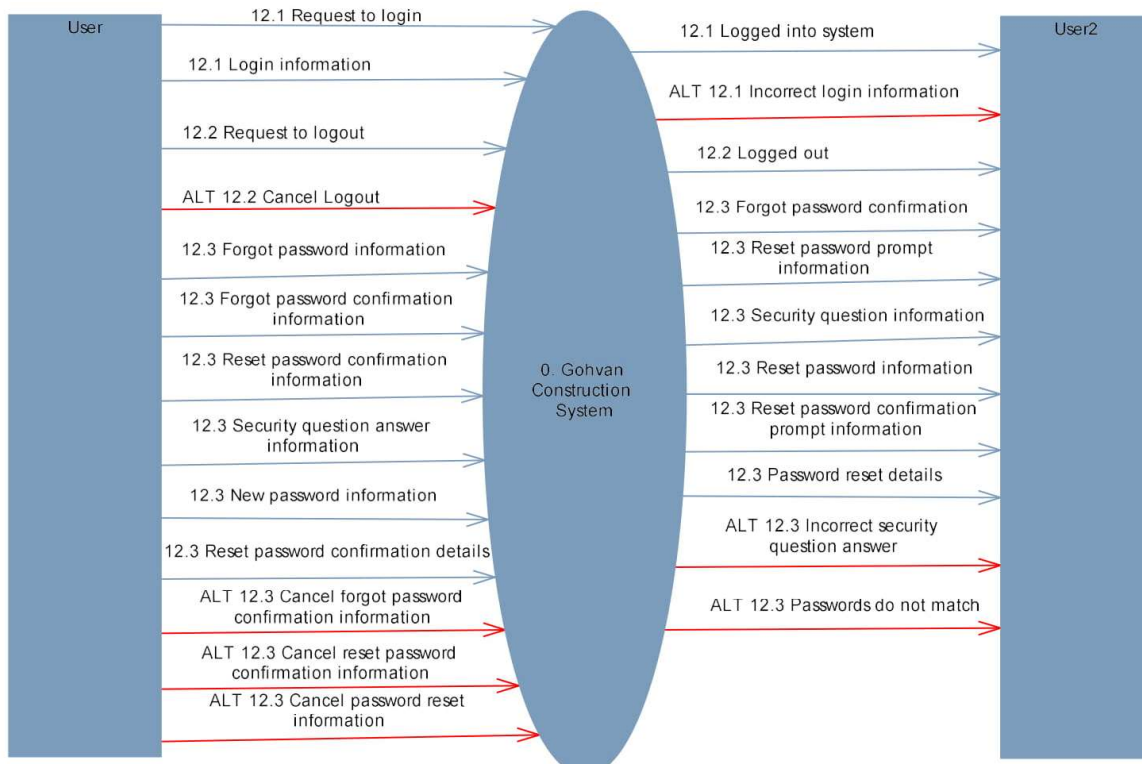
2.1.10 Inventory Management Subsystem



2.1.11 Report Subsystem



2.1.12 User Management Subsystem



Conclusions

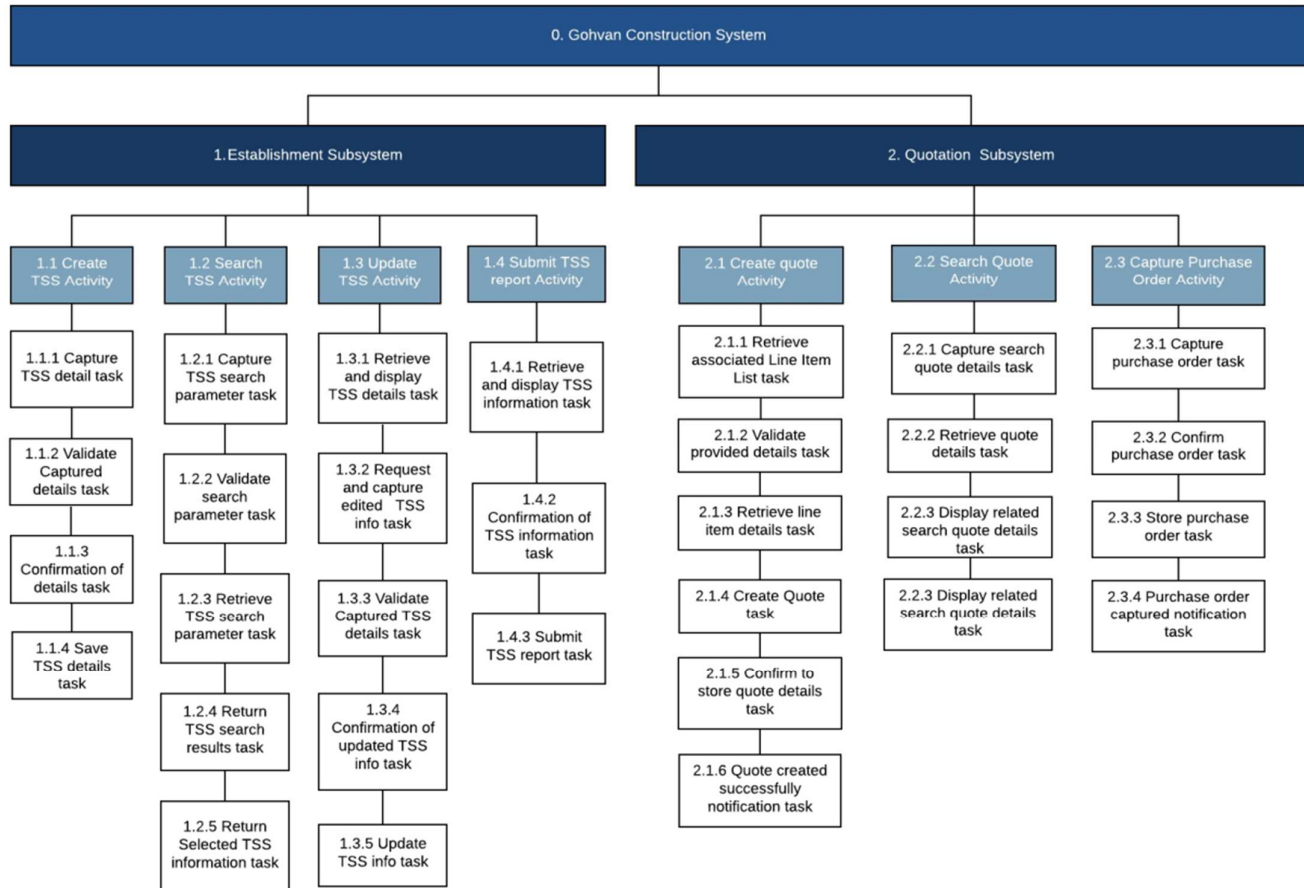
This concludes the Context Diagram that indicates the Data flows in and out of the system as a whole.

2.2 Decomposition

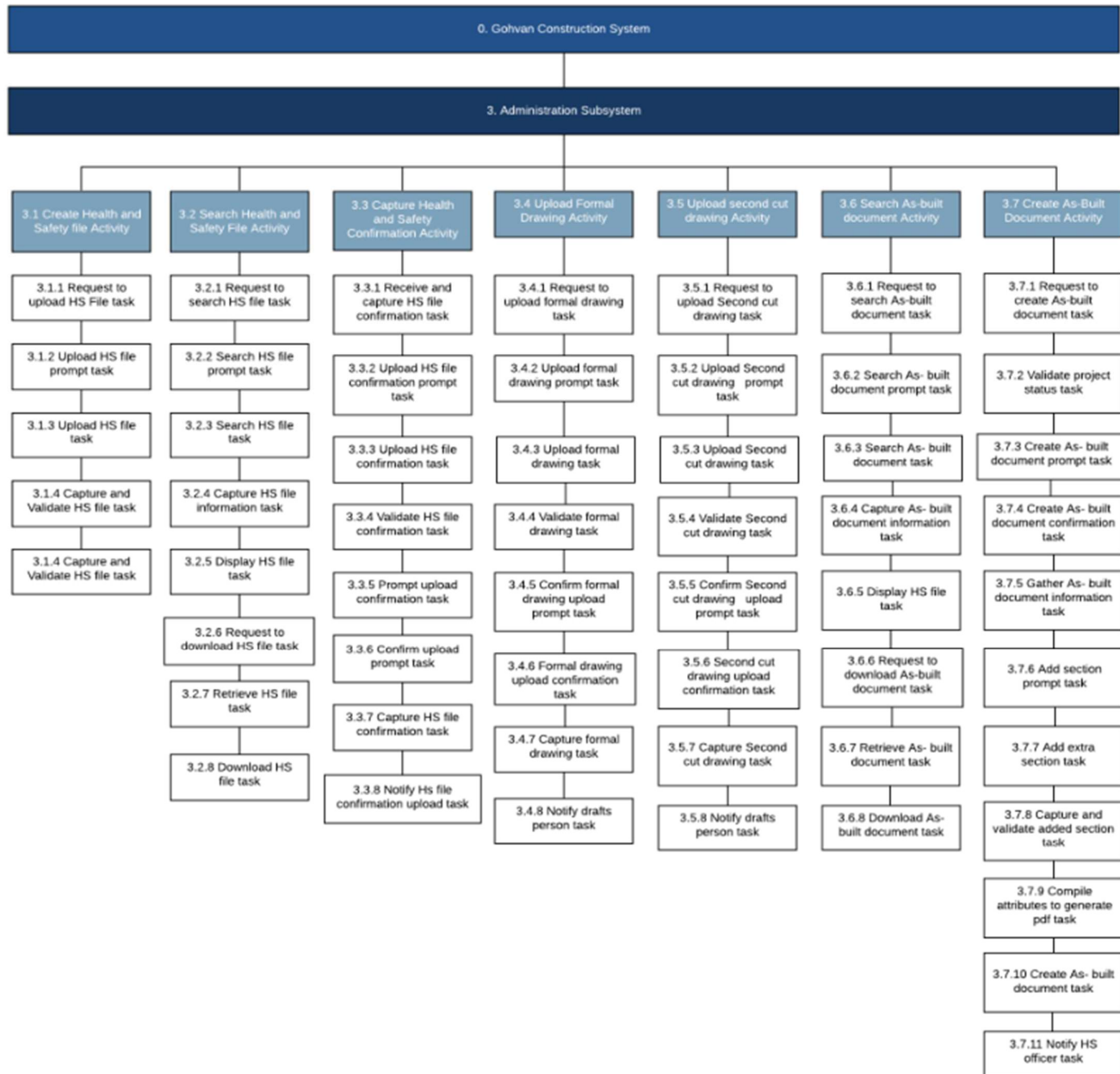
Introduction

This section of the deliverable will include the decomposition diagrams, all levels of the data flow diagrams and data dictionary which describe and design the functional requirements of the system.

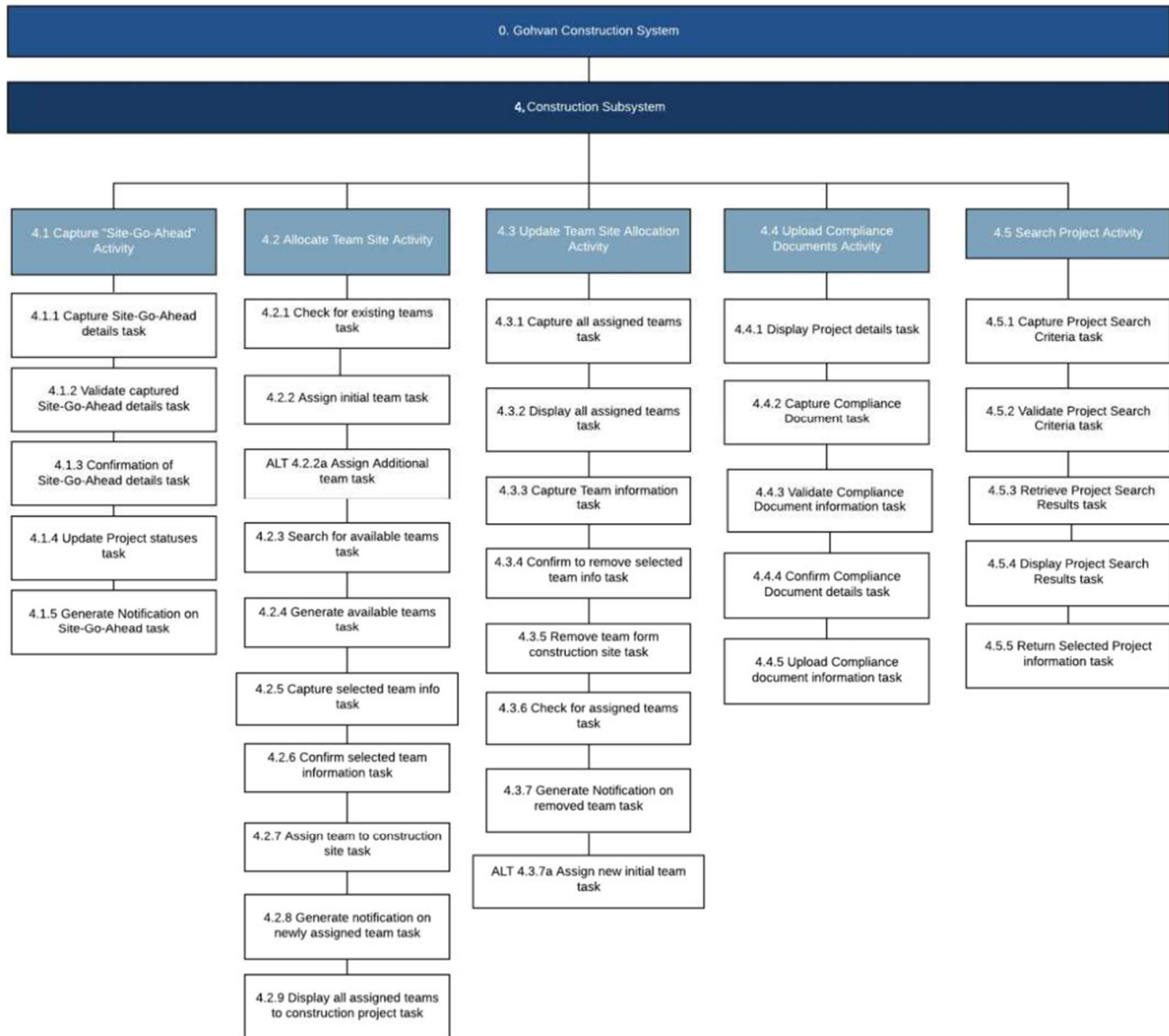
2.2.1 Establishment and Quotation Subsystem



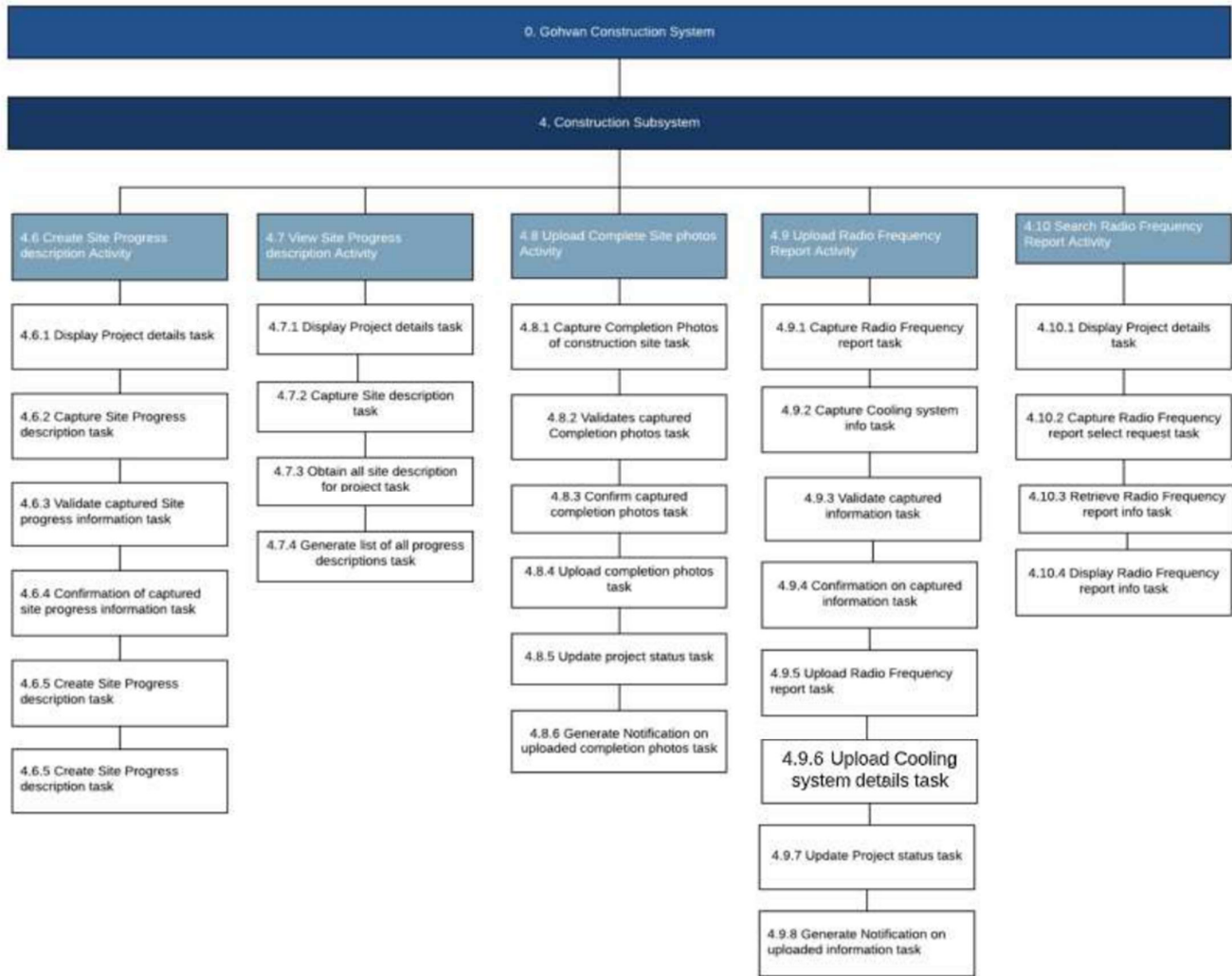
2.2.2 Administration Subsystem



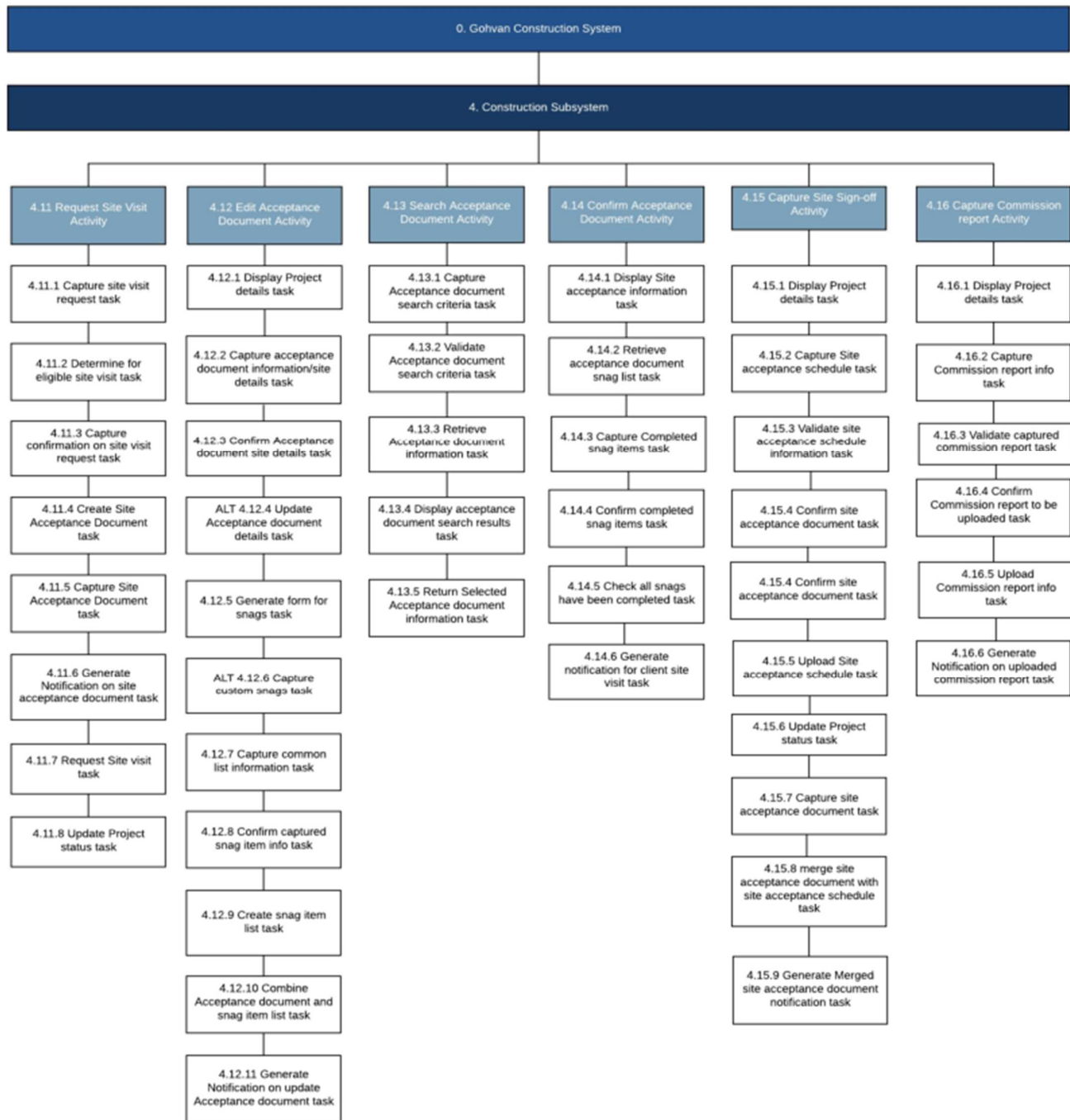
2.2.3 Construction Subsystem



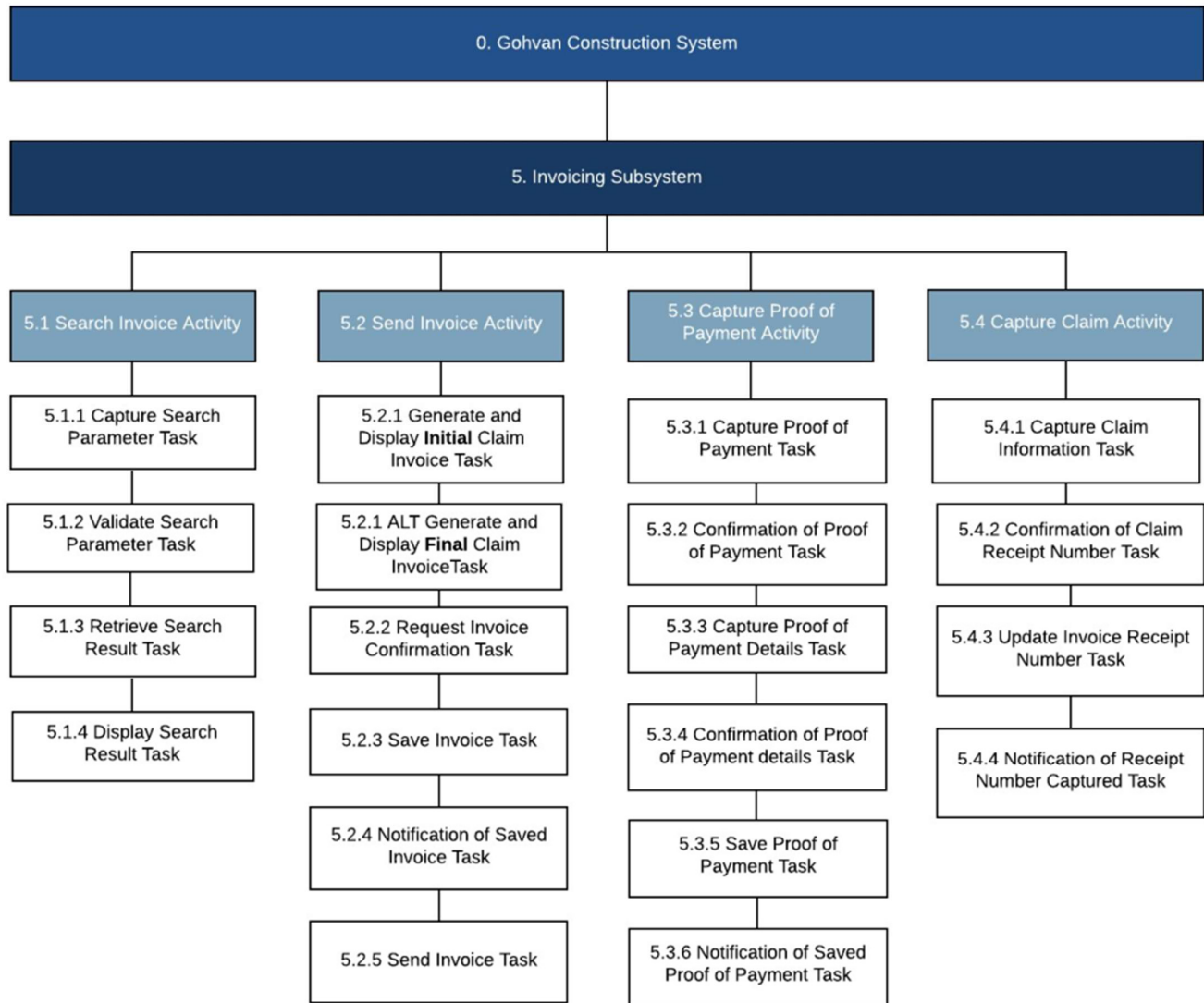
2.2.4 Construction Subsystem continued



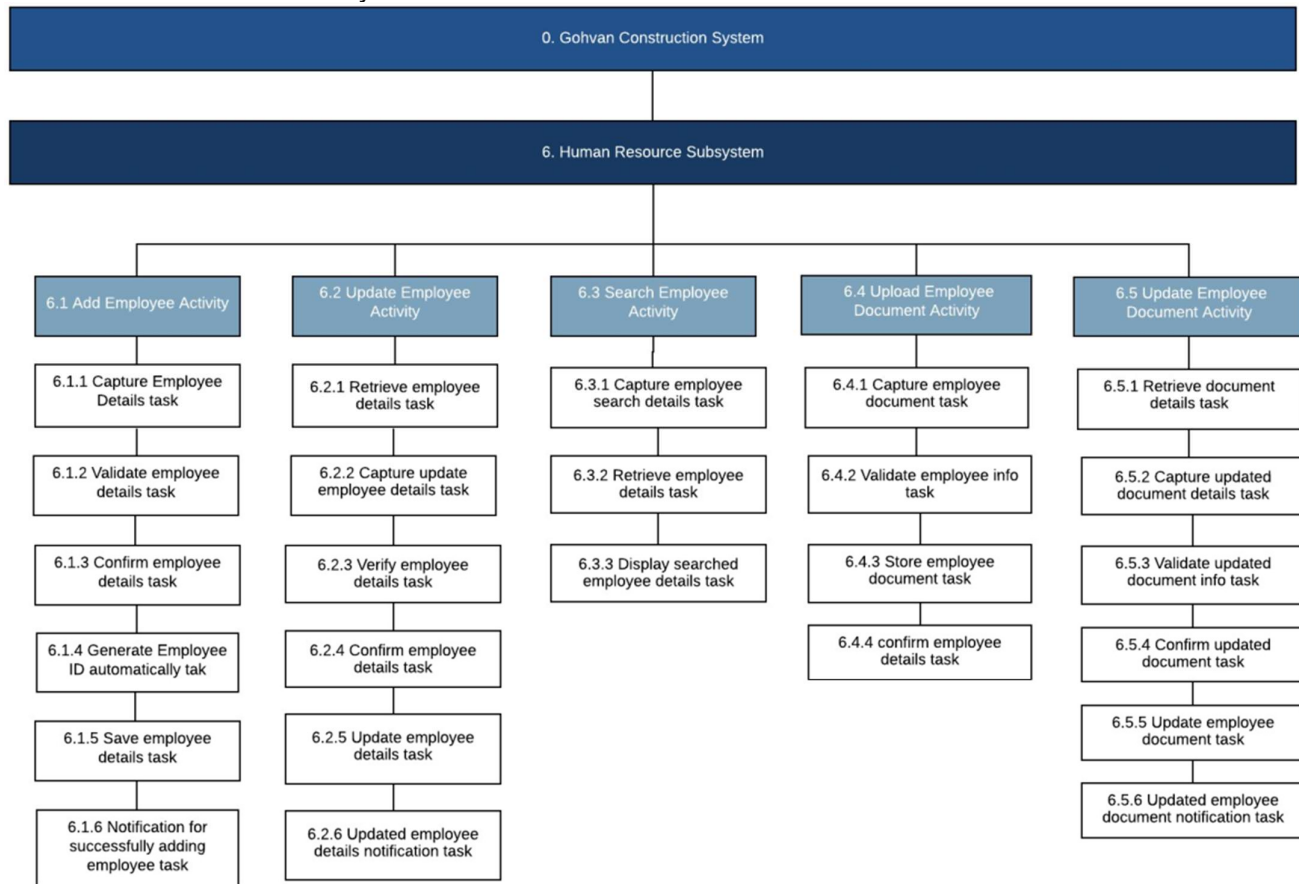
2.2.5 Construction Subsystem continued



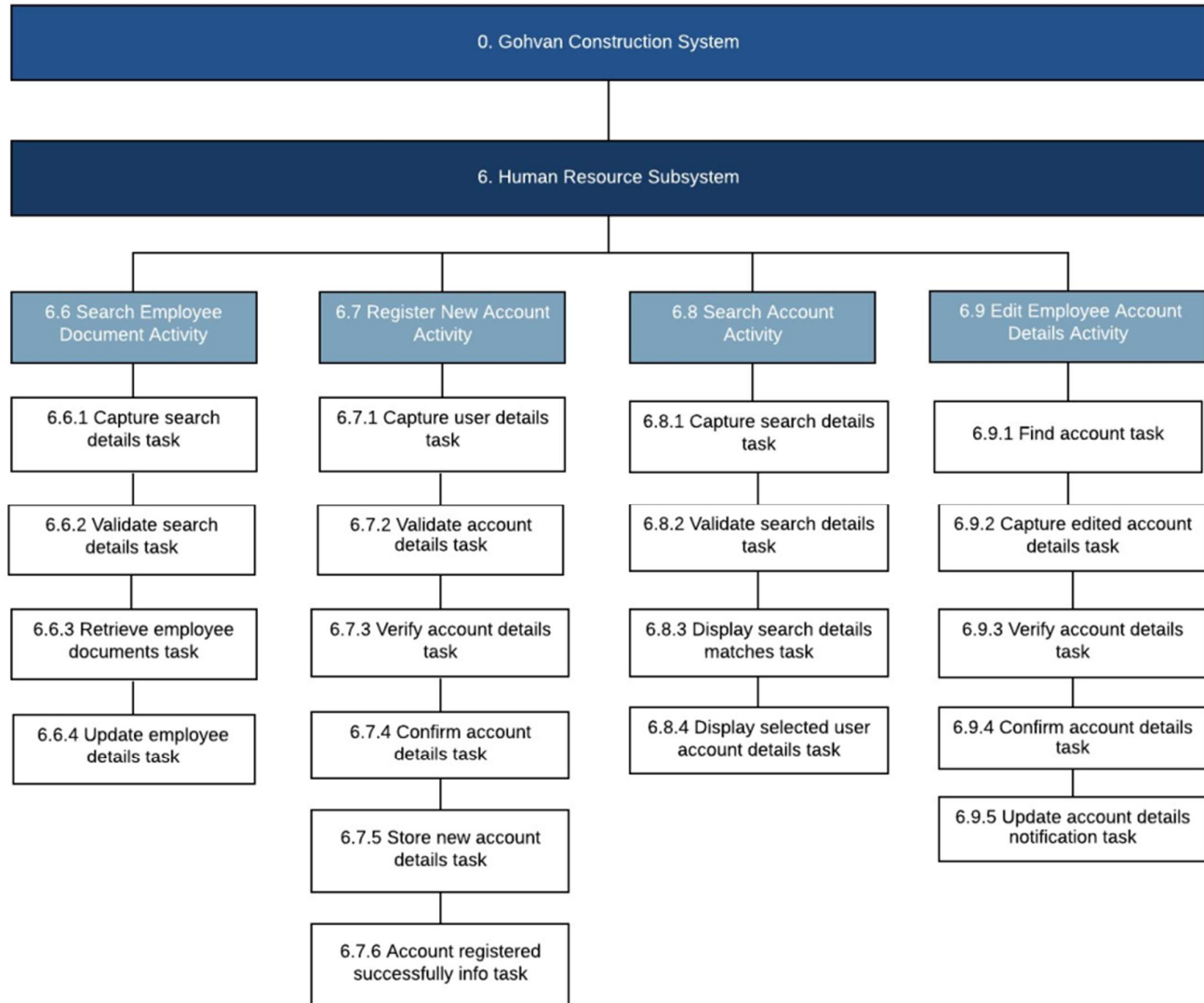
2.2.6 Invoicing Subsystem



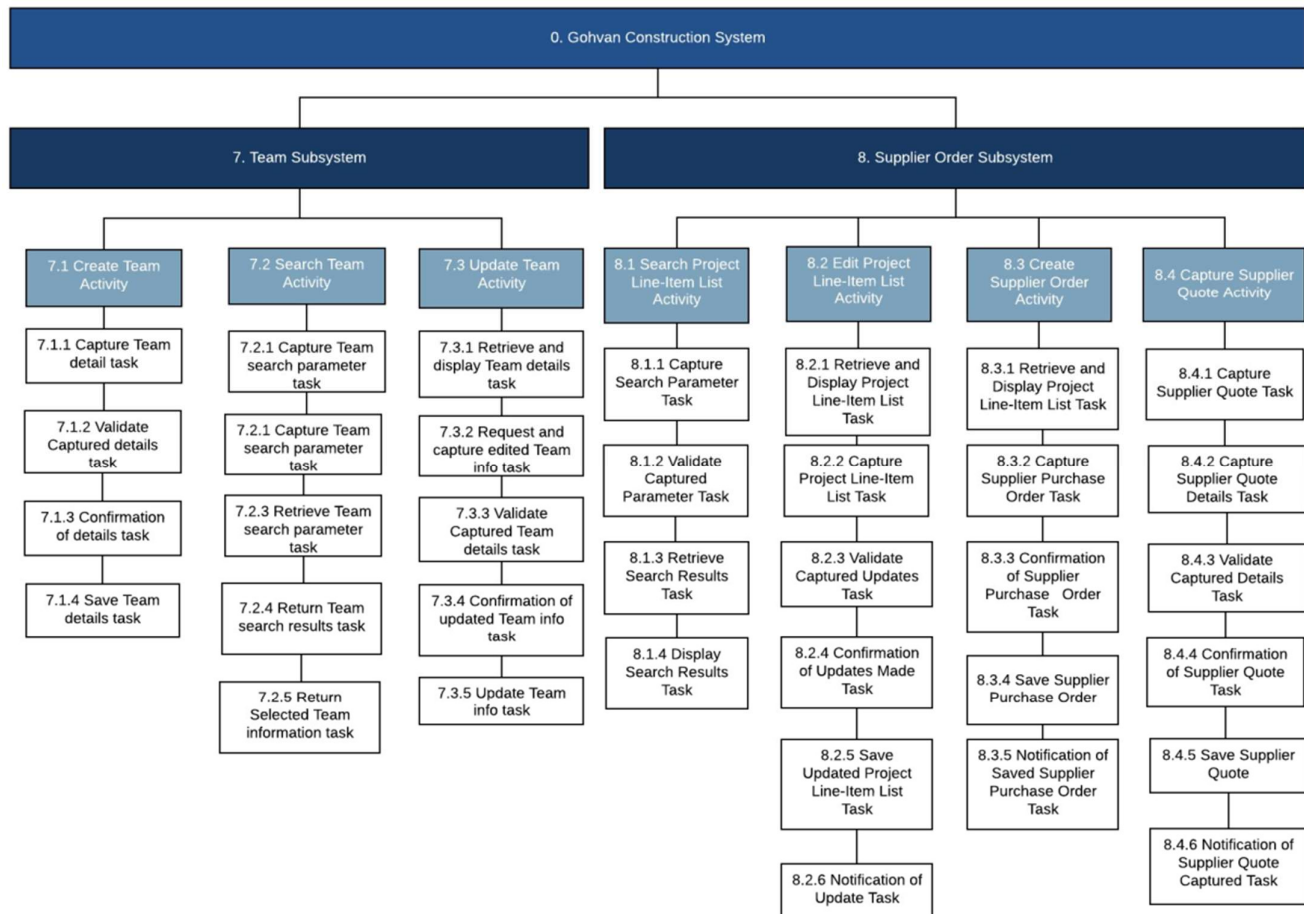
2.2.7 Human Resource Subsystem



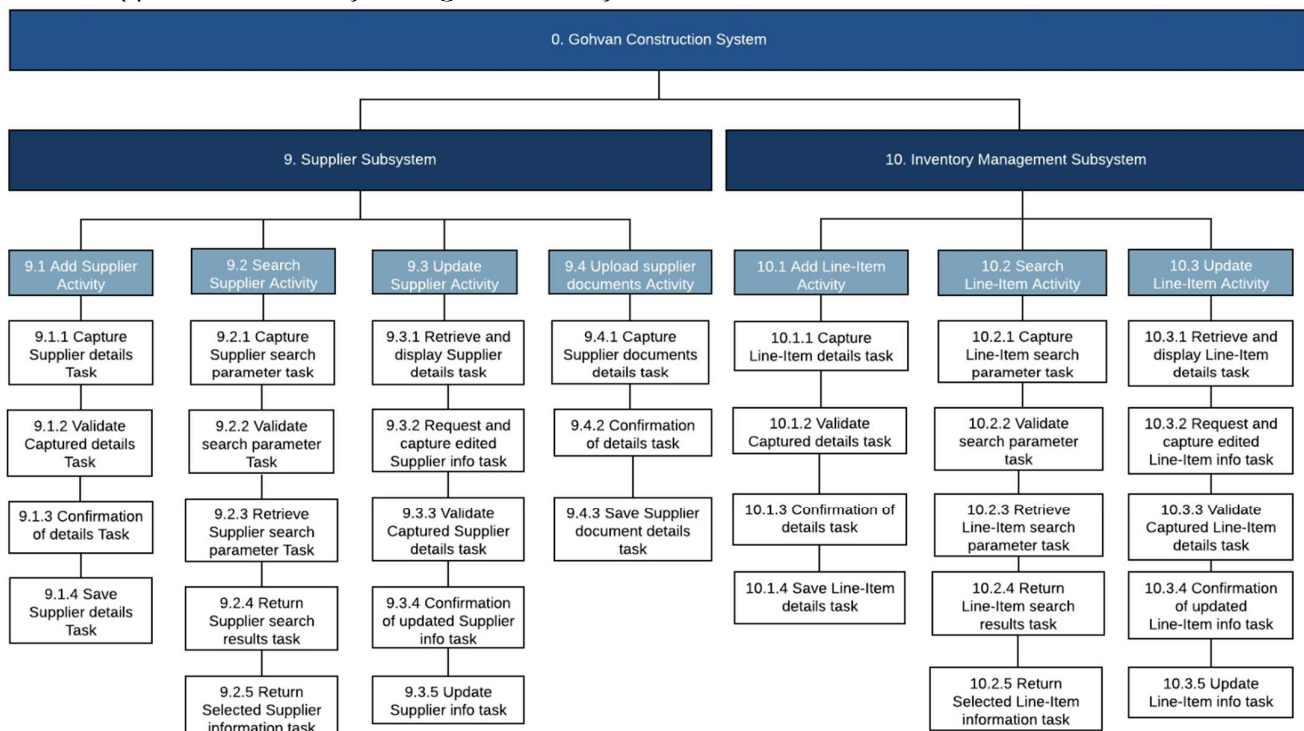
2.2.8 Human Resource Subsystem continued



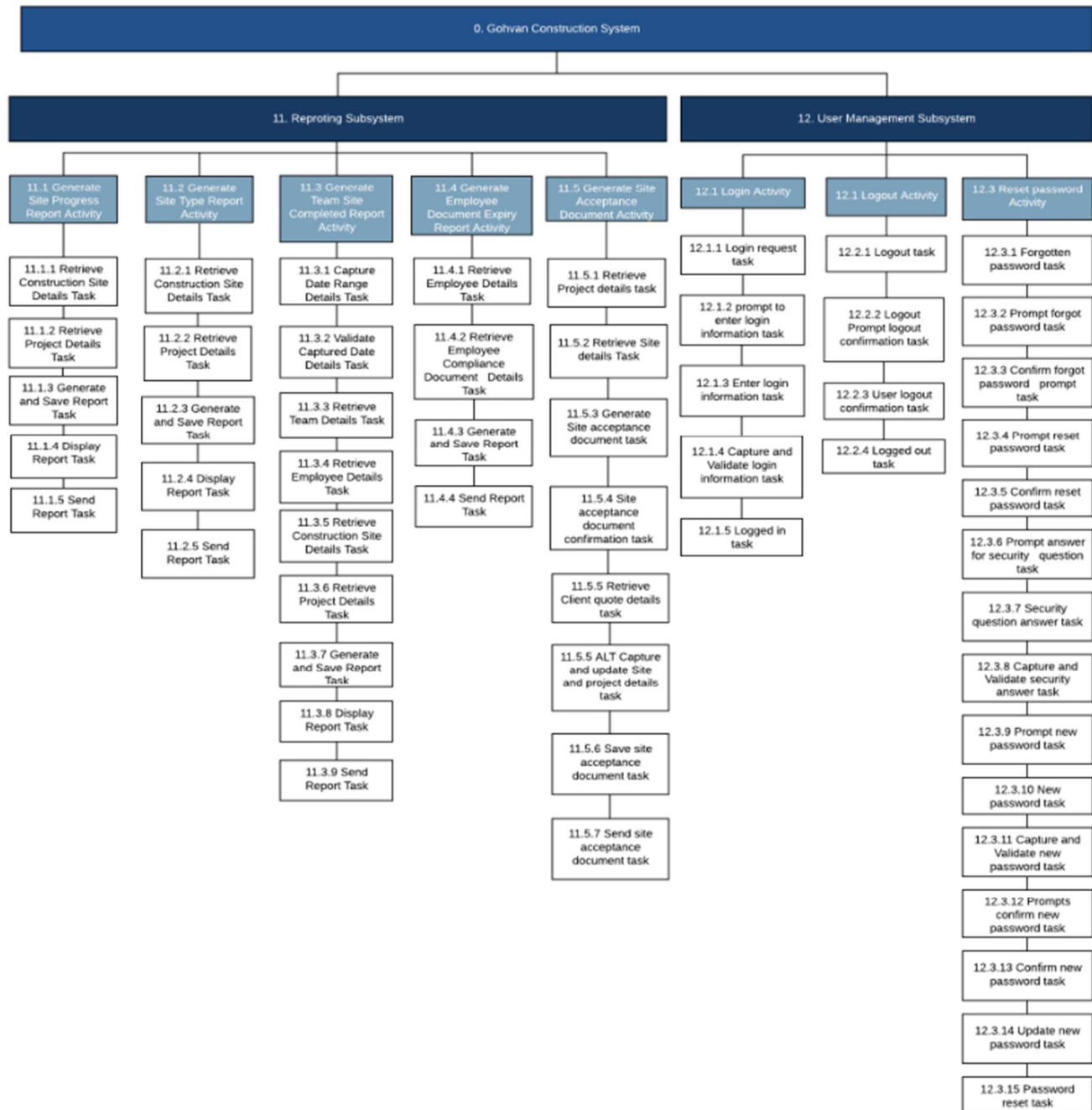
2.2.9 Team and Supplier Order Subsystem



2.2.10 Supplier and Inventory Management Subsystem



2.2.11 Reporting and User Management Subsystem



Conclusions

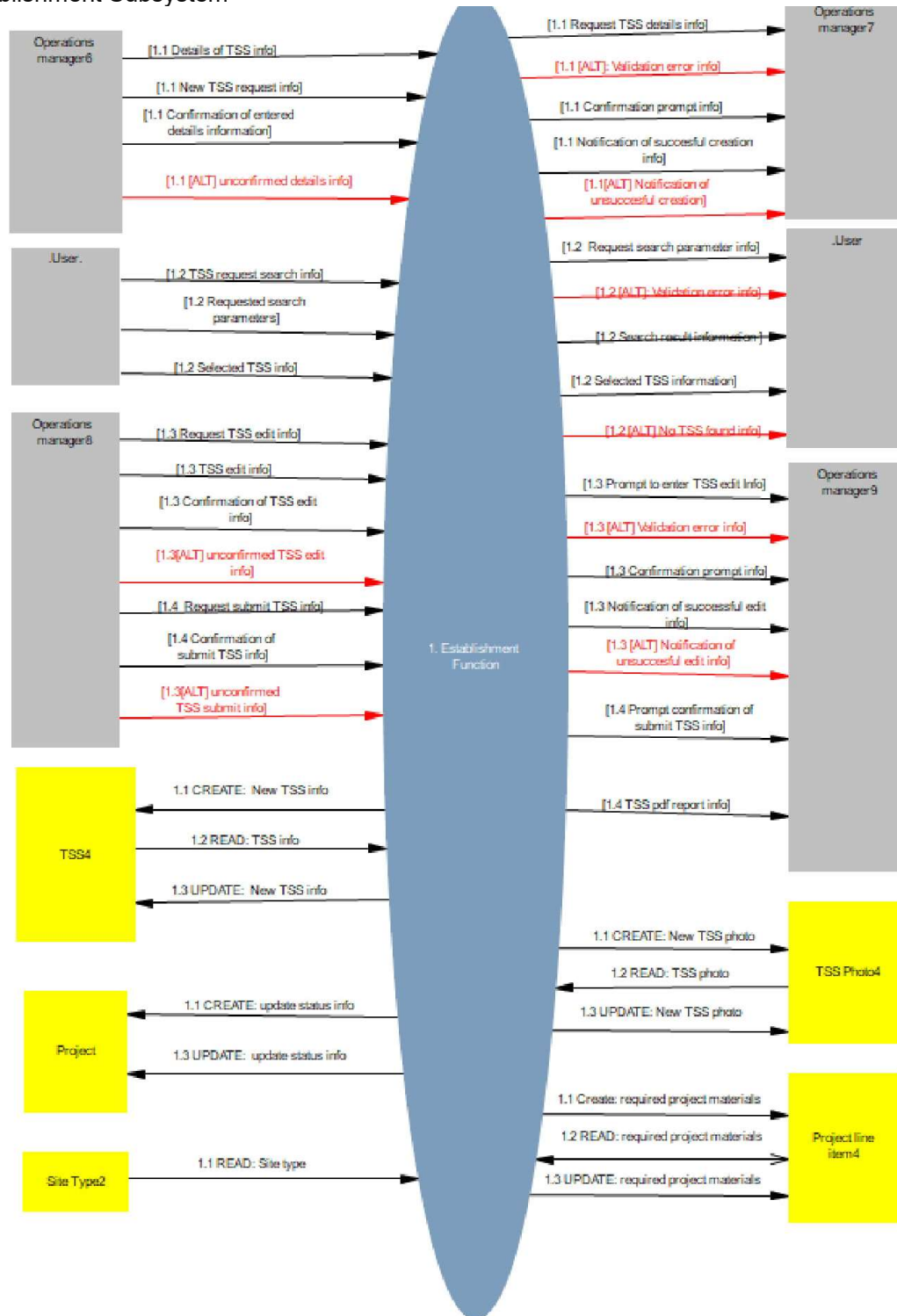
This section of the deliverable contains the decomposition diagrams, all levels of the data flow diagrams and data dictionary that explained the functional requirements of the system in full.

2.3 High Level Data Flow Diagram

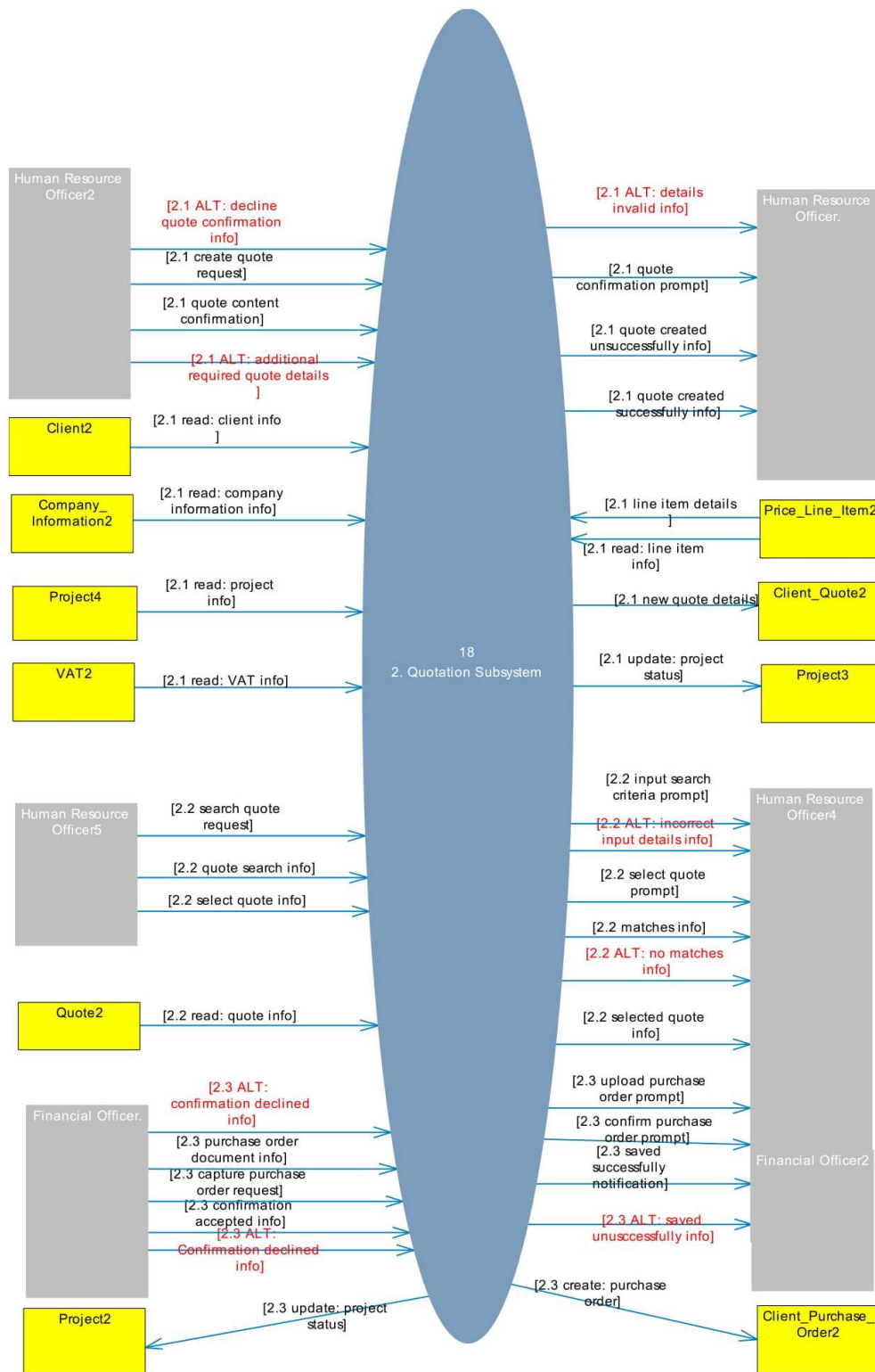
Introduction

This section contains the High-level Data flow diagram, indicating the subsystems interaction the Entity Relationship Diagram and all data flows within the subsystem.

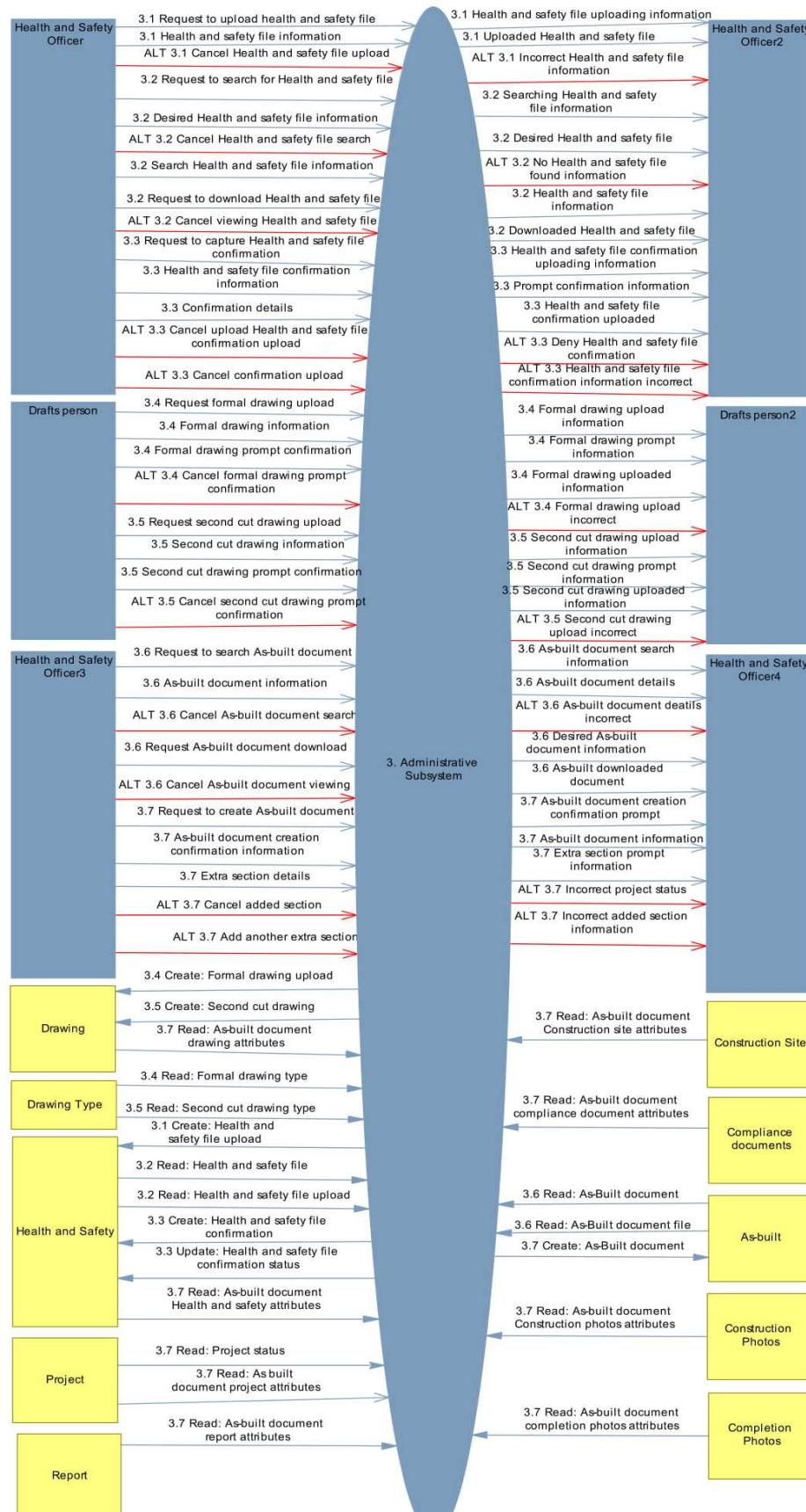
2.3.1 Establishment Subsystem



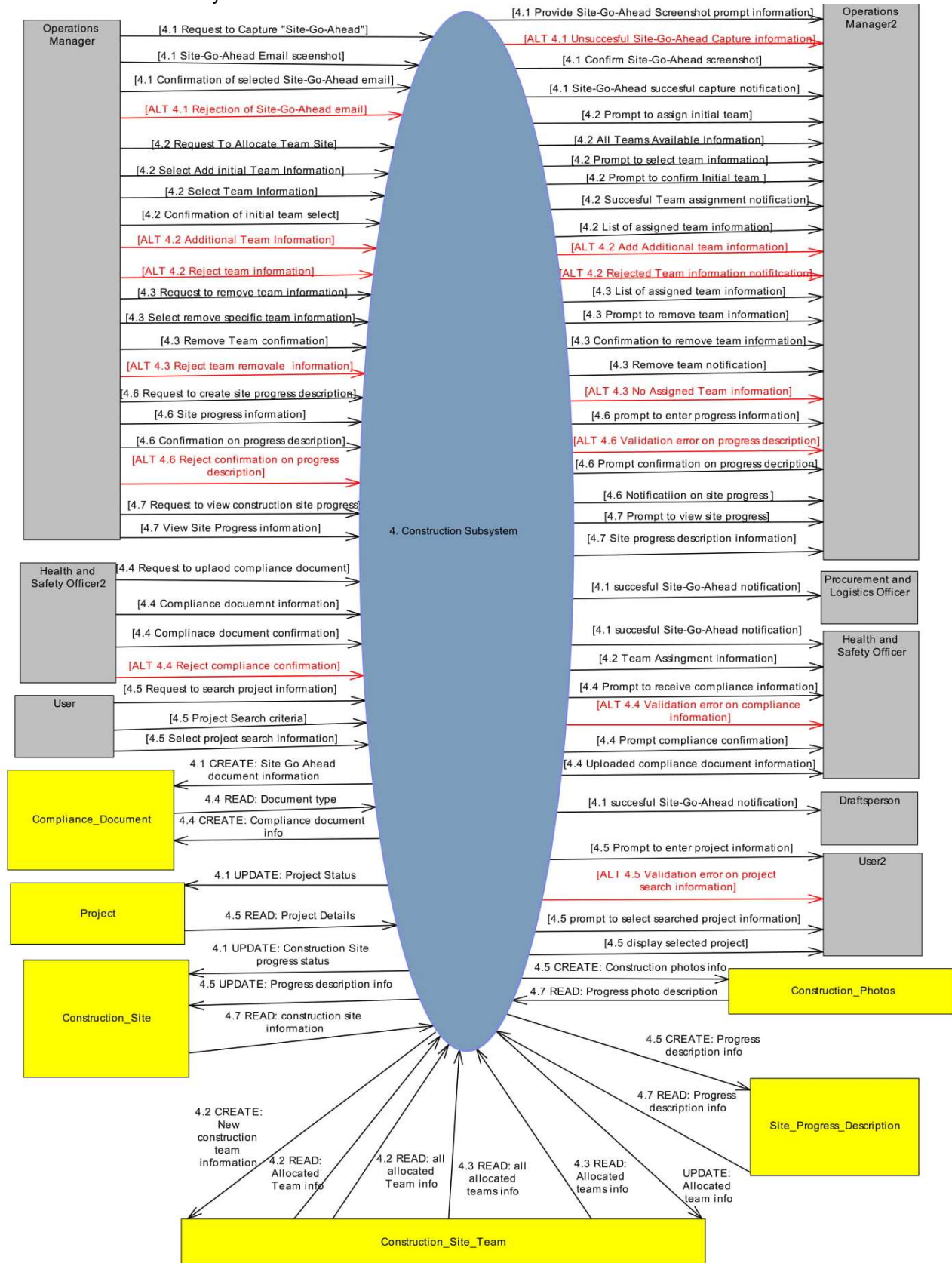
2.3.2 Quotation Subsystem

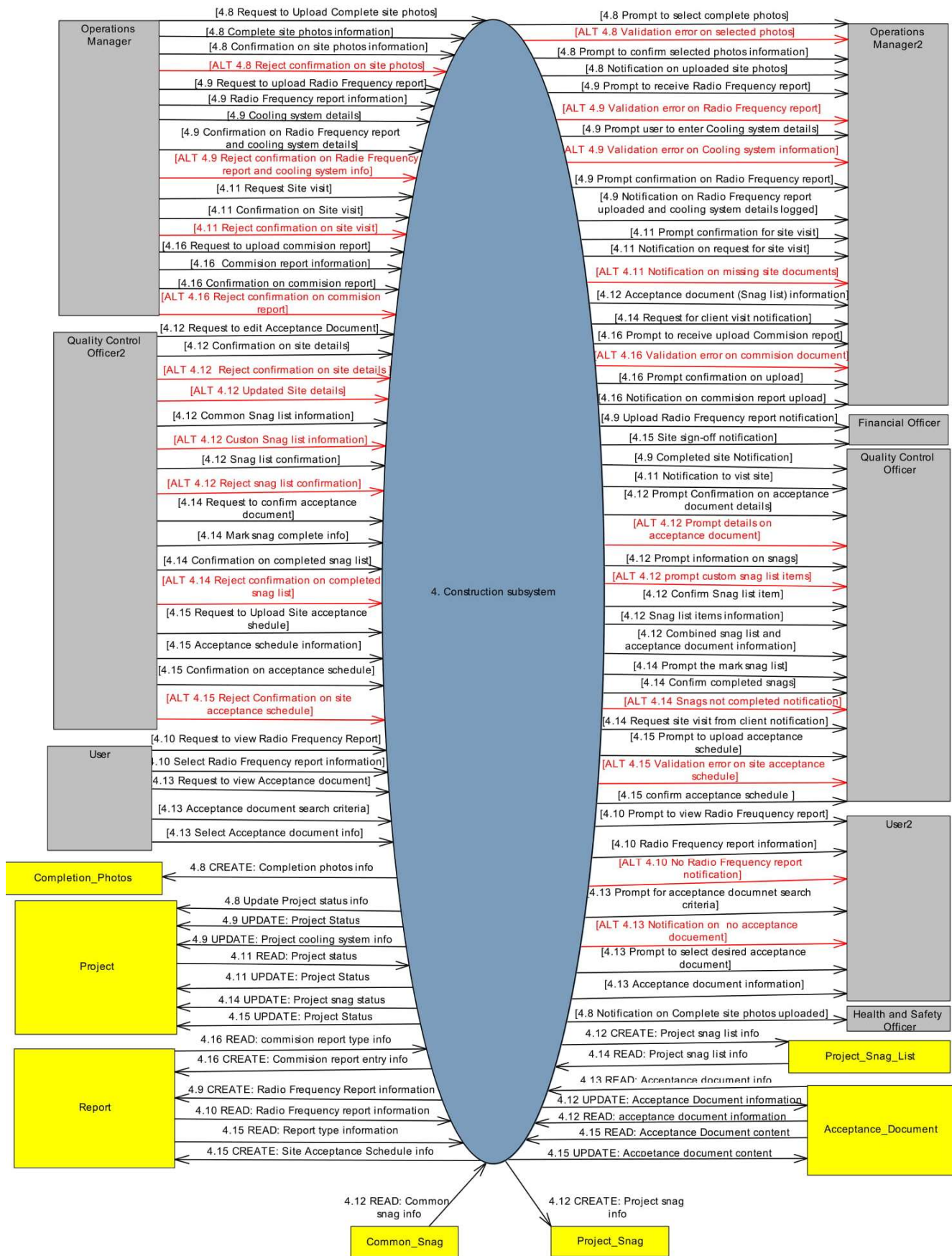


2.3.3 Administration Subsystem

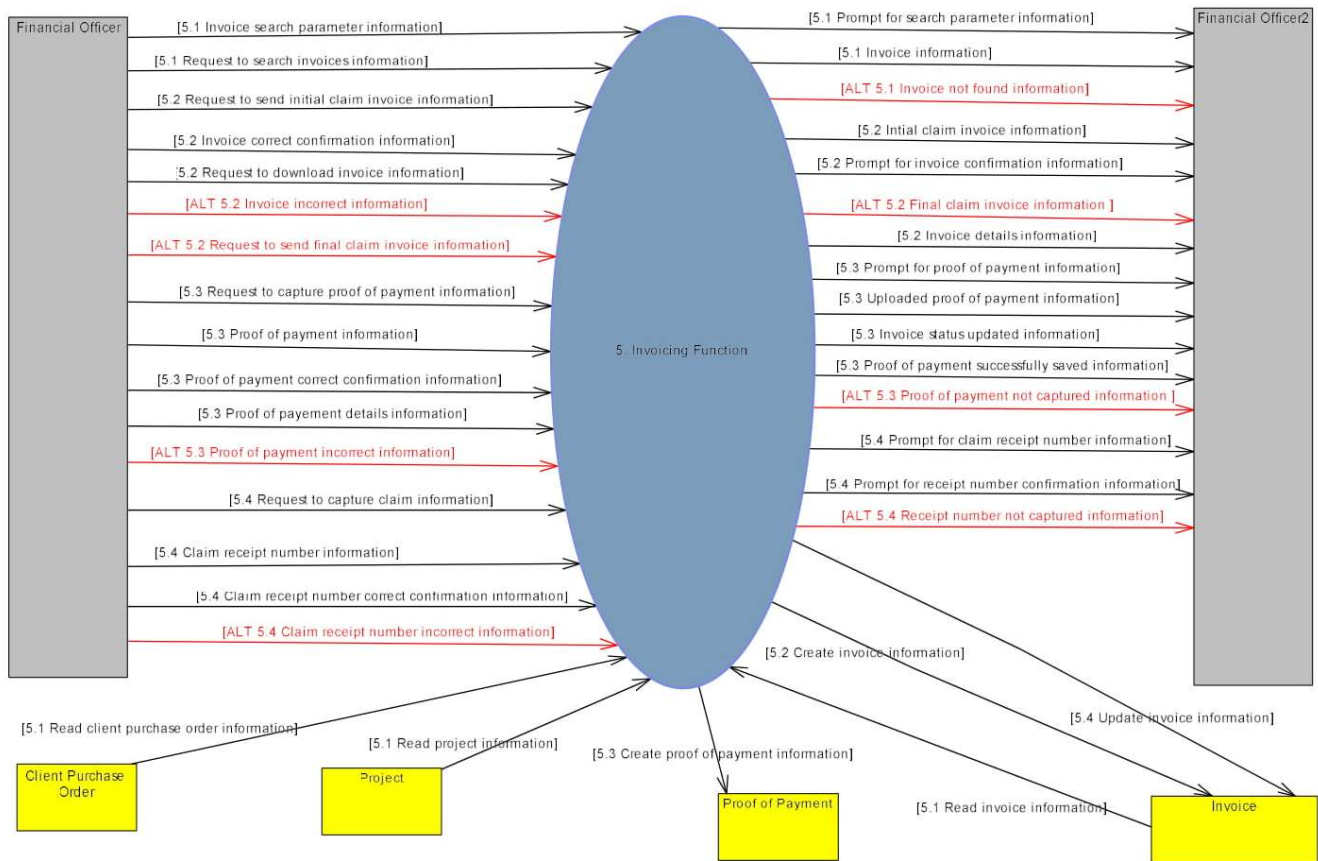


2.3.4 Construction Subsystem





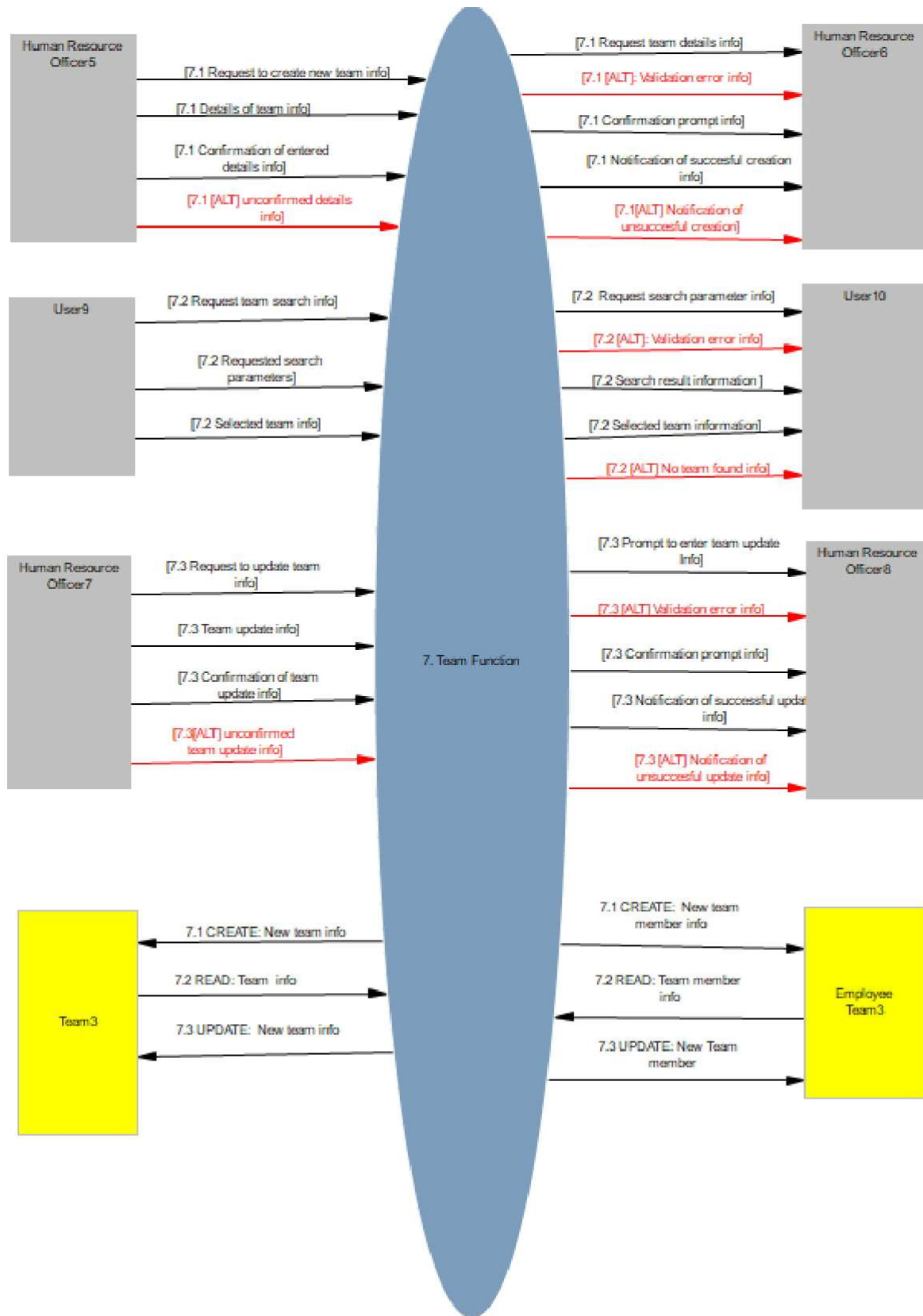
2.3.5 Invoicing Subsystem



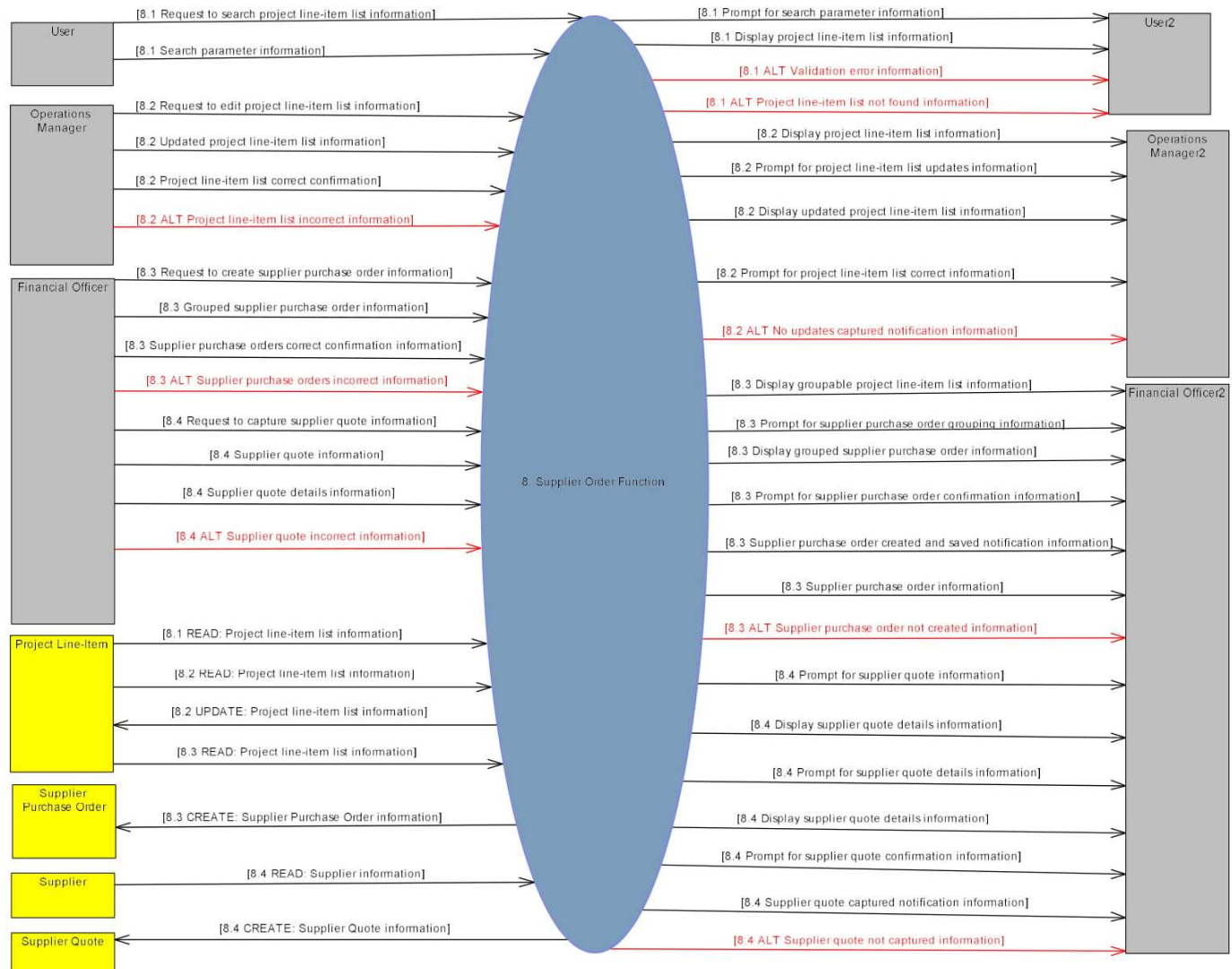
17 MAY 2021



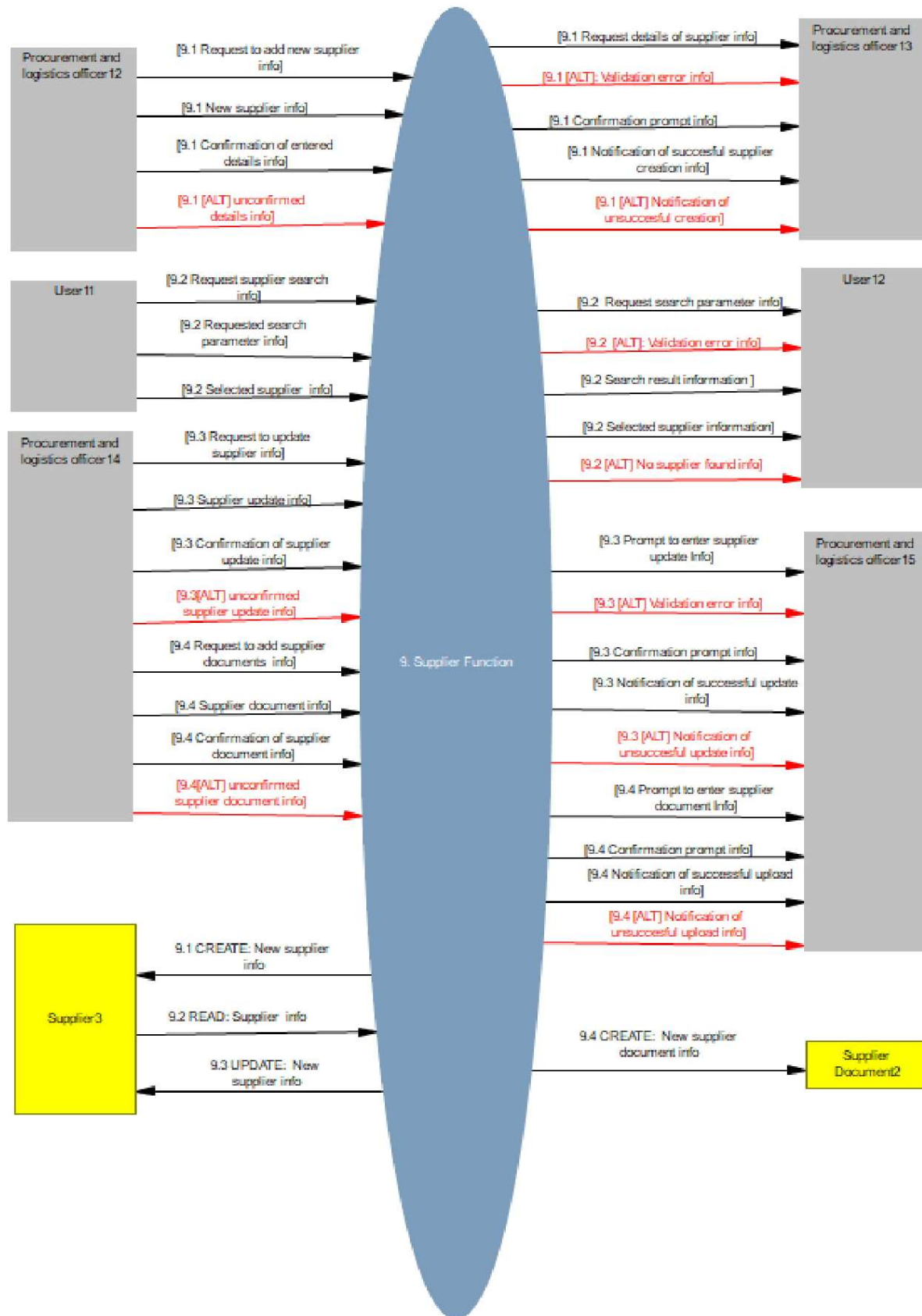
2.3.7 Team Subsystem



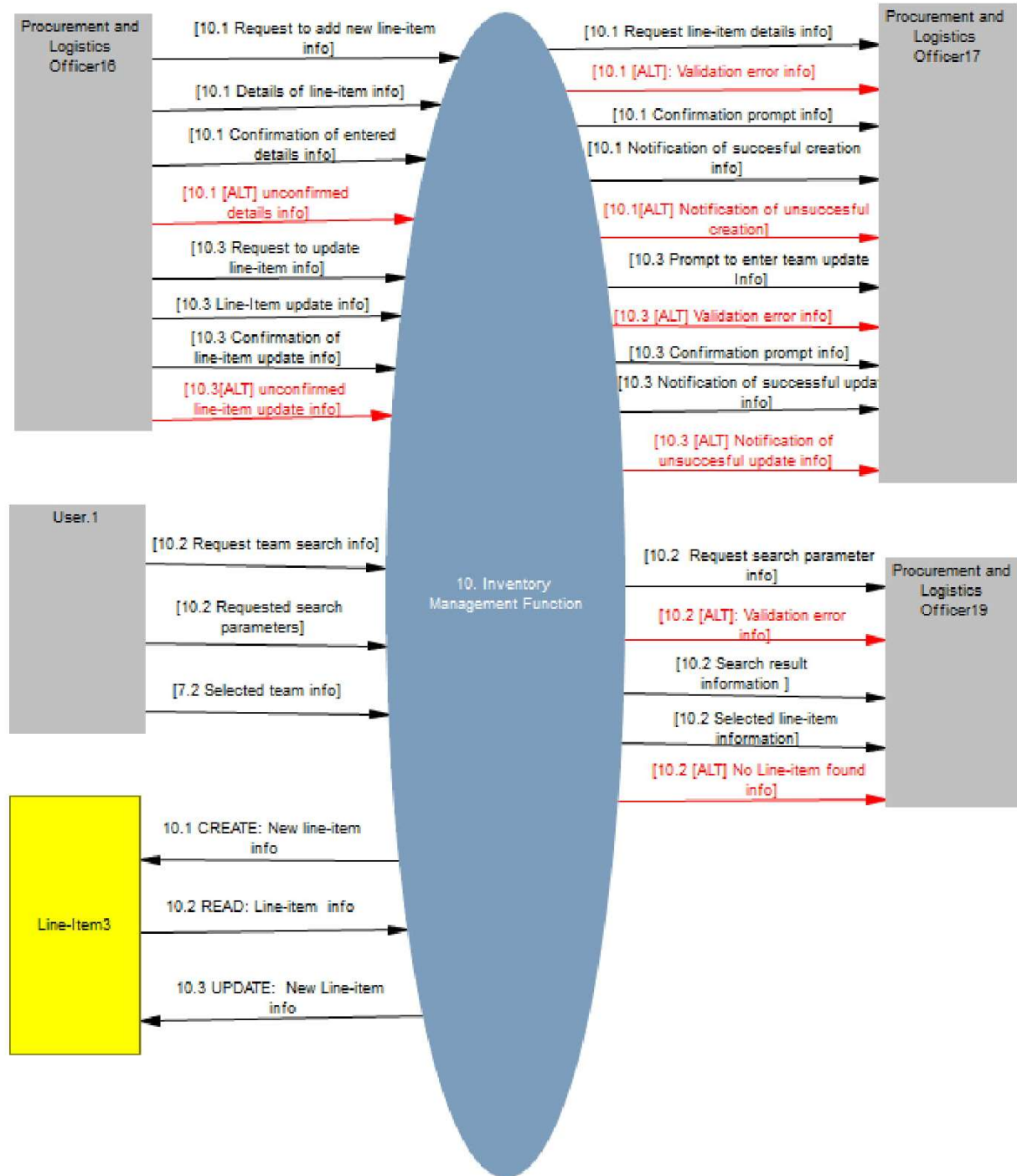
2.3.8 Supplier Order Subsystem



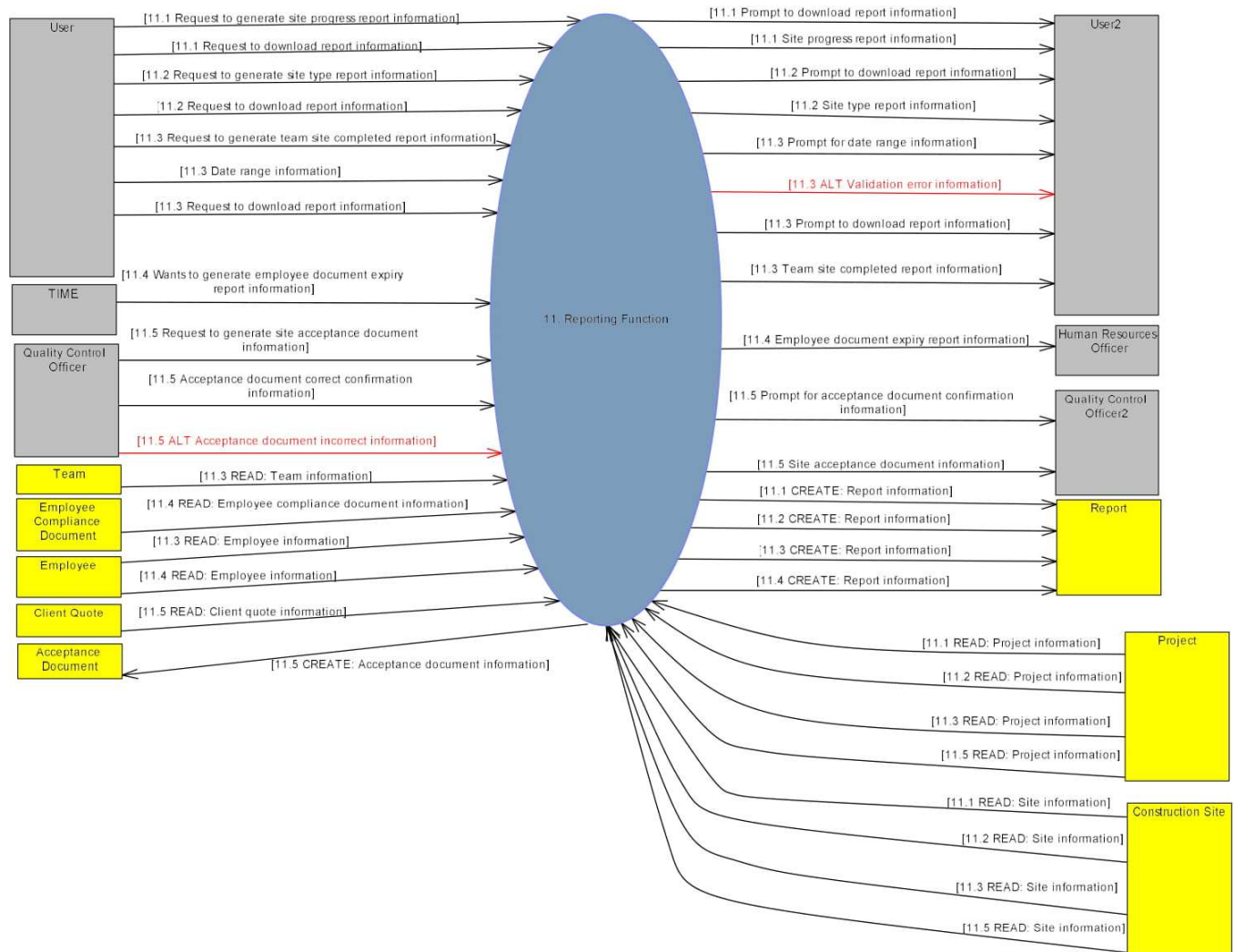
2.3.9 Supplier Subsystem



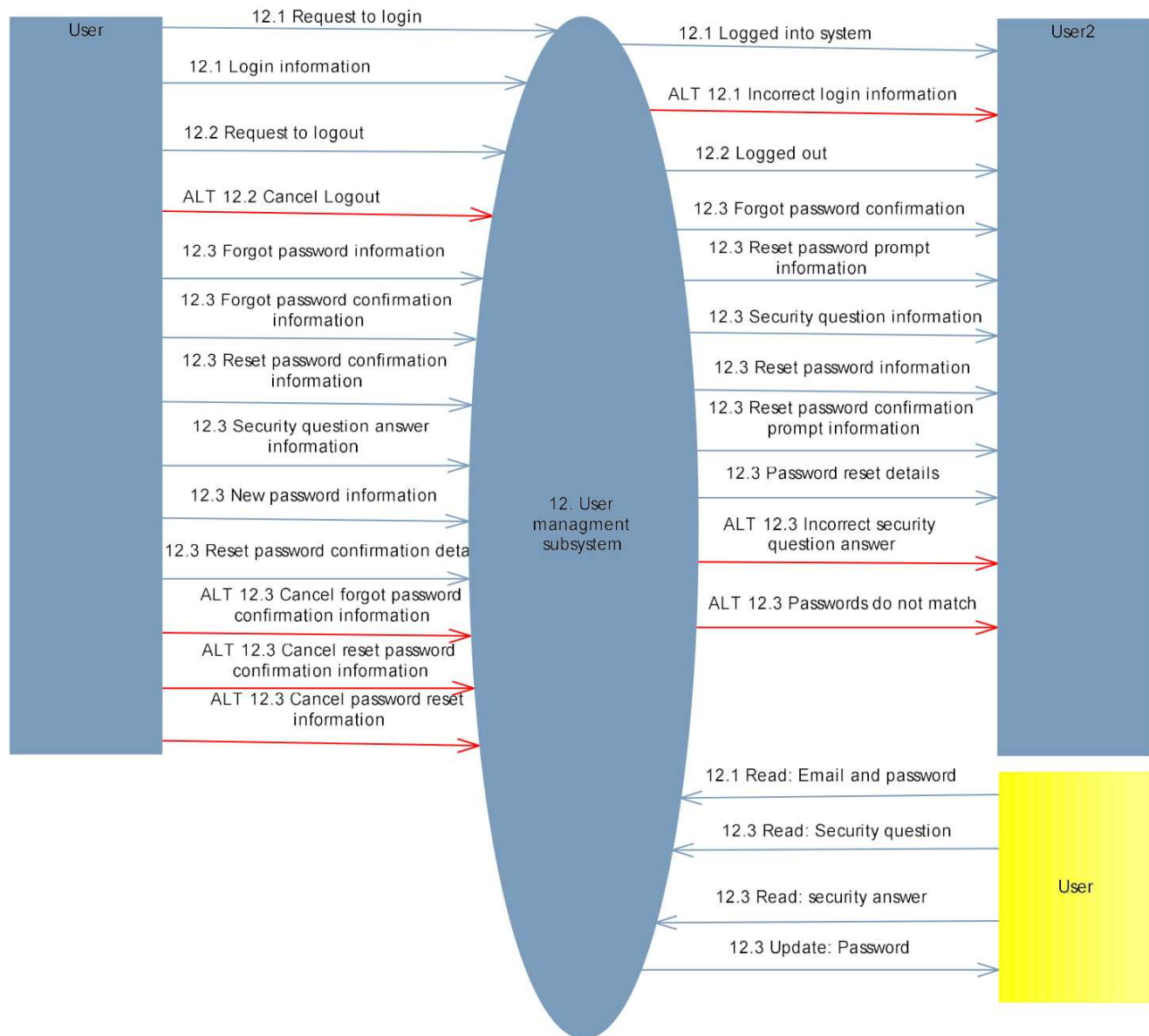
2.3.10 Inventory Management Subsystem



2.3.11 Report Subsystem



2.3.12 User Management Subsystem



Conclusions

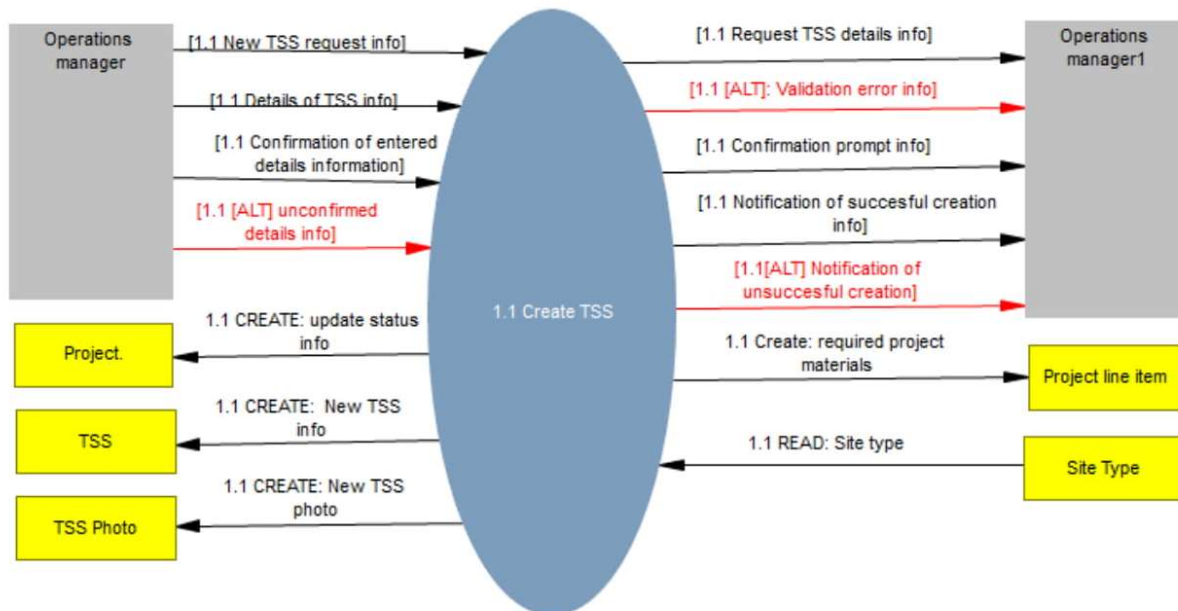
This concludes the High-Level Data Flow Diagrams. Which details the subsystems data flows and interactions with the Entity Relationship Model.

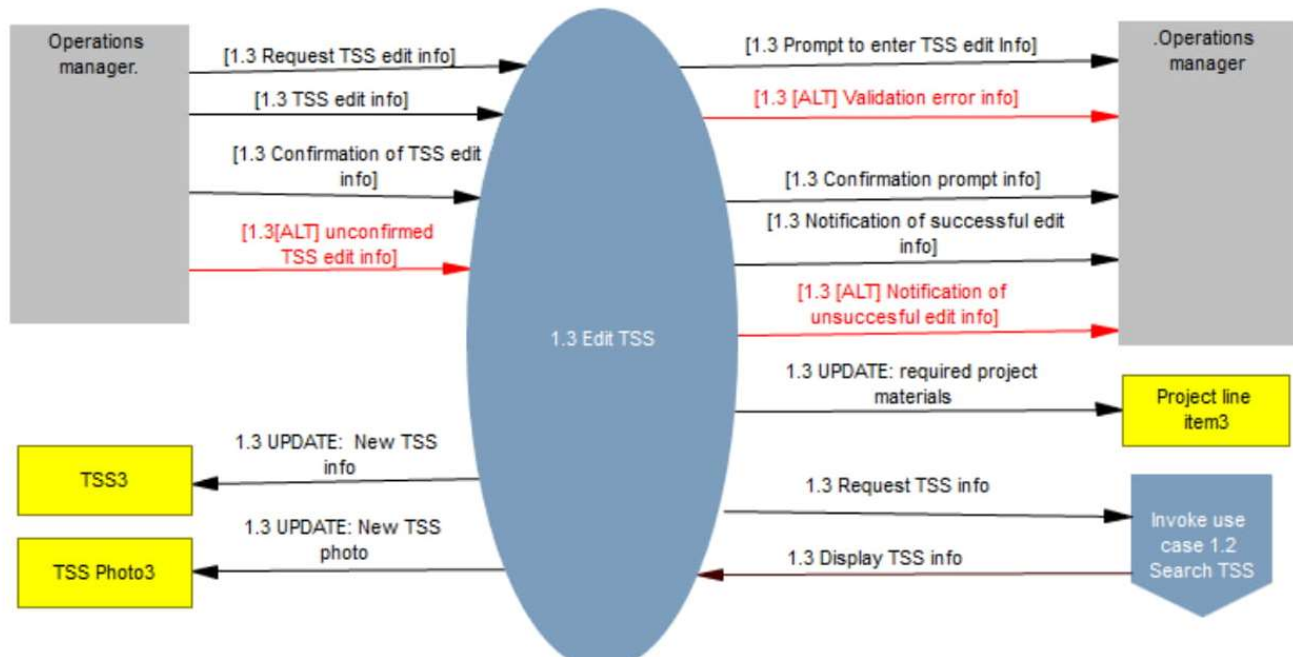
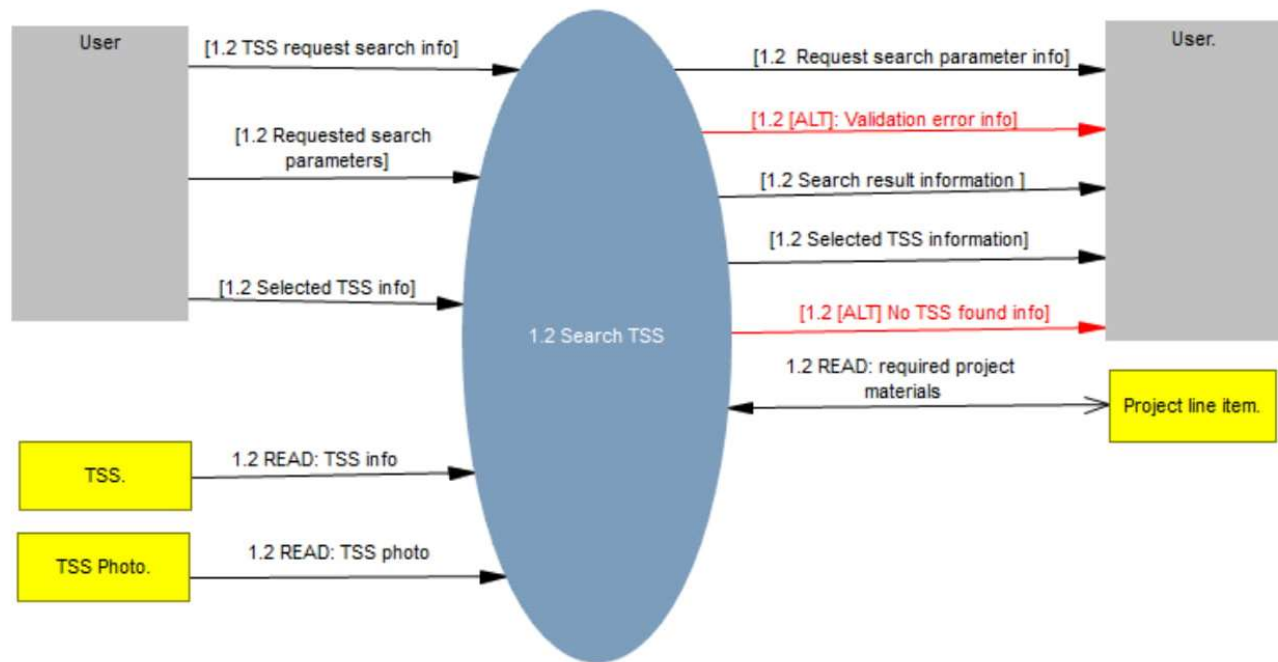
2.4 Middle Level Data Flow Diagram

Introduction

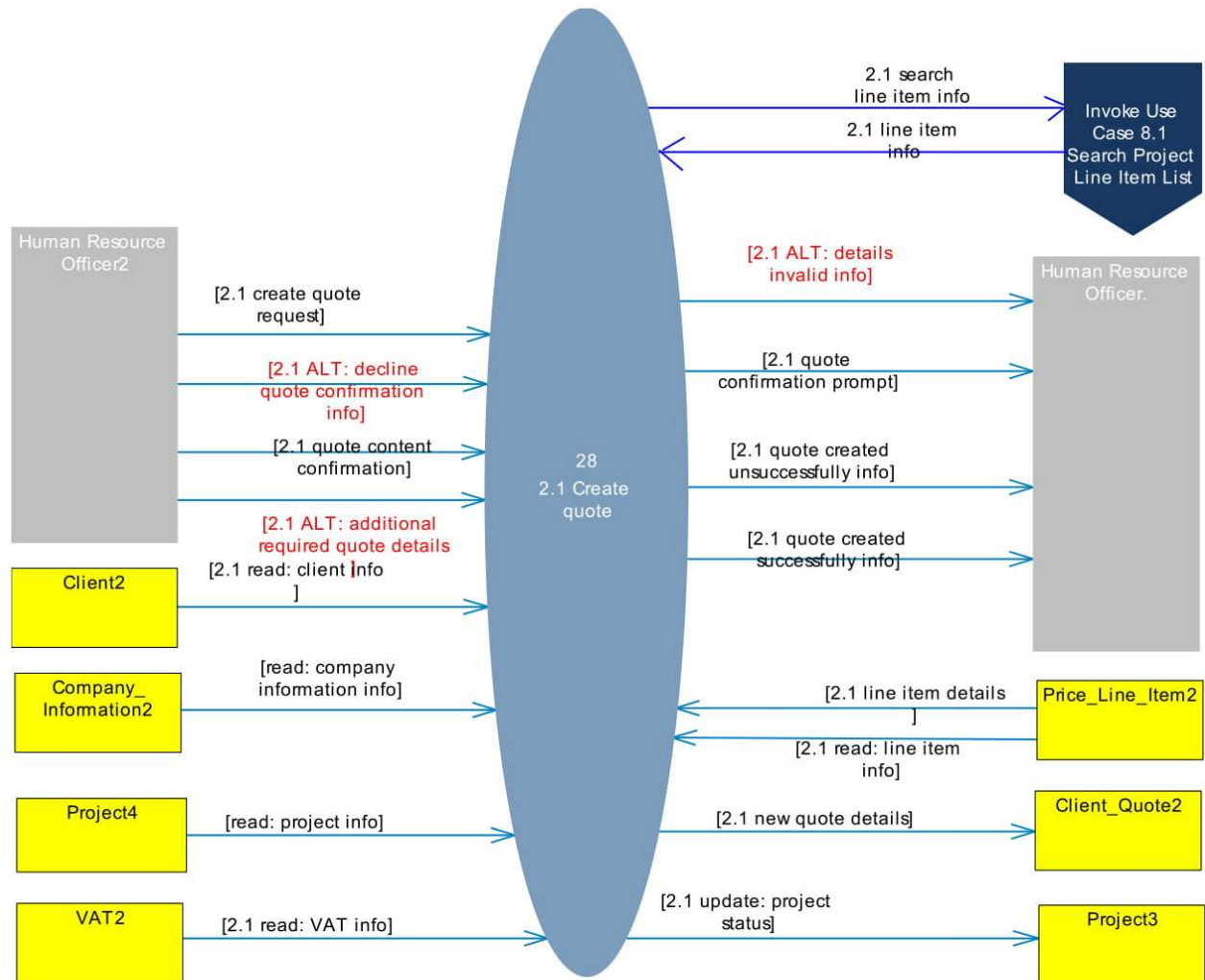
This section contains the Middle level Data Flow Diagrams. Which details the use cases data flow and interactions with the Entity Relationship Model.

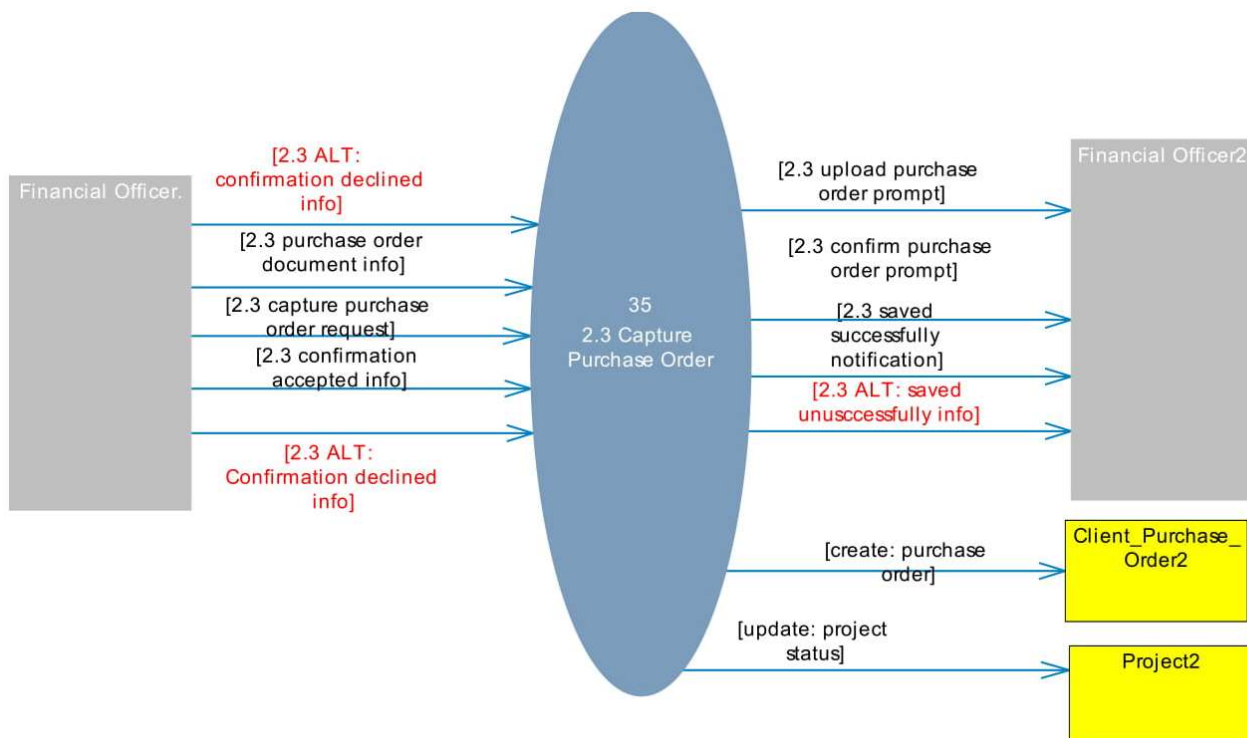
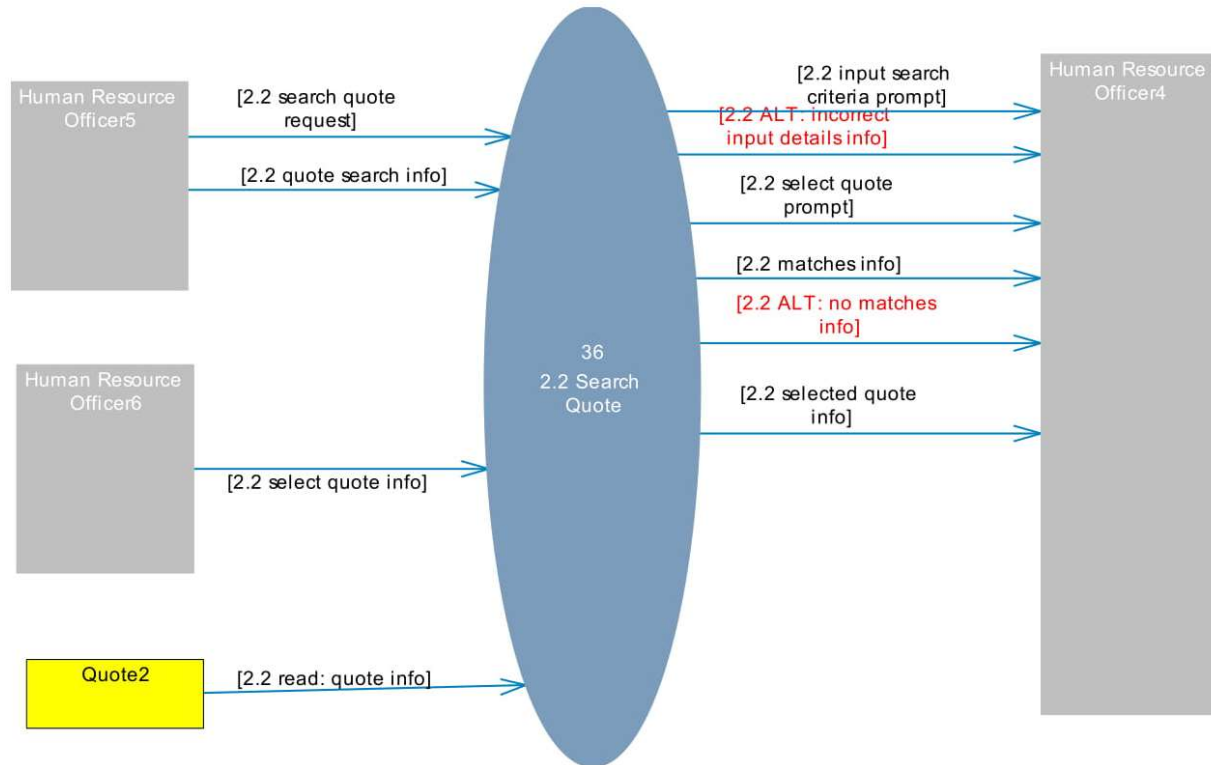
2.4.1 Establishment Subsystem



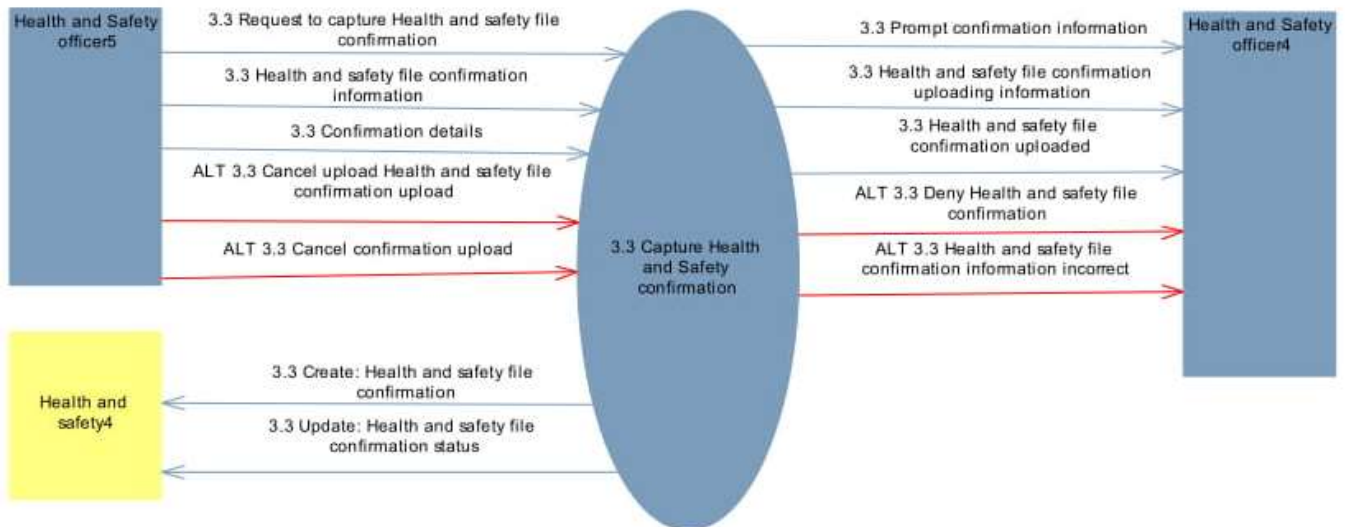
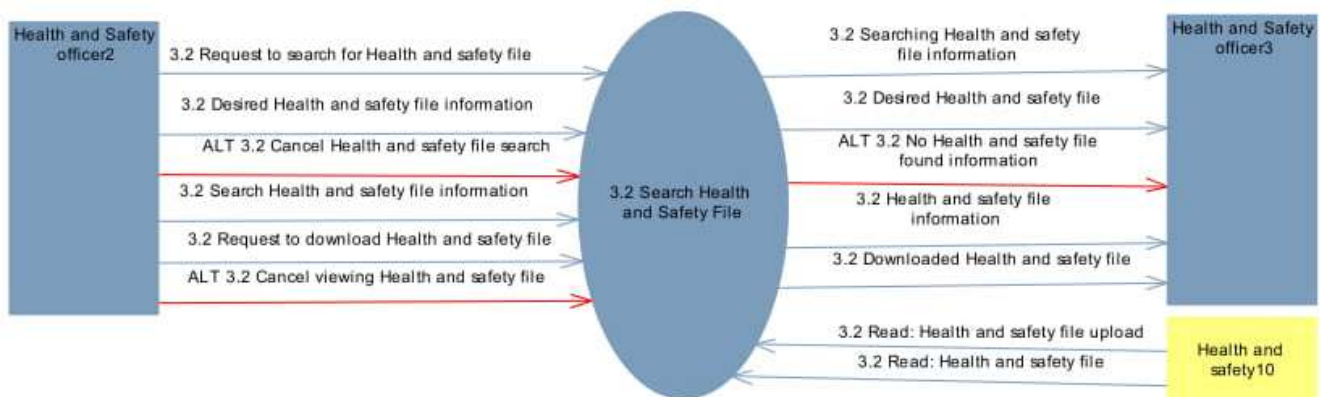
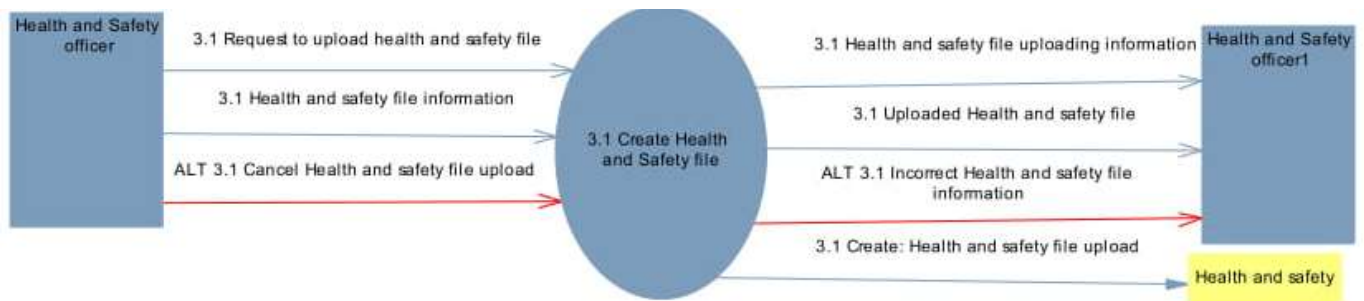


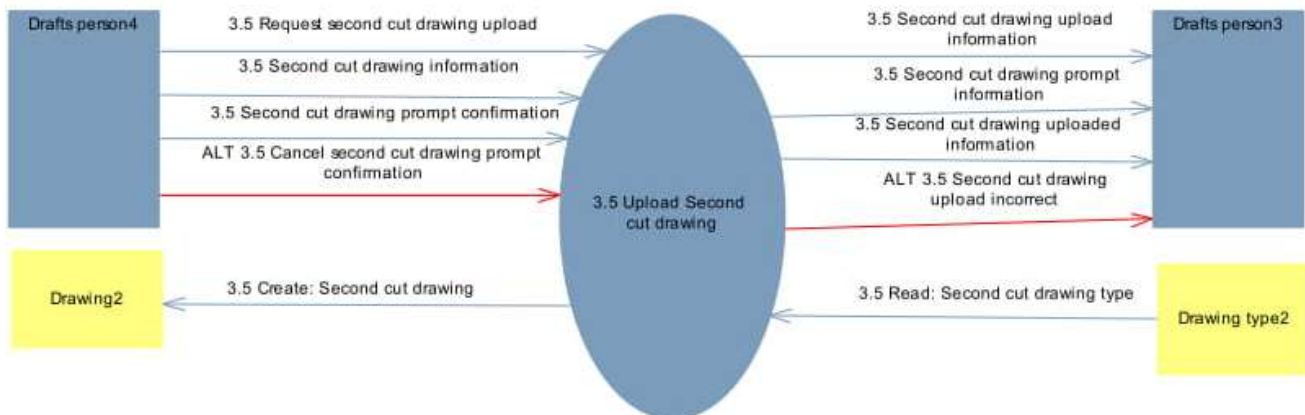
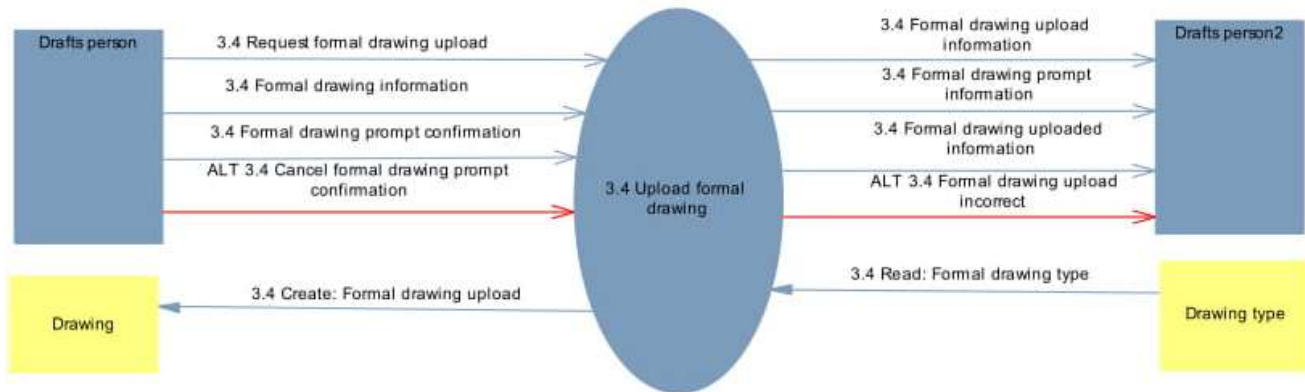
2.4.2 Quotation Subsystem

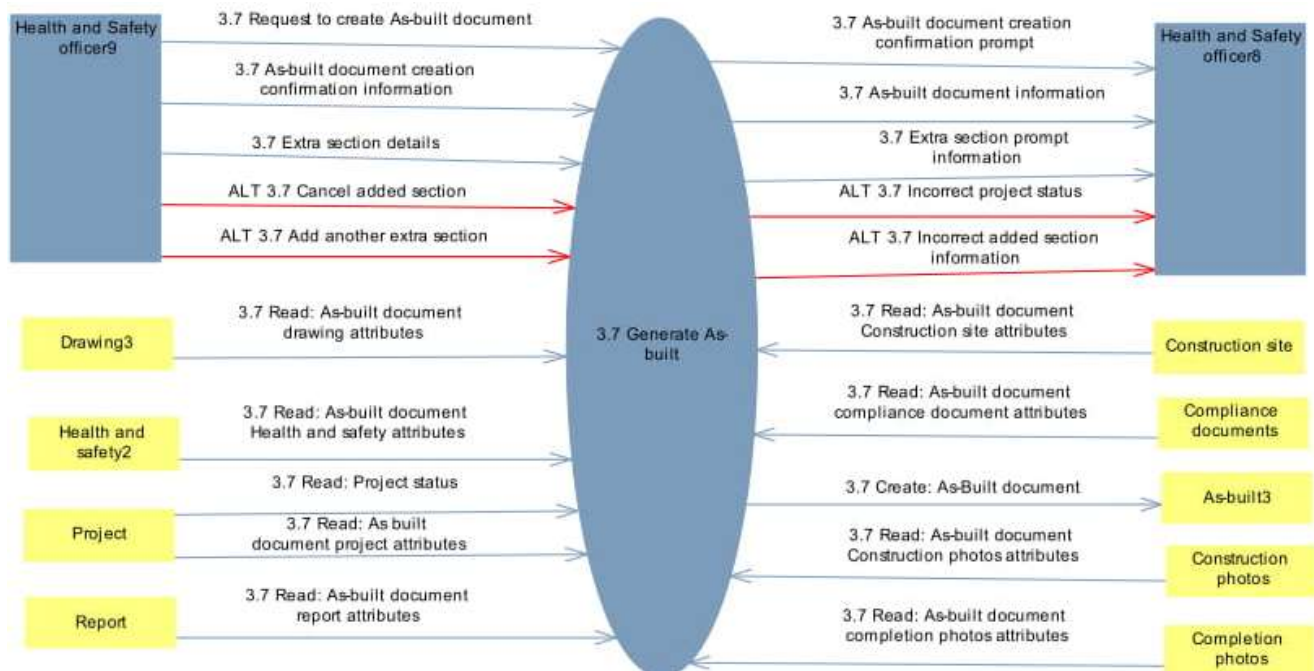




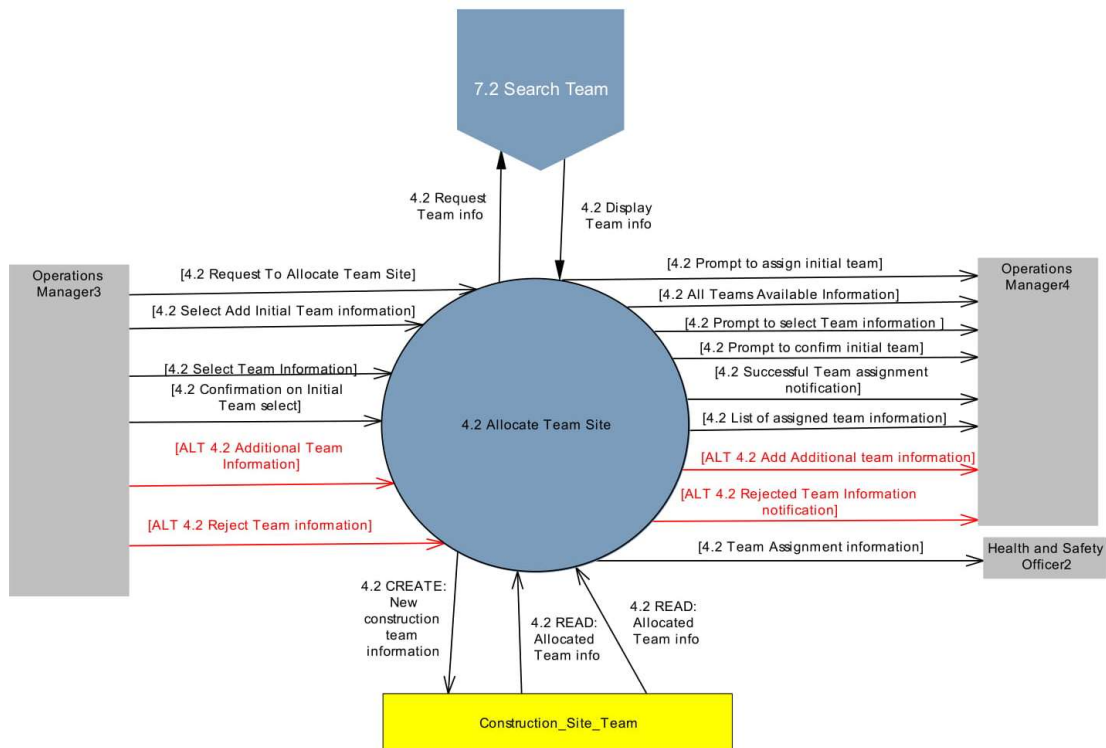
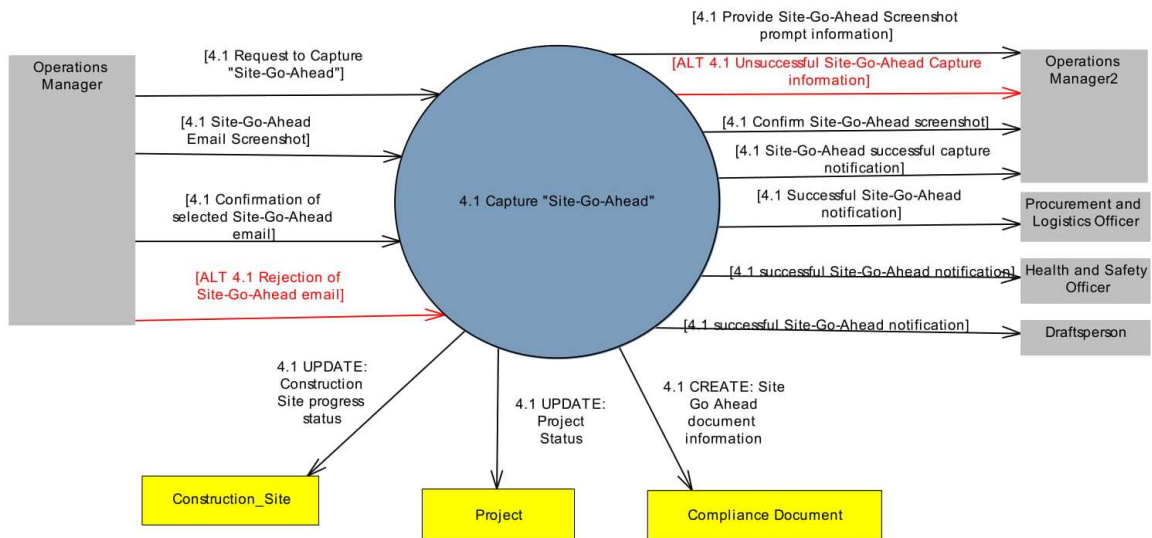
2.4.3 Administration Subsystem



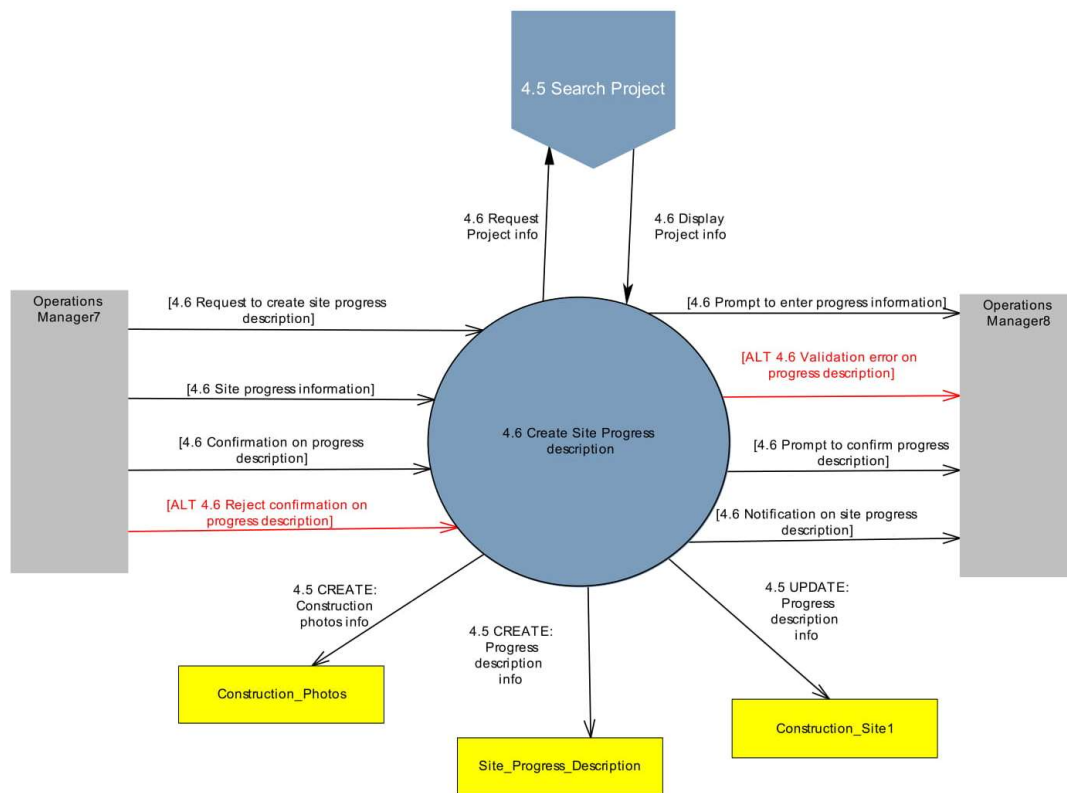
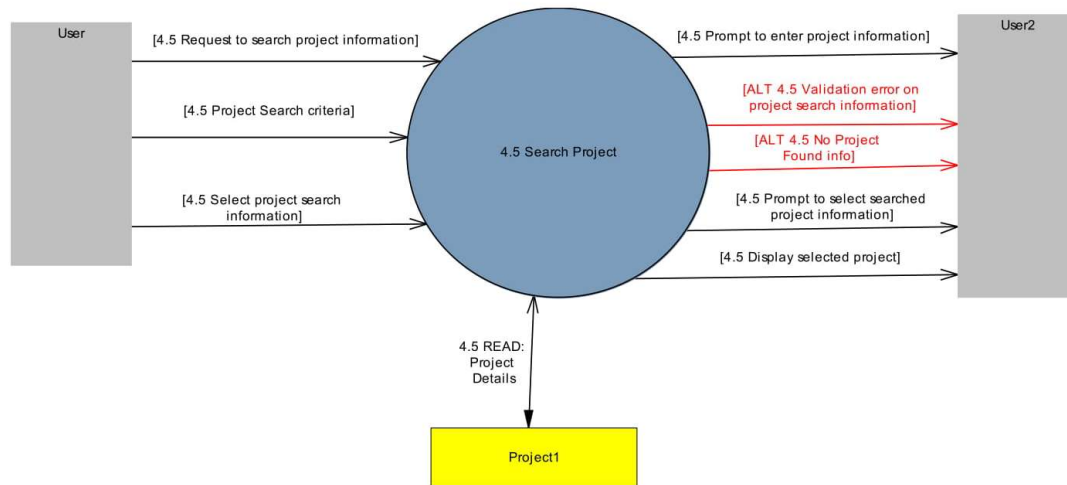


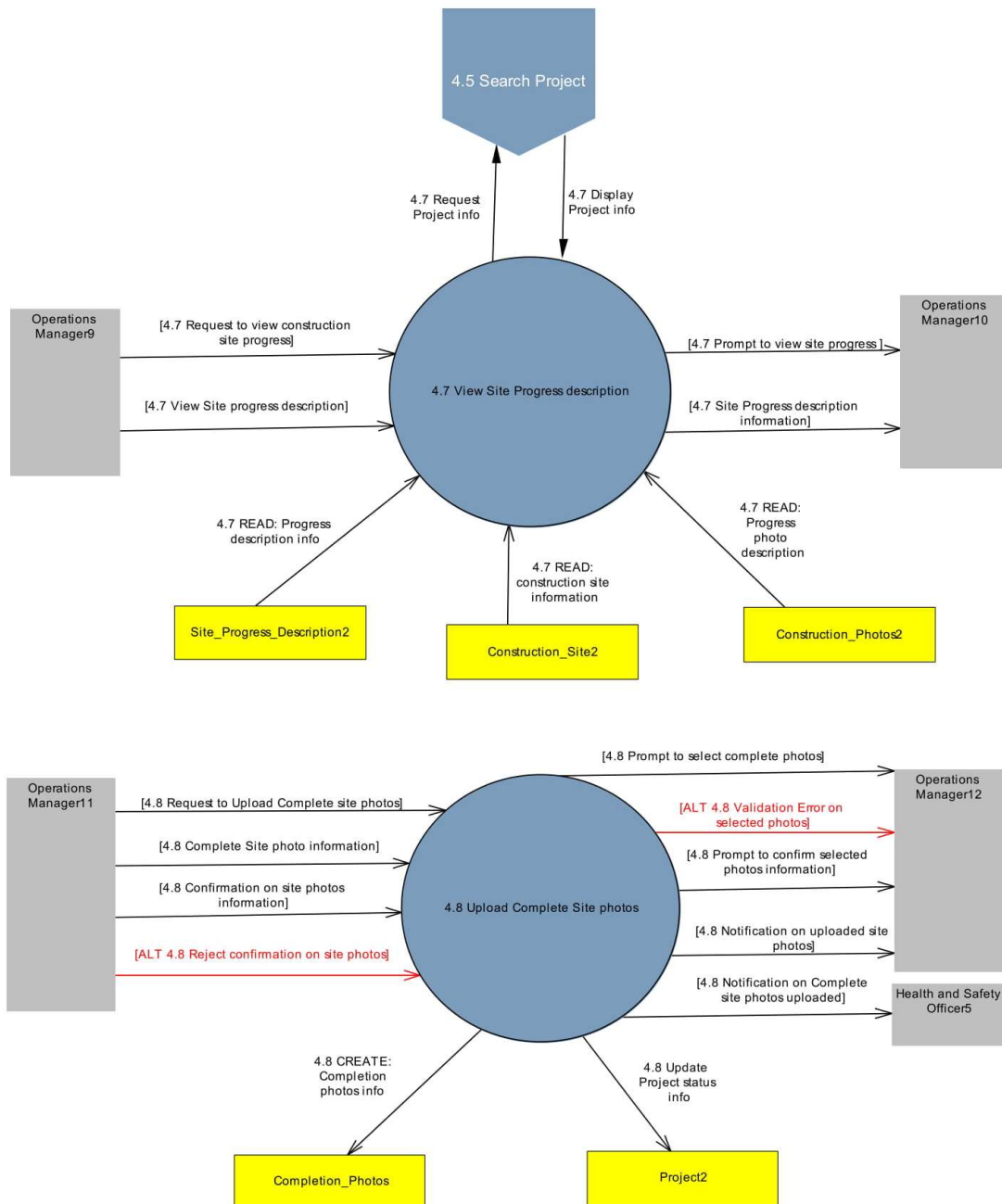


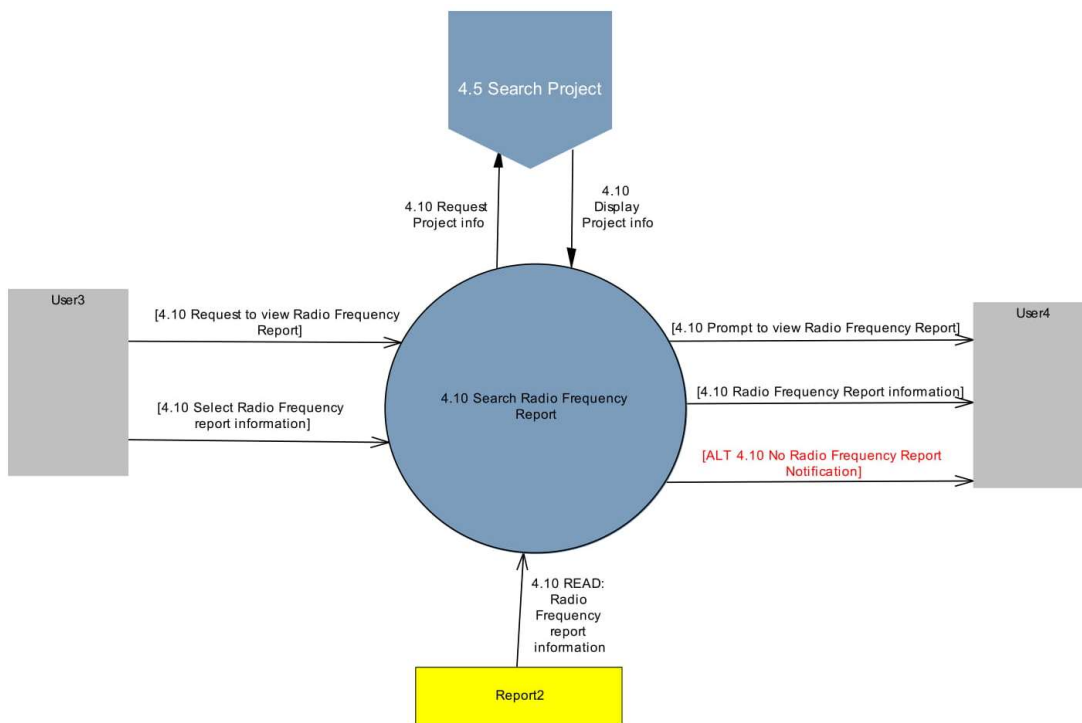
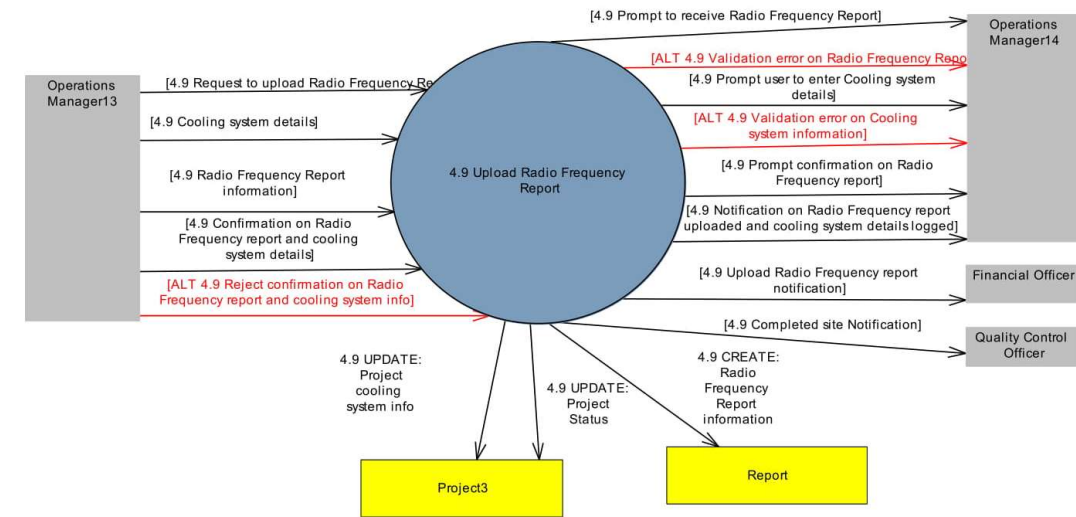
2.4.4 Construction Subsystem

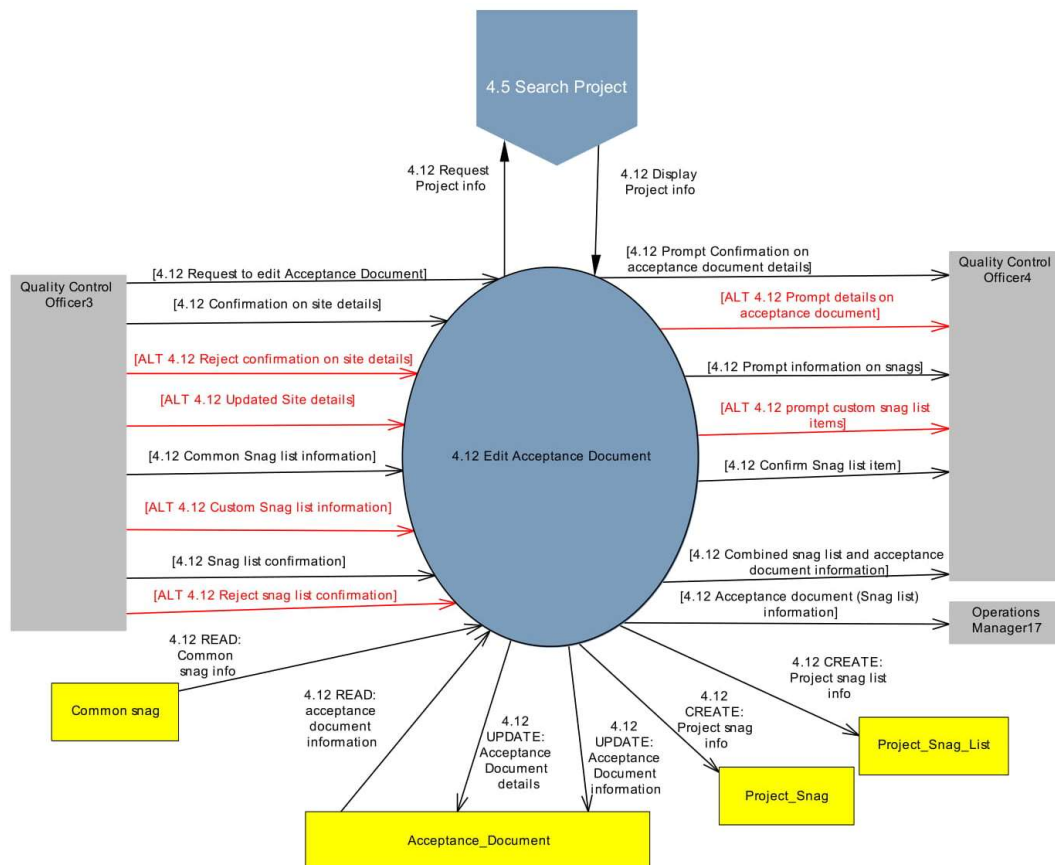
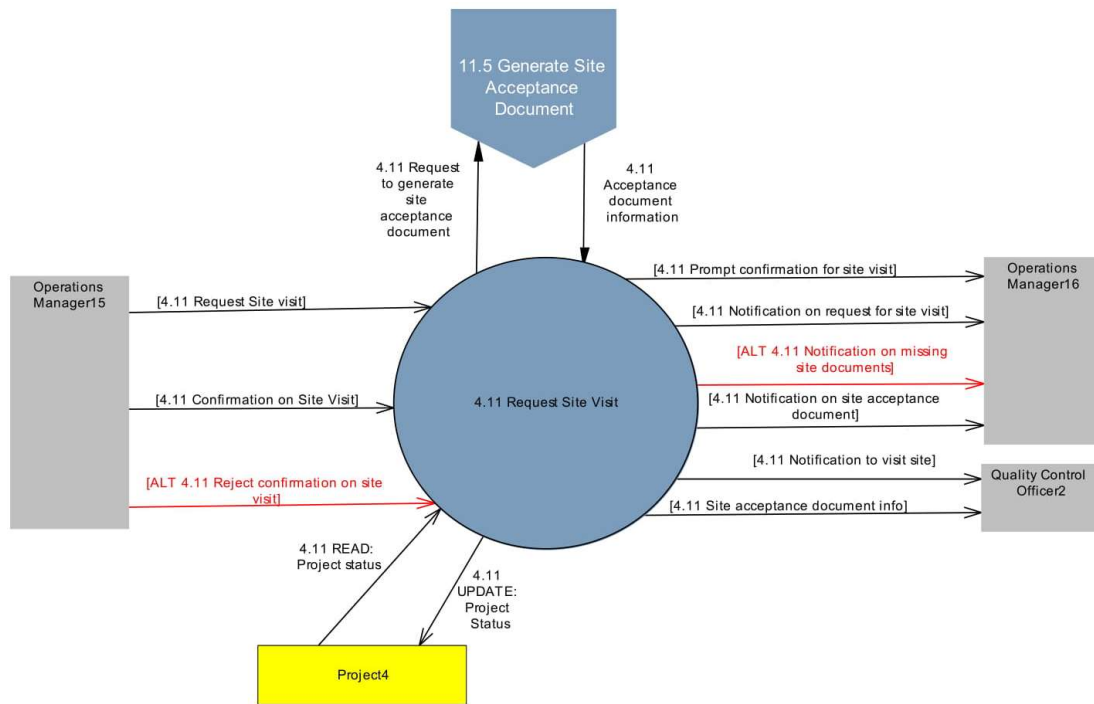


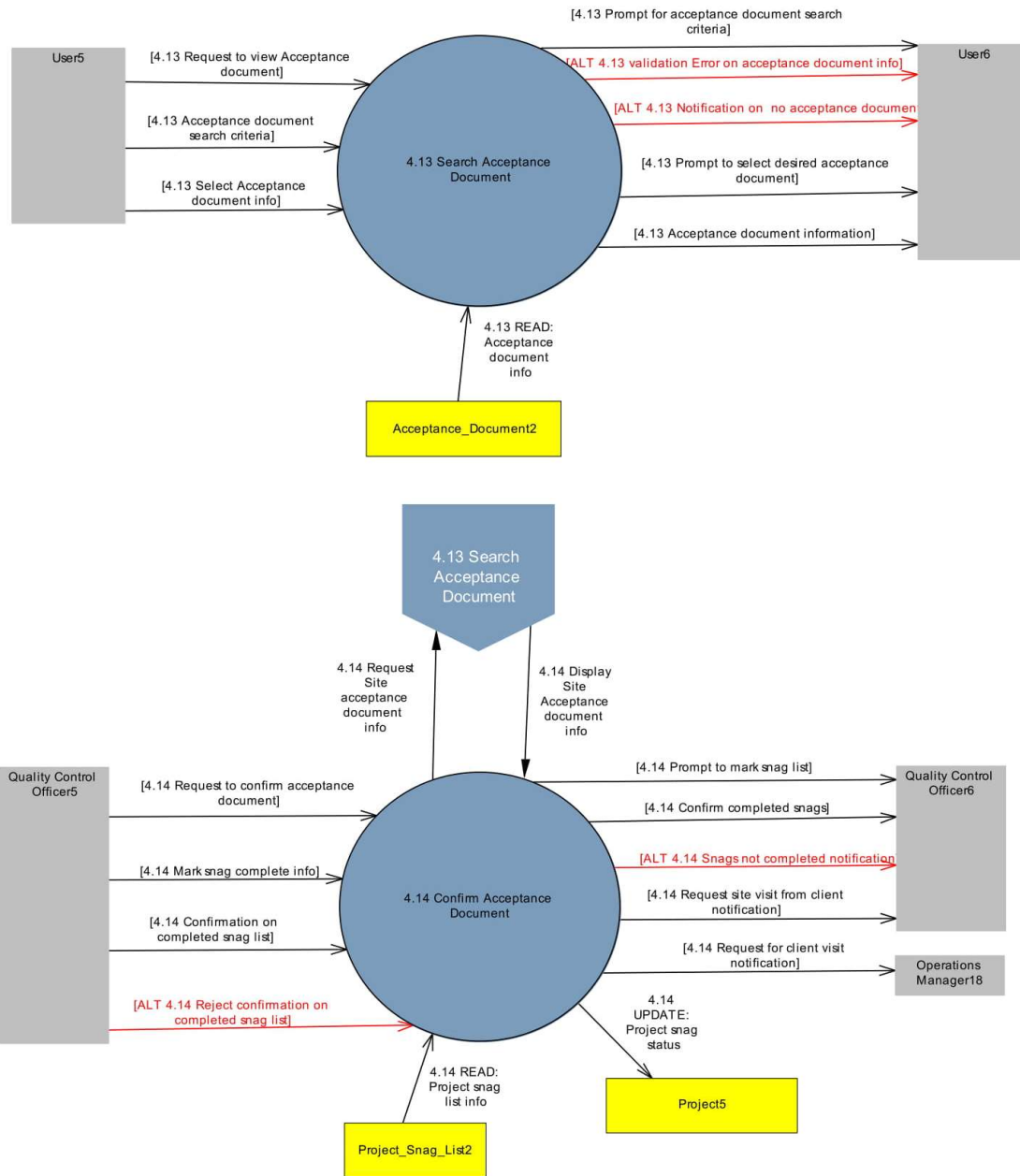


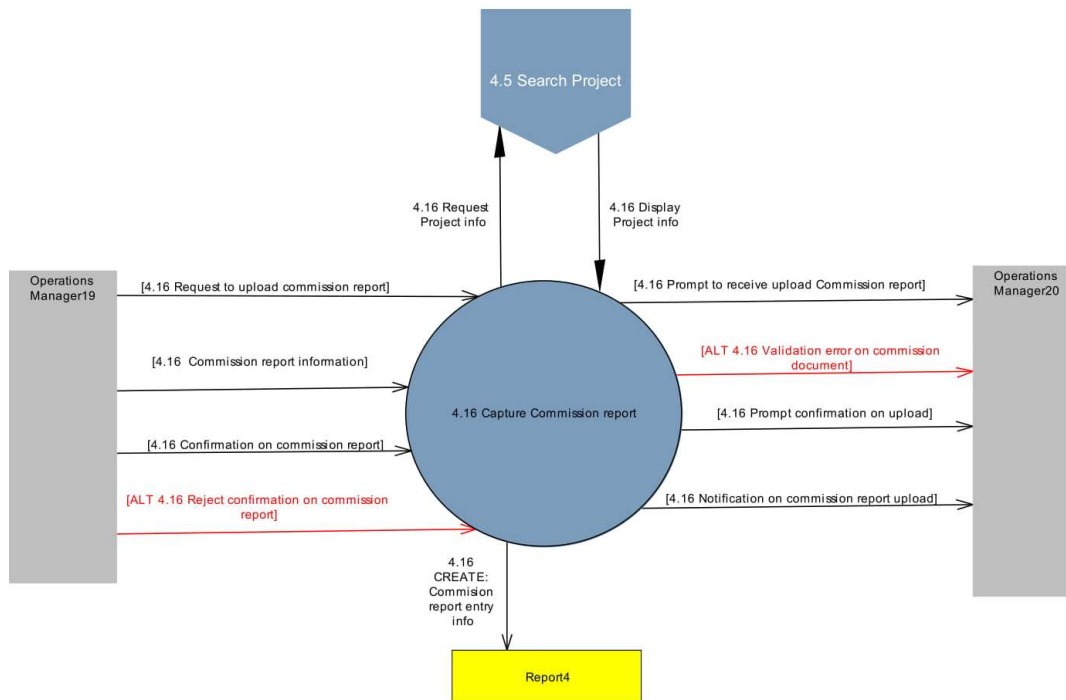
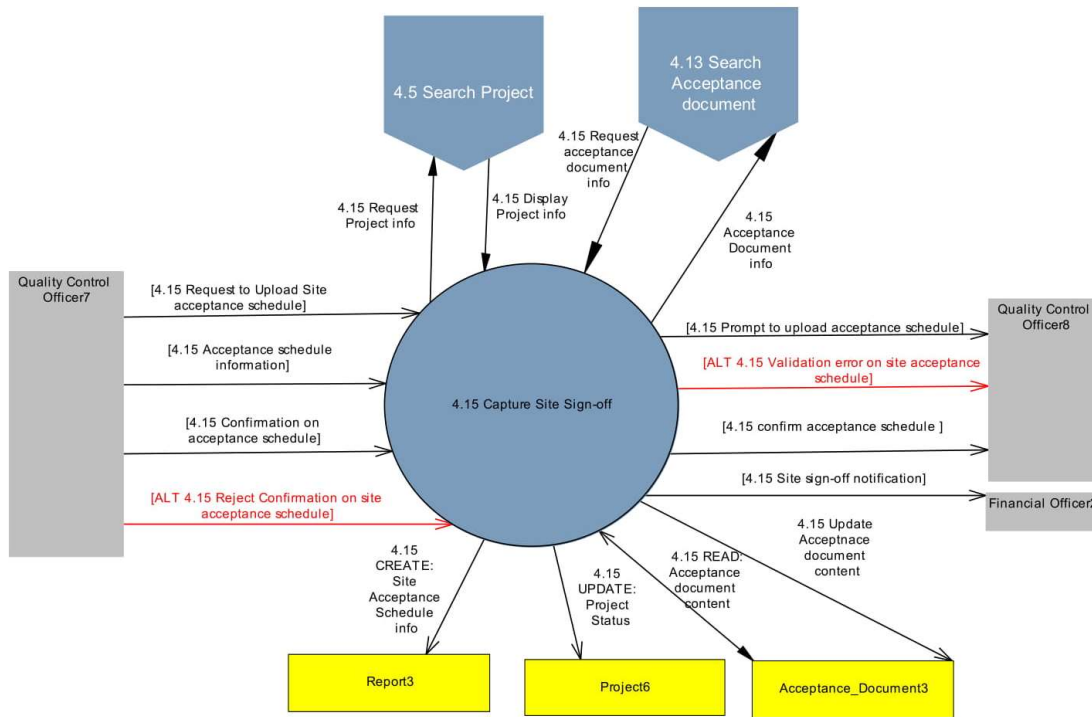




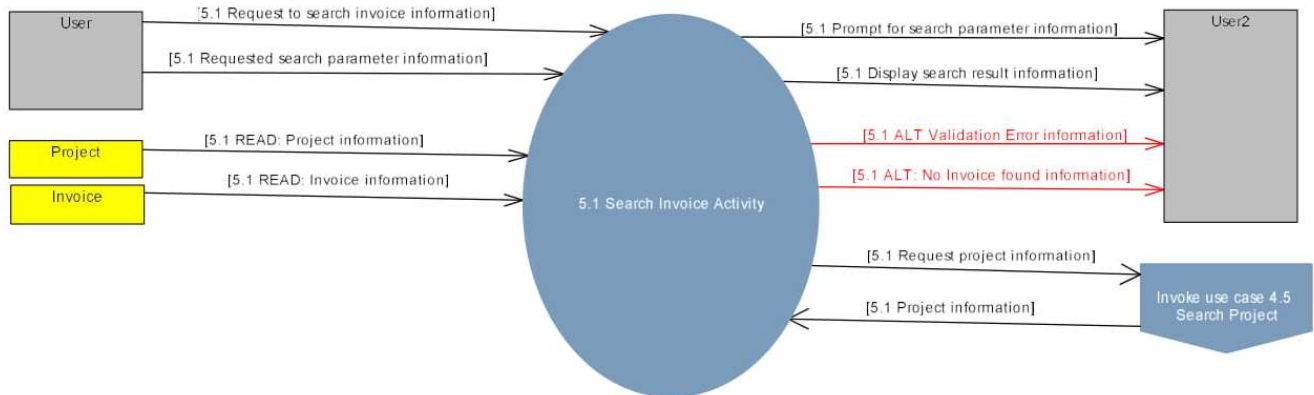
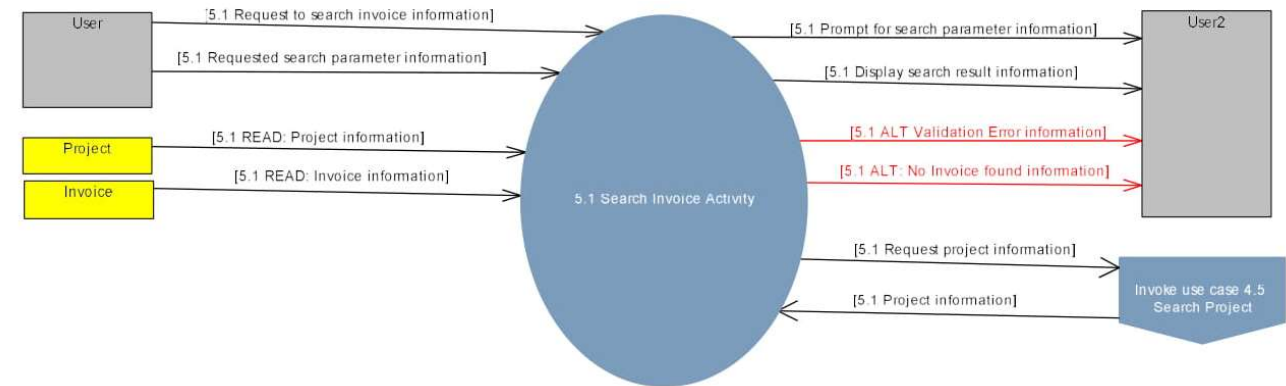


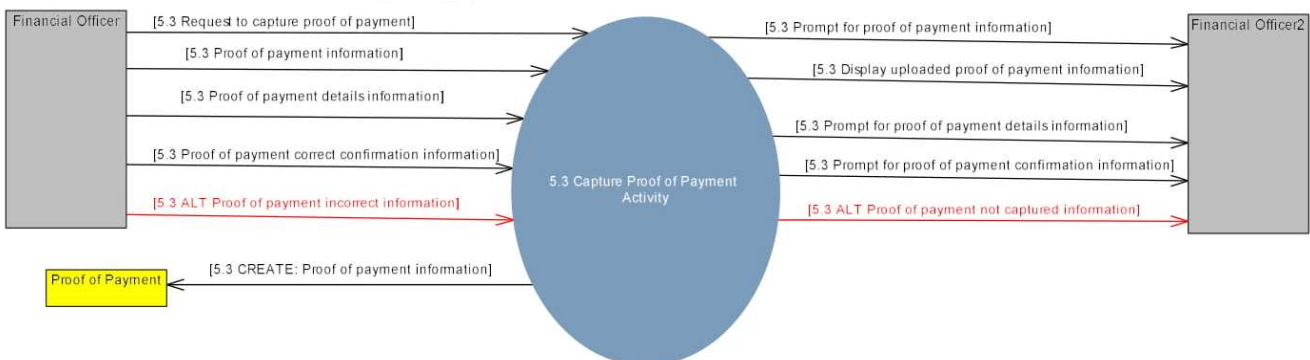
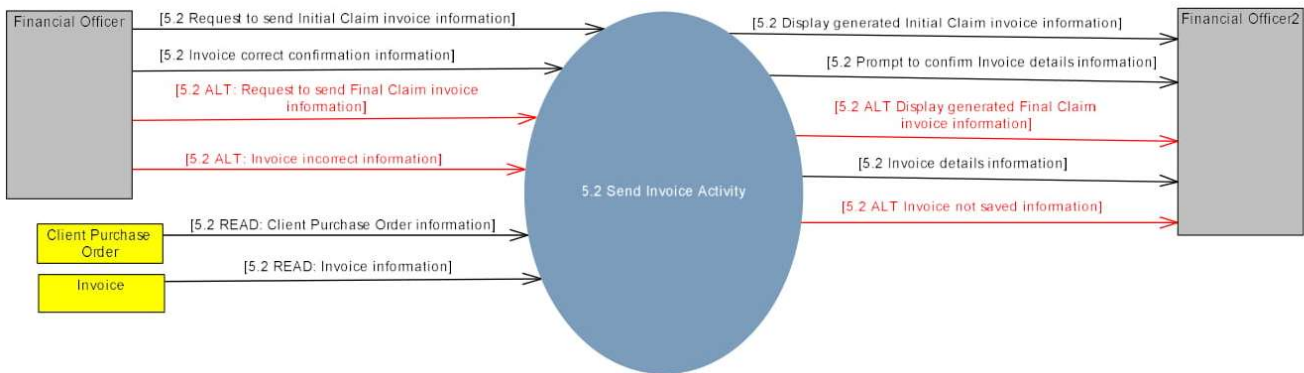
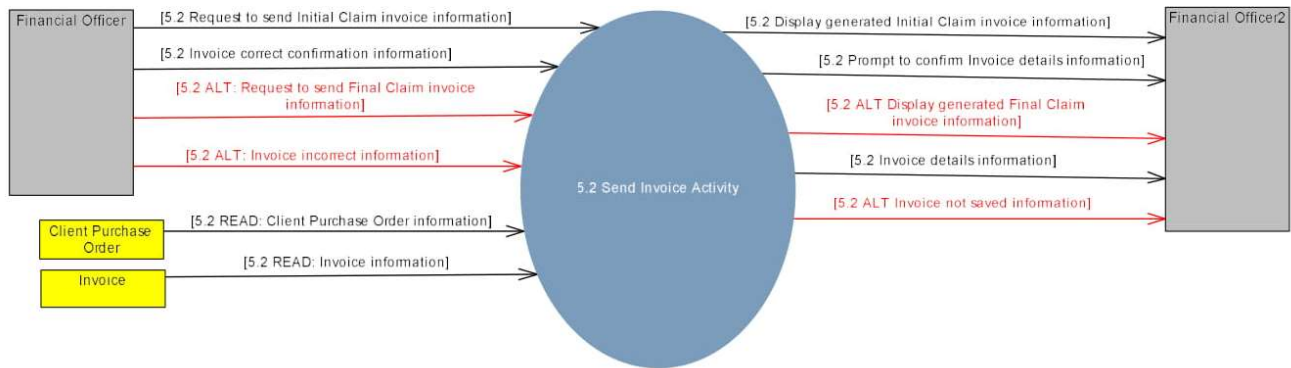


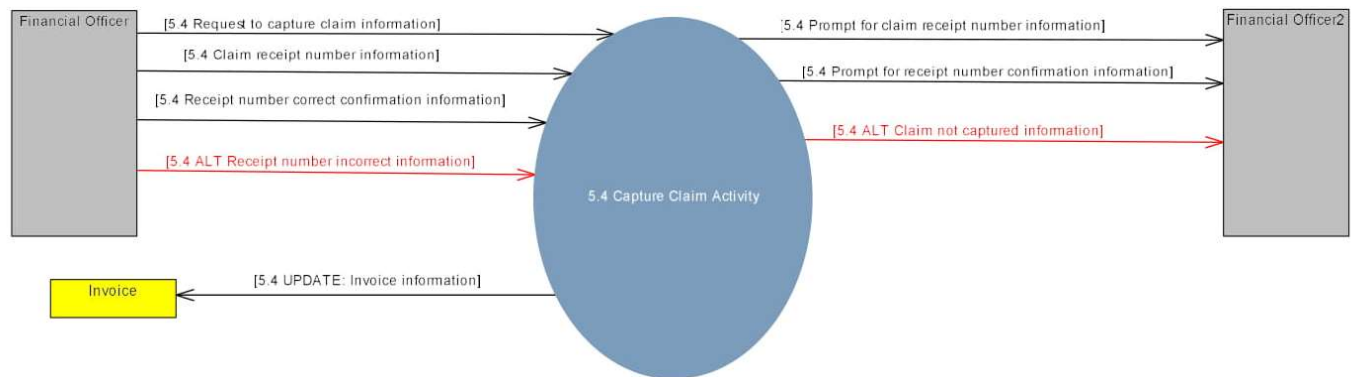
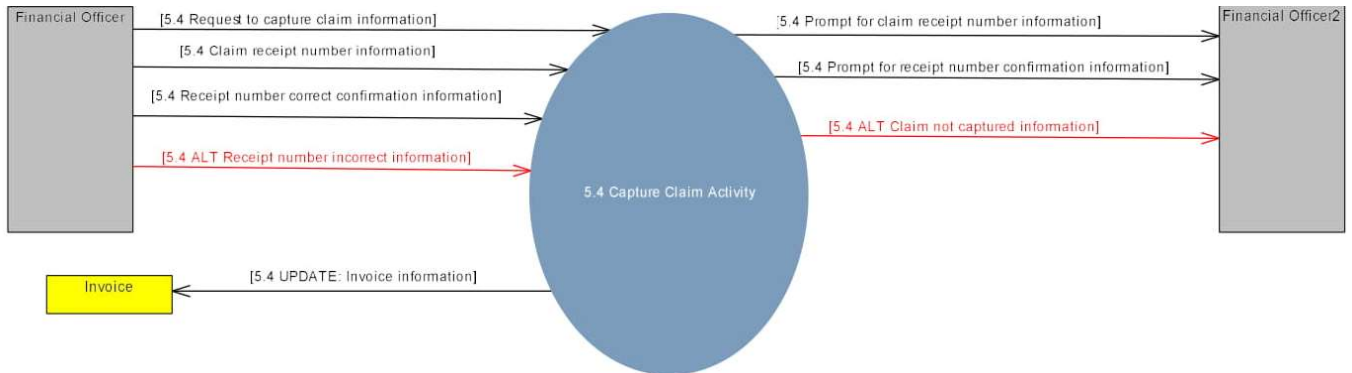
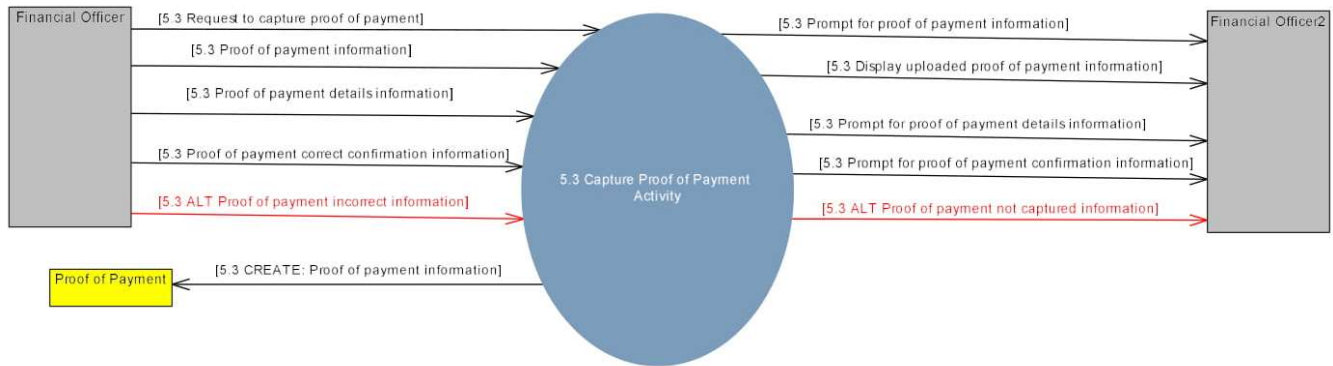




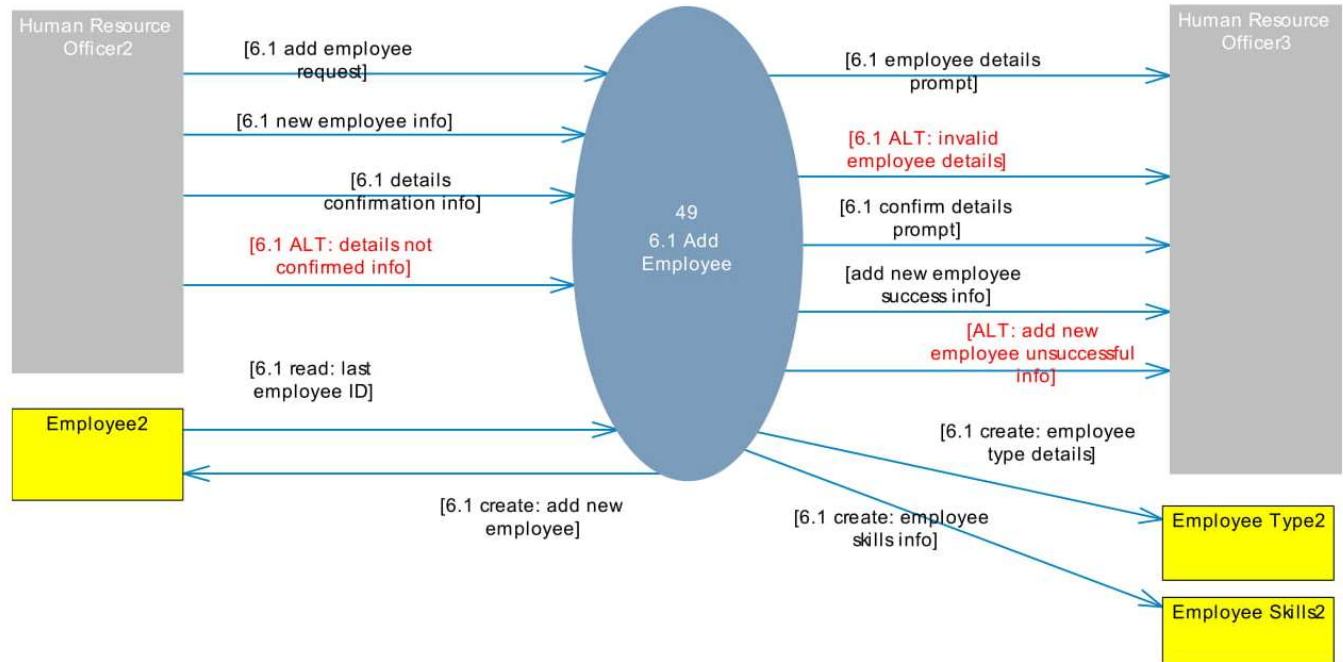
2.4.5 Invoicing Subsystem

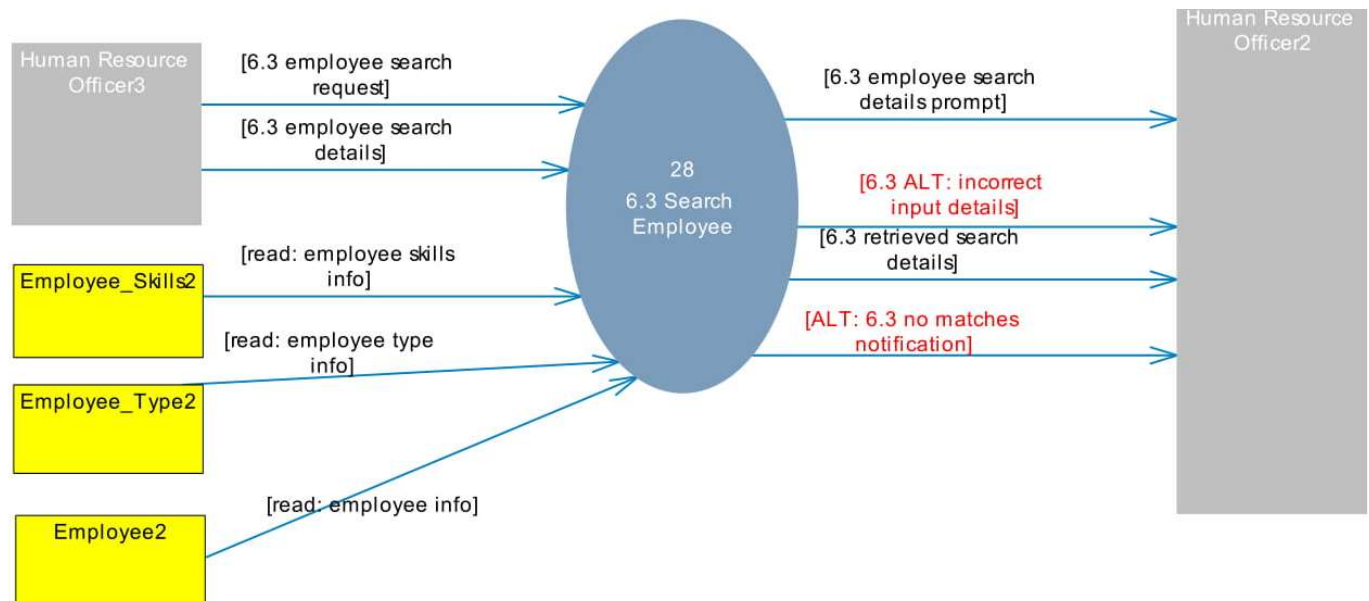
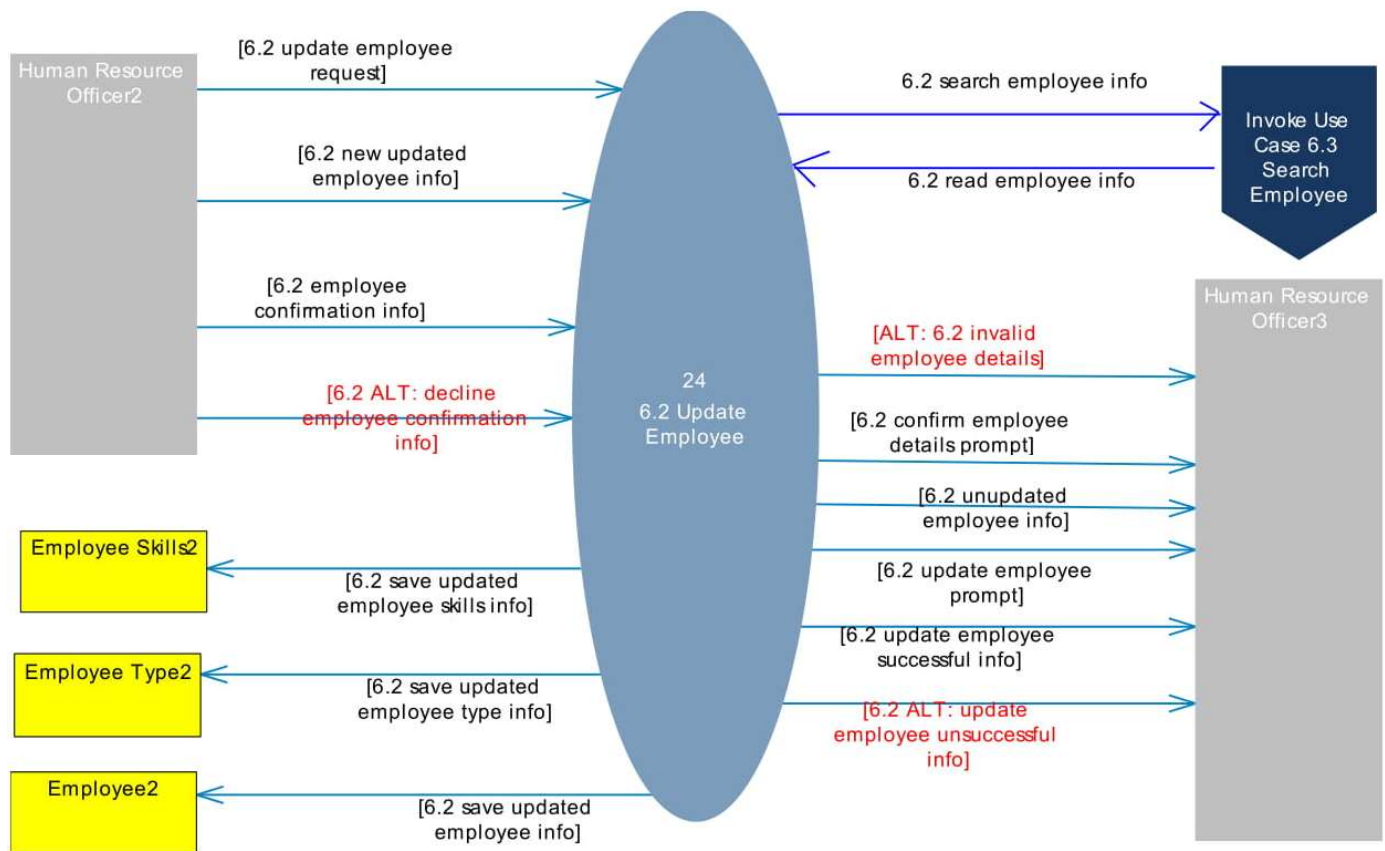


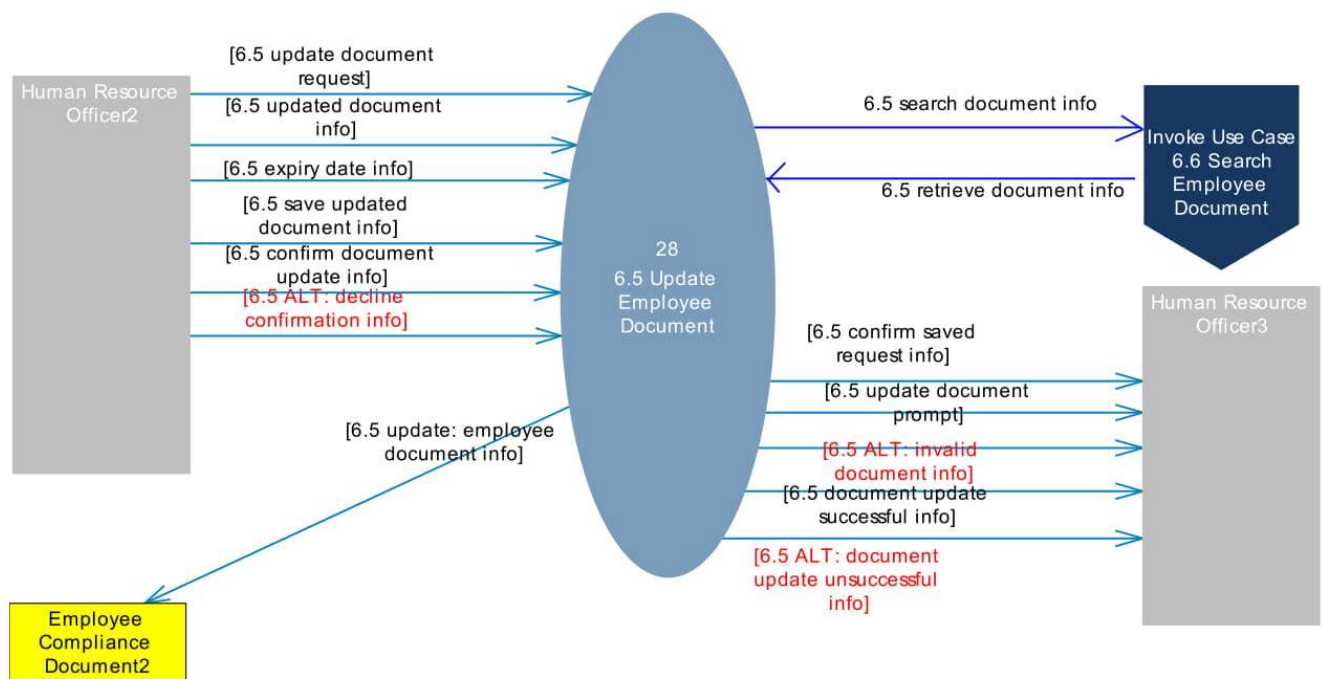
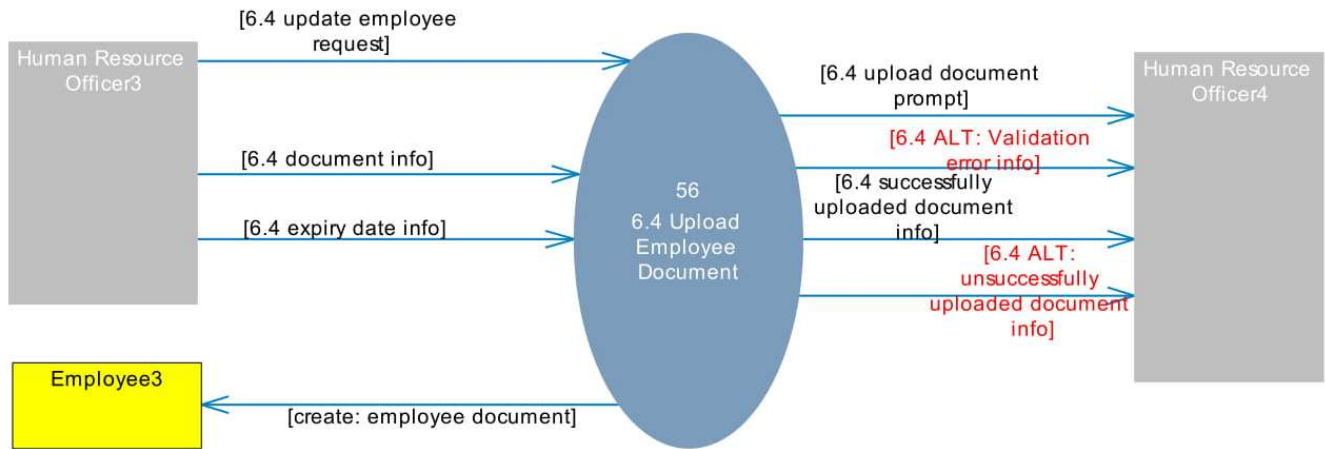


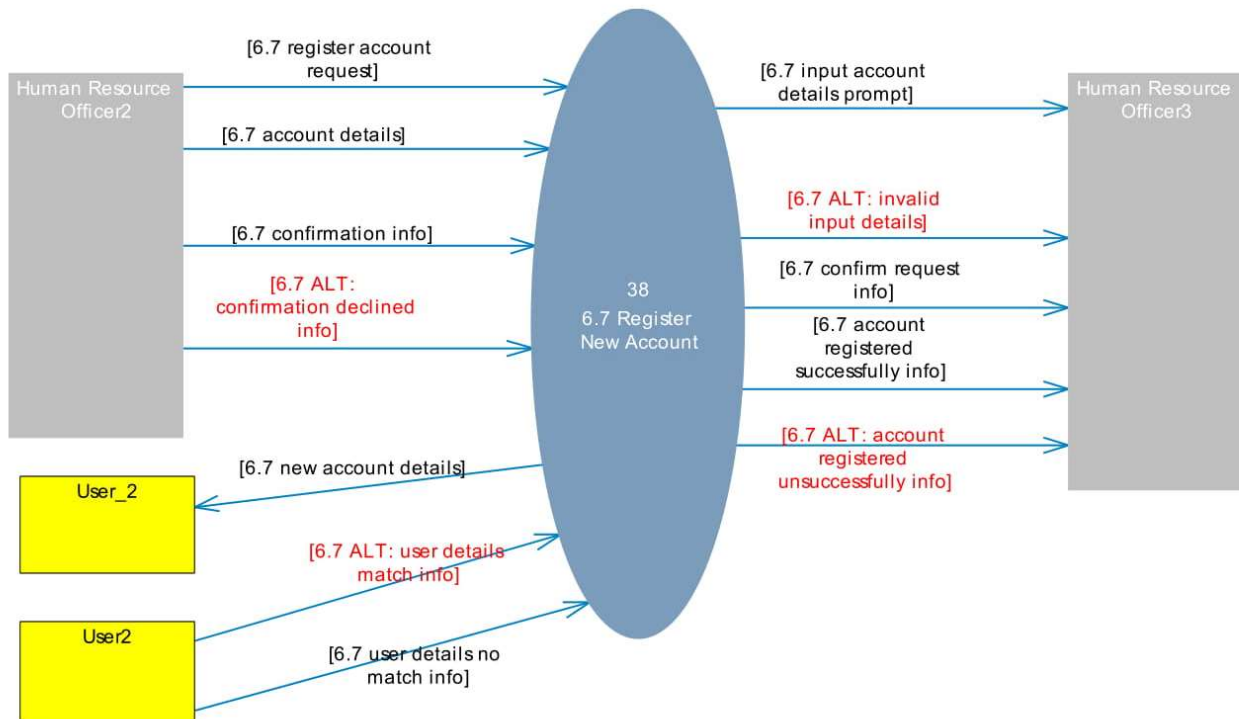
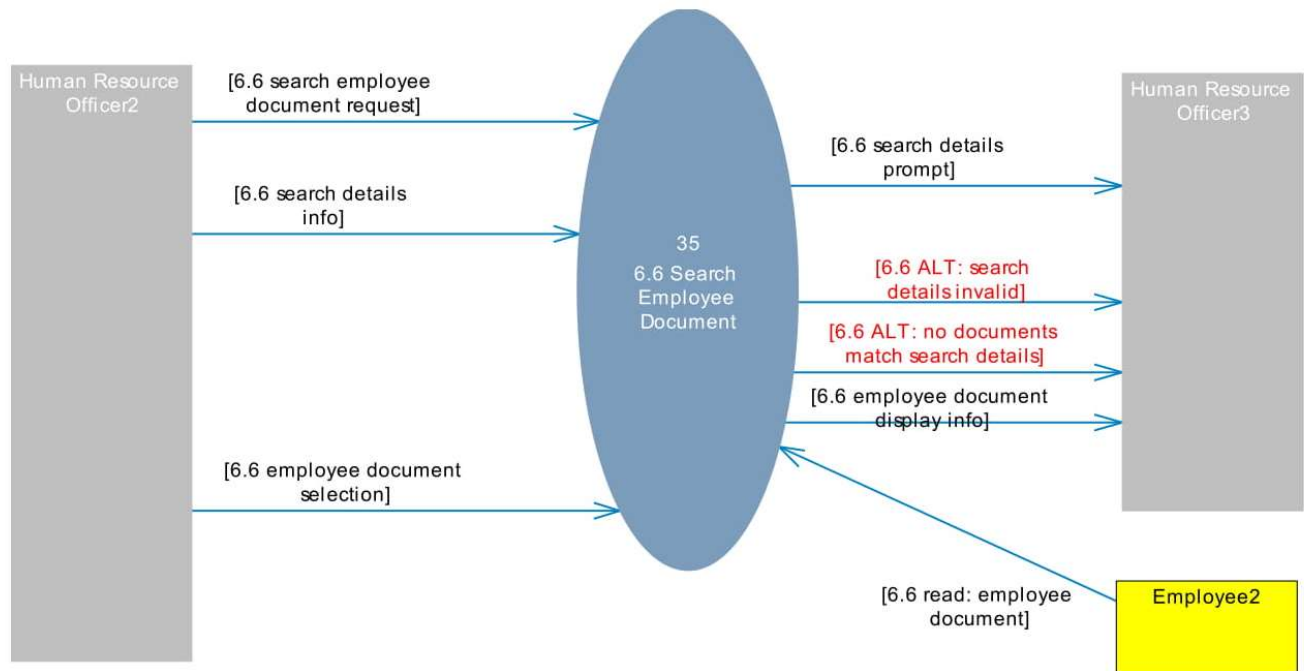


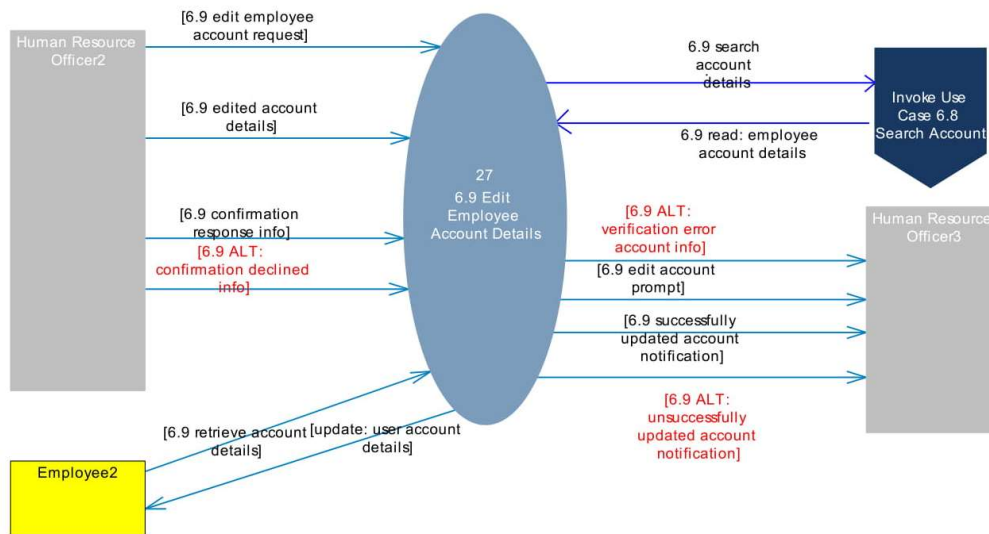
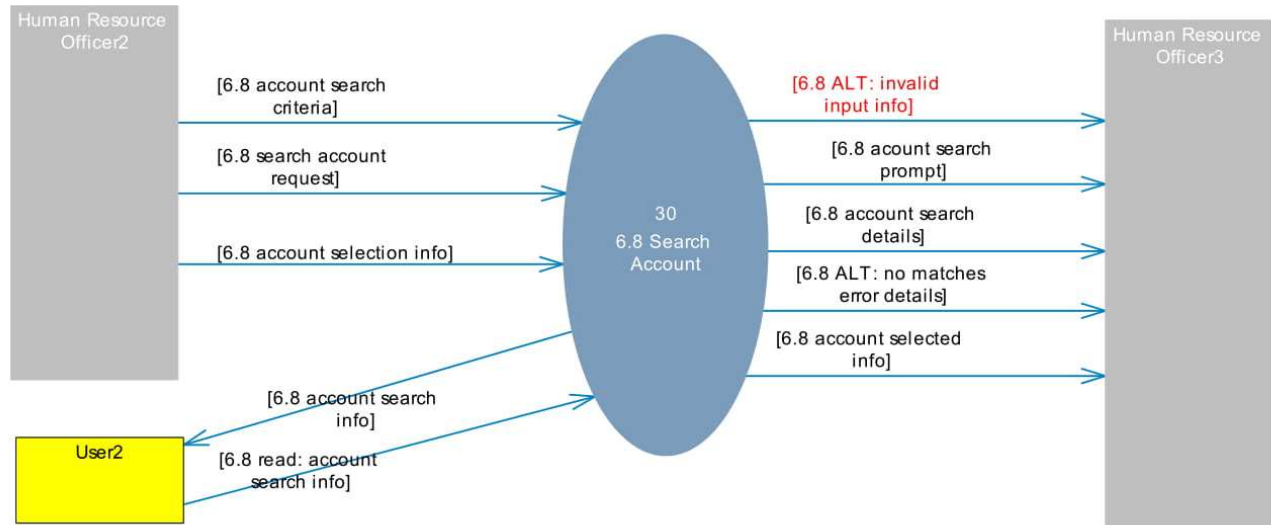
2.4.6 Human Resource Subsystem



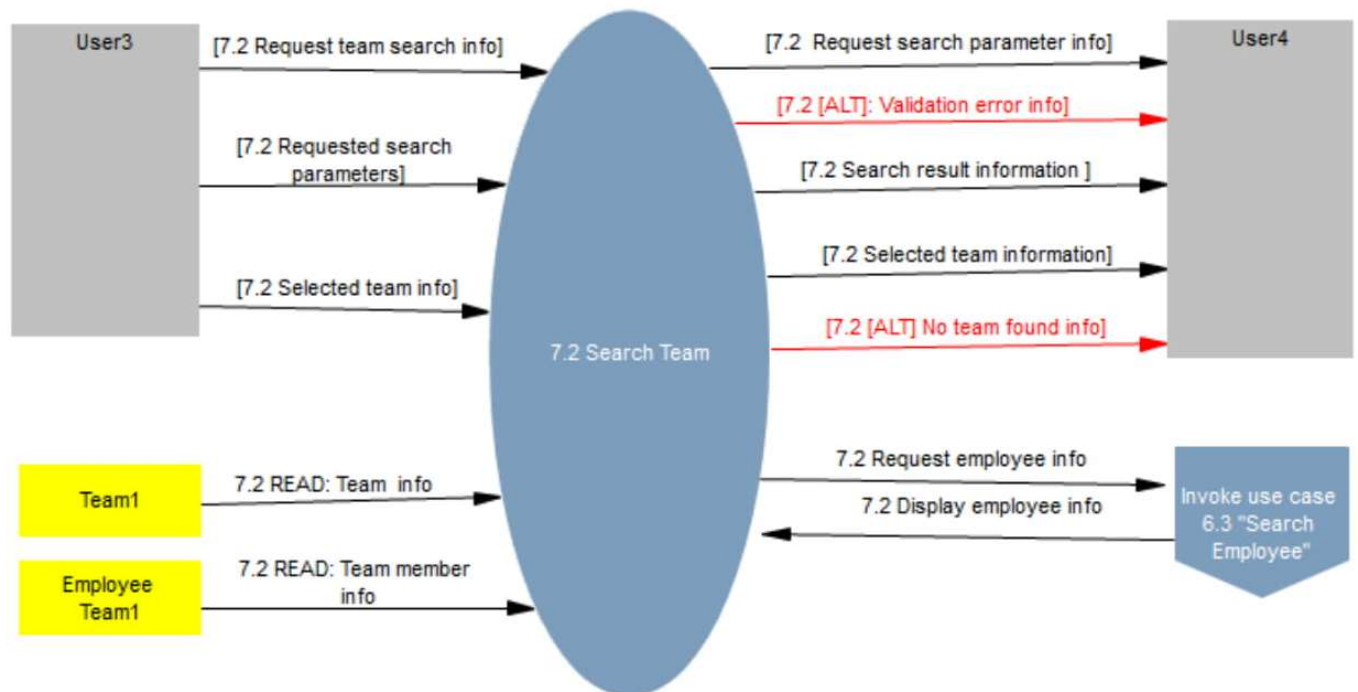
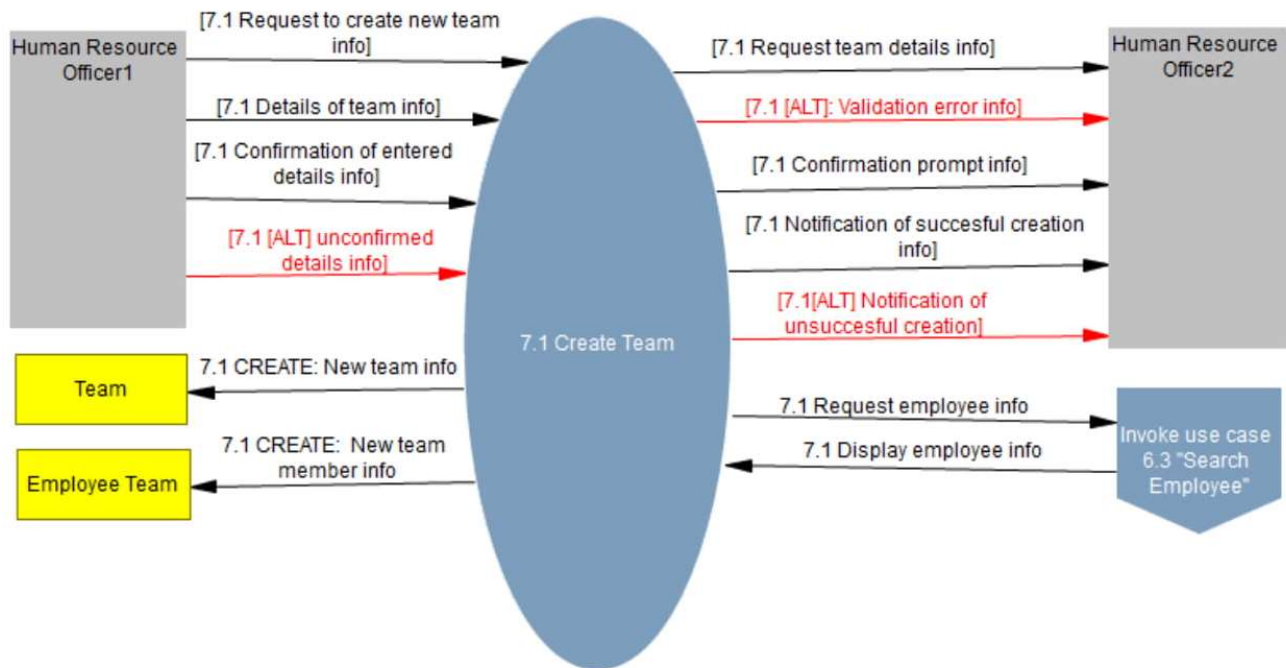






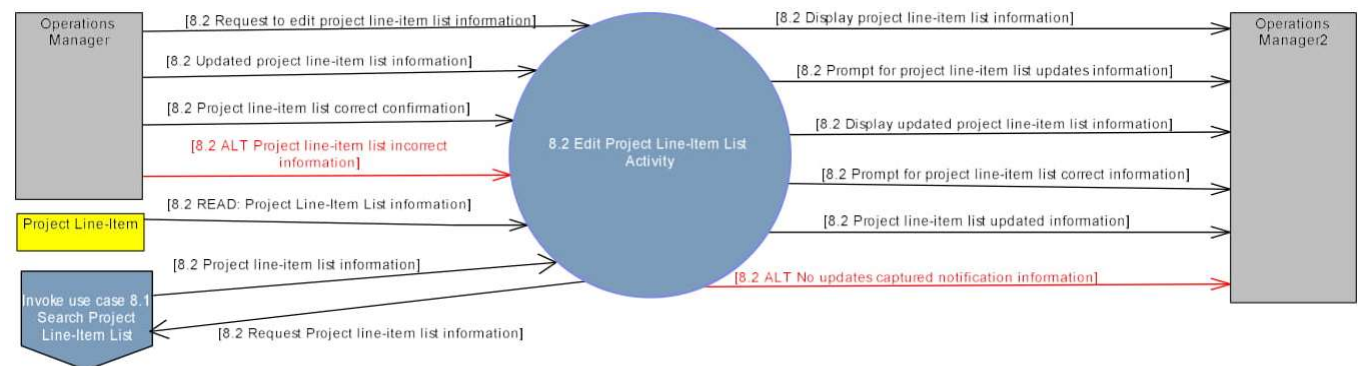
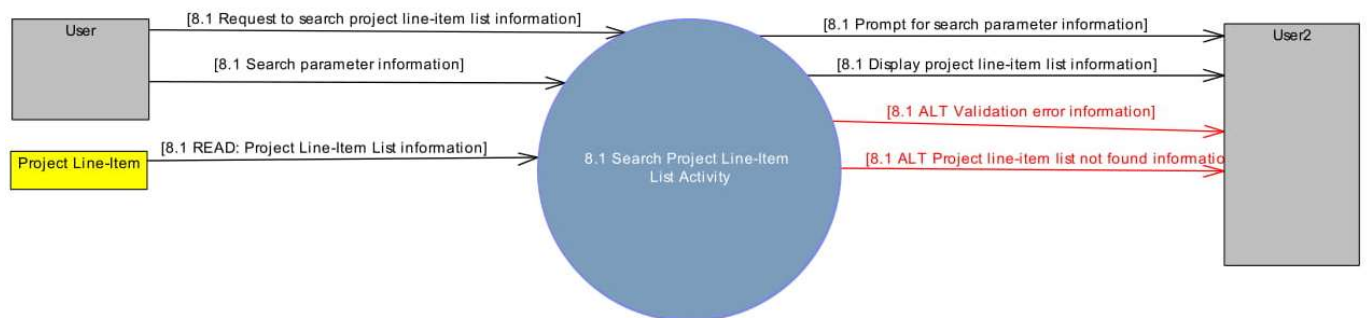
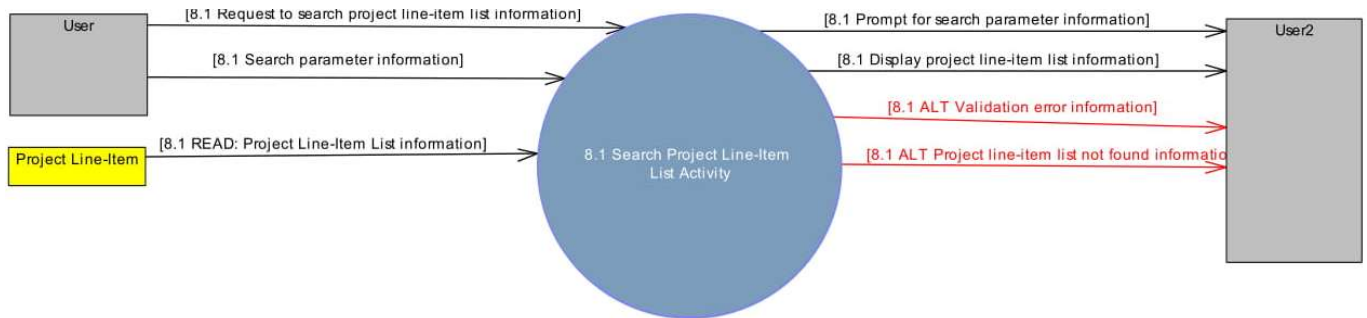


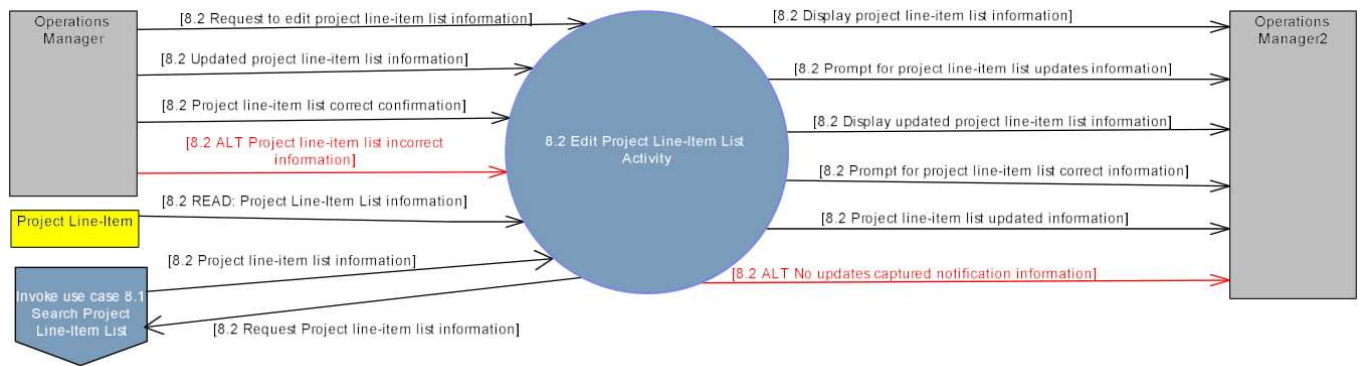
2.4.7 Team Subsystem

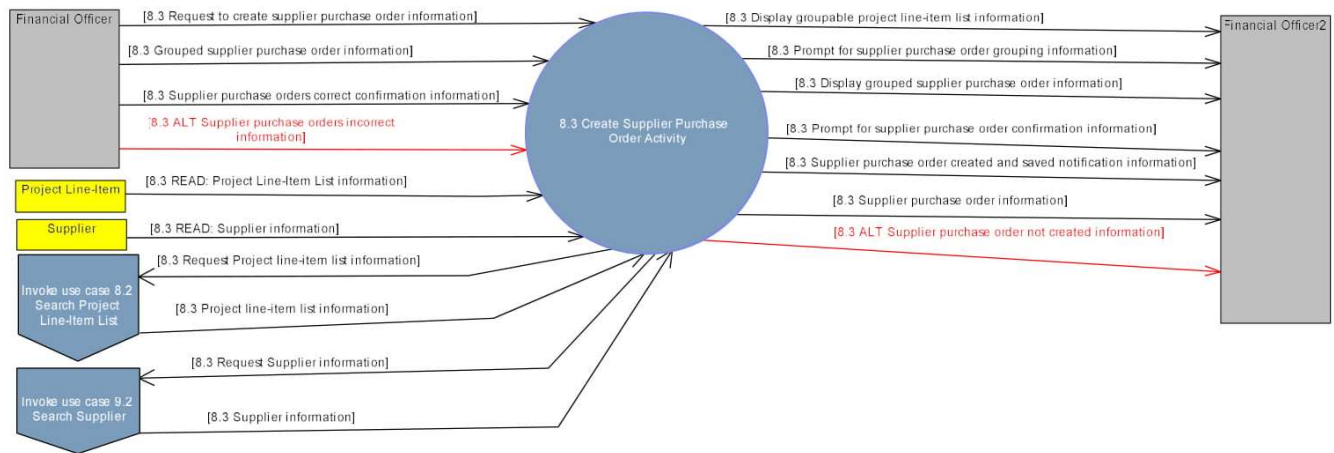
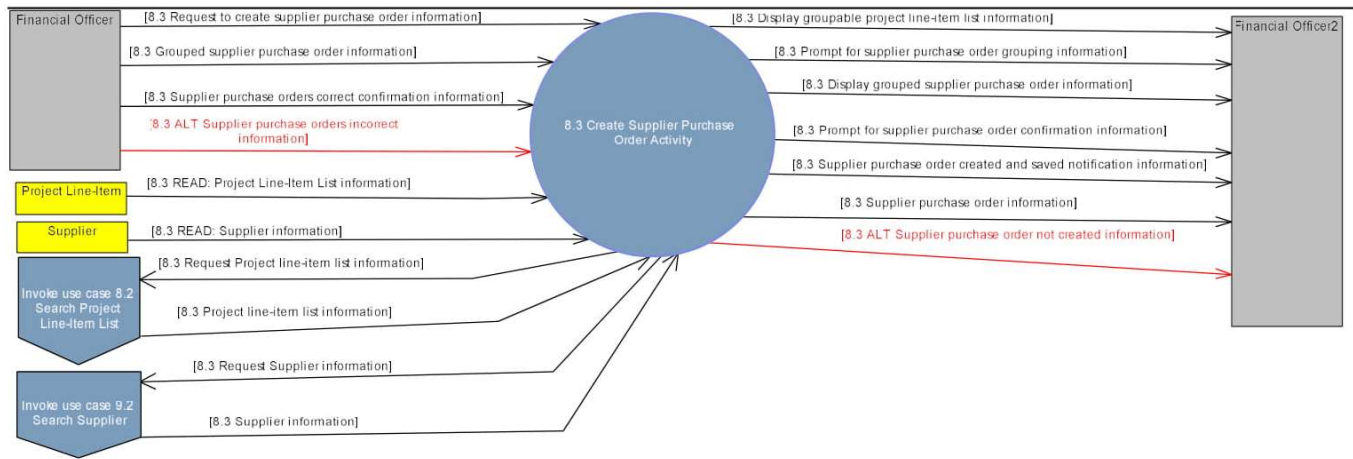




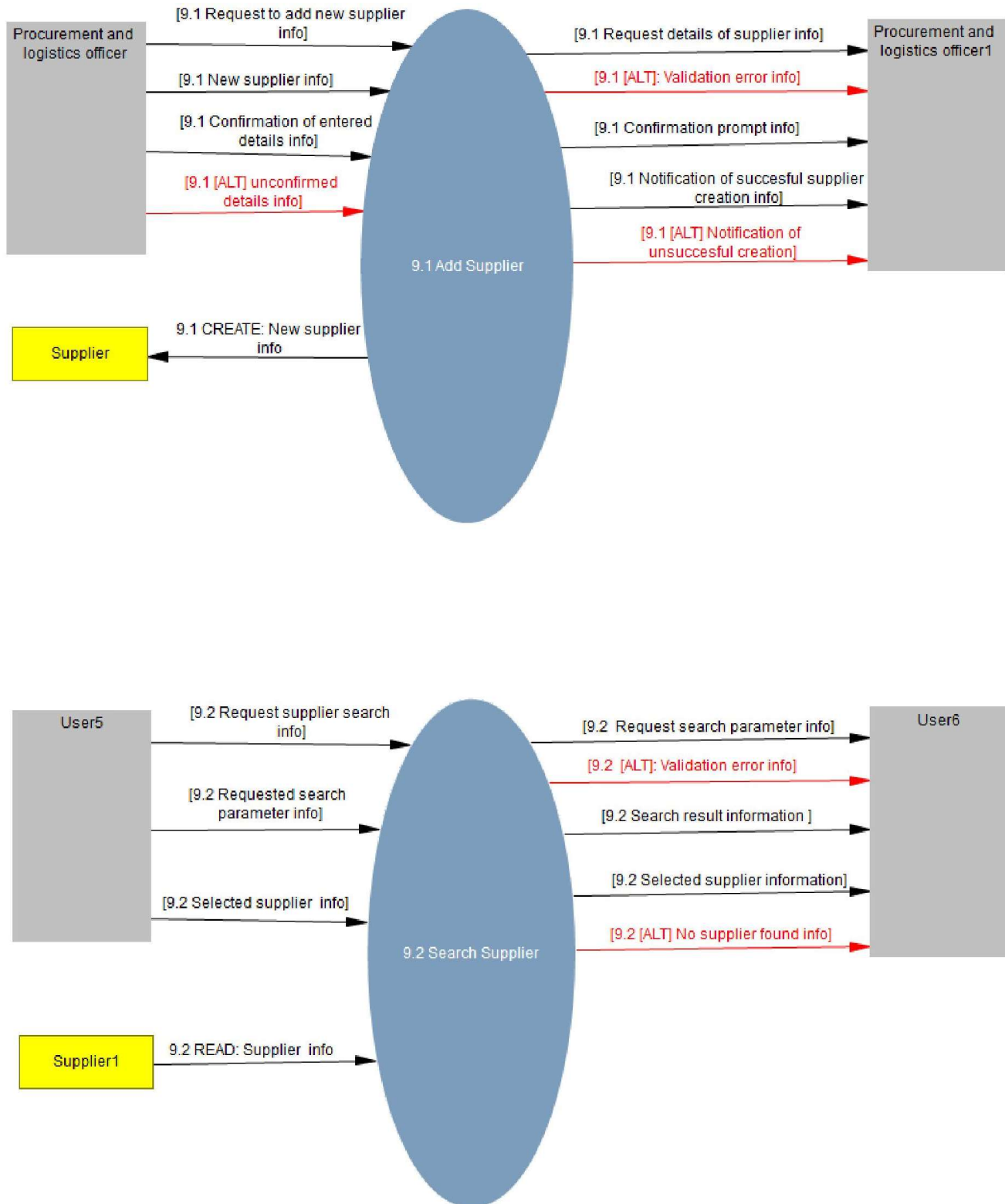
2.4.8 Supplier Order Subsystem

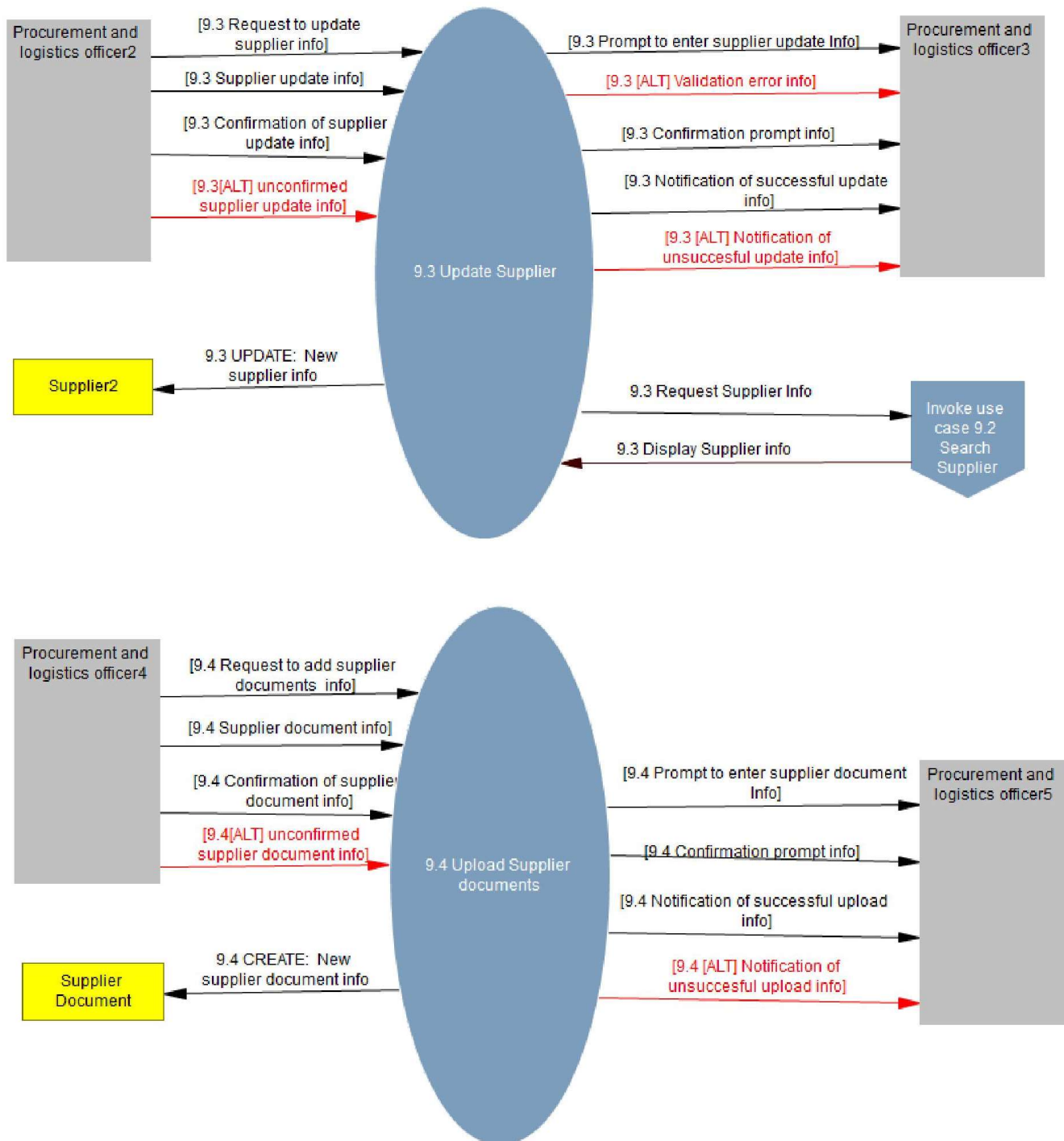




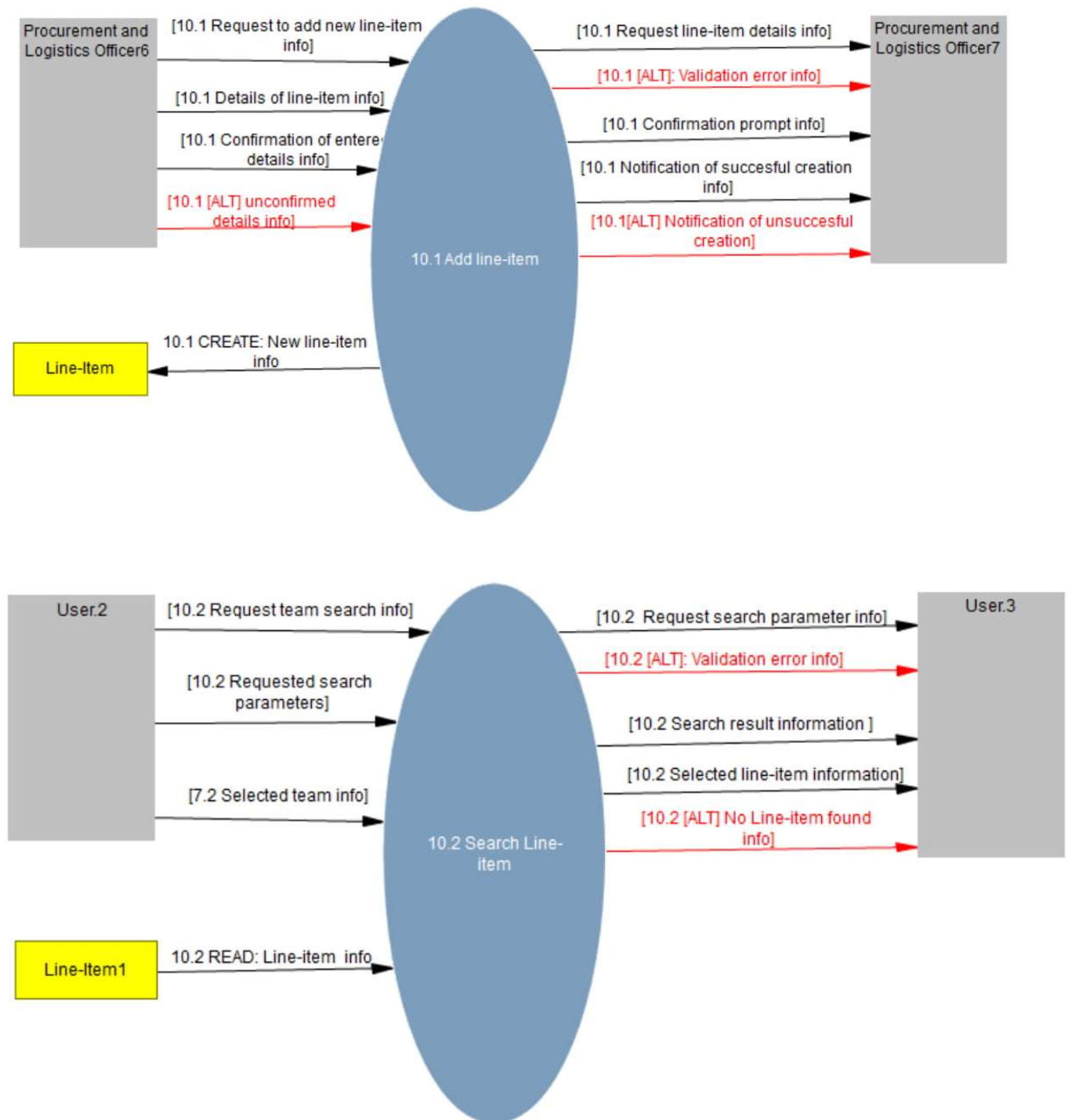


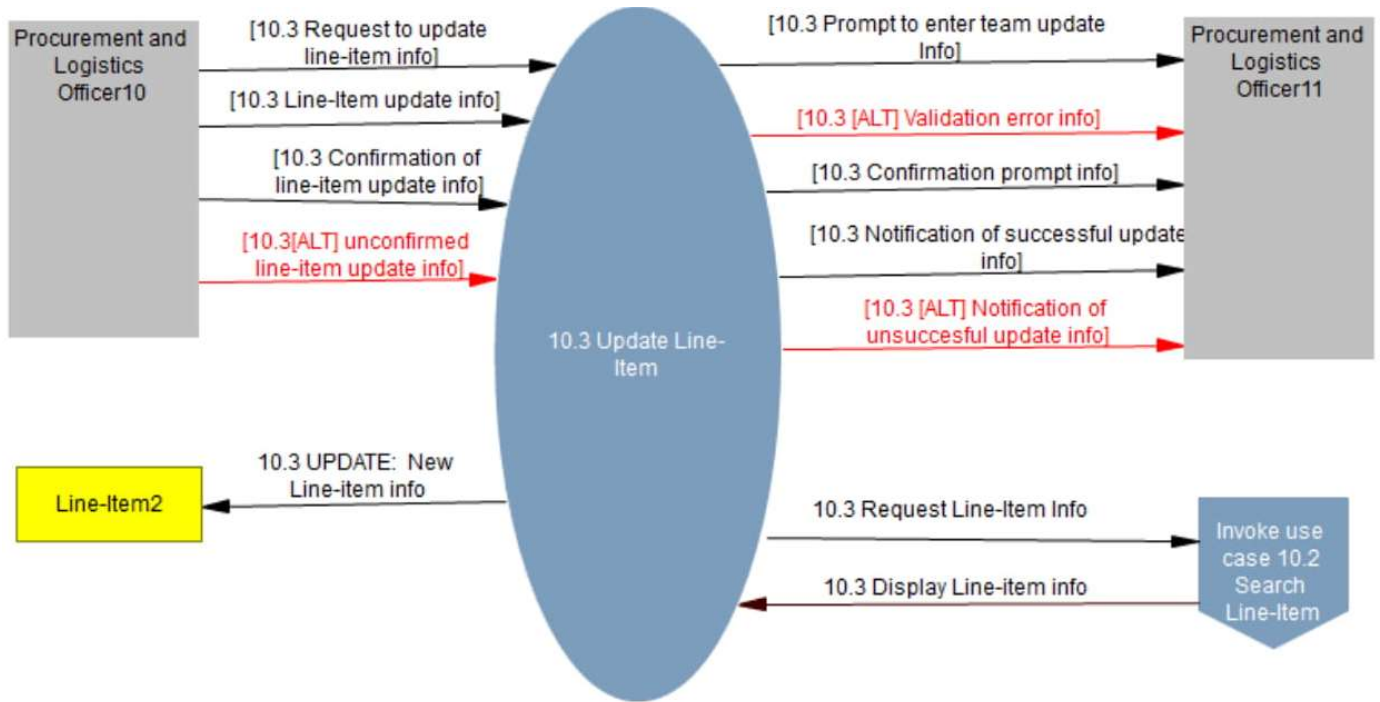
2.4.9 Supplier Subsystem



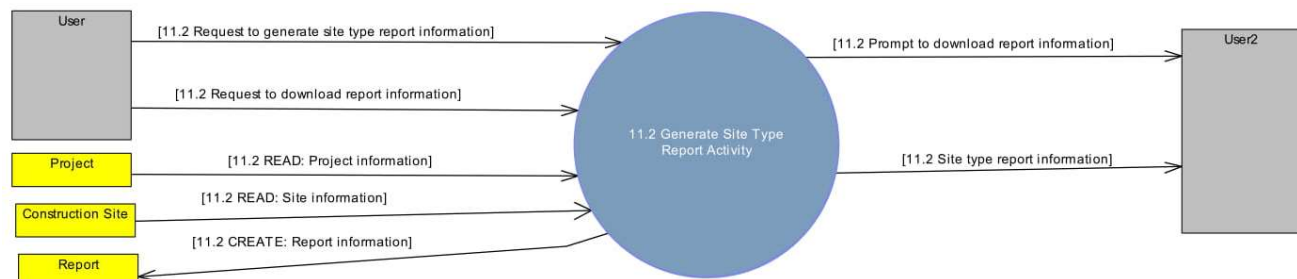
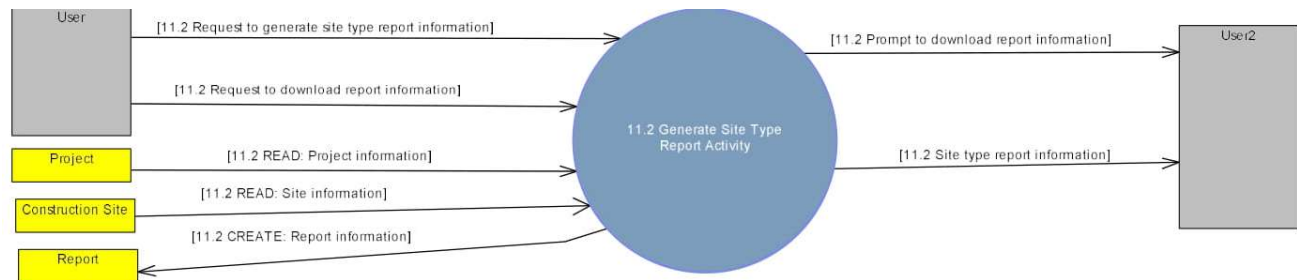
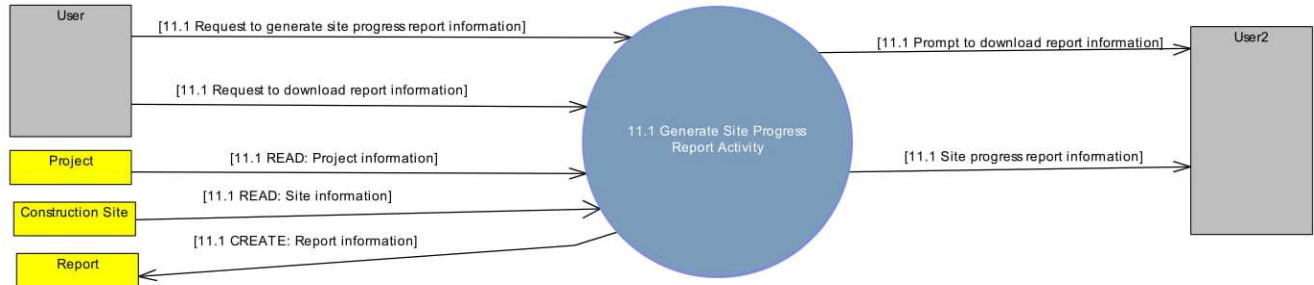
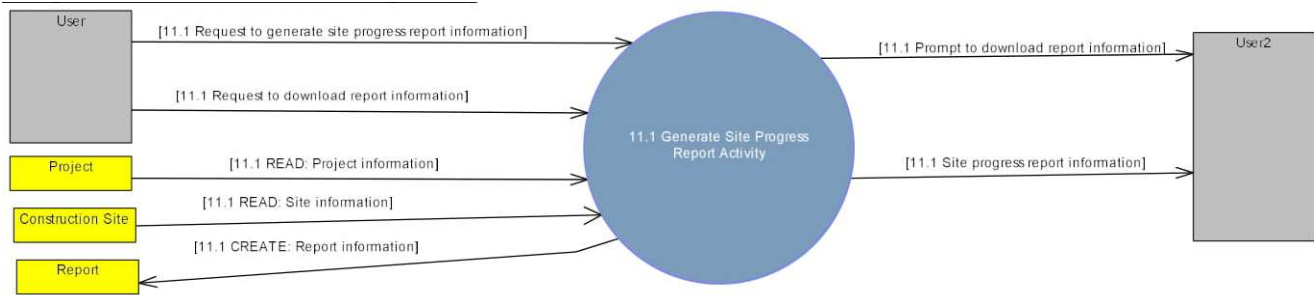


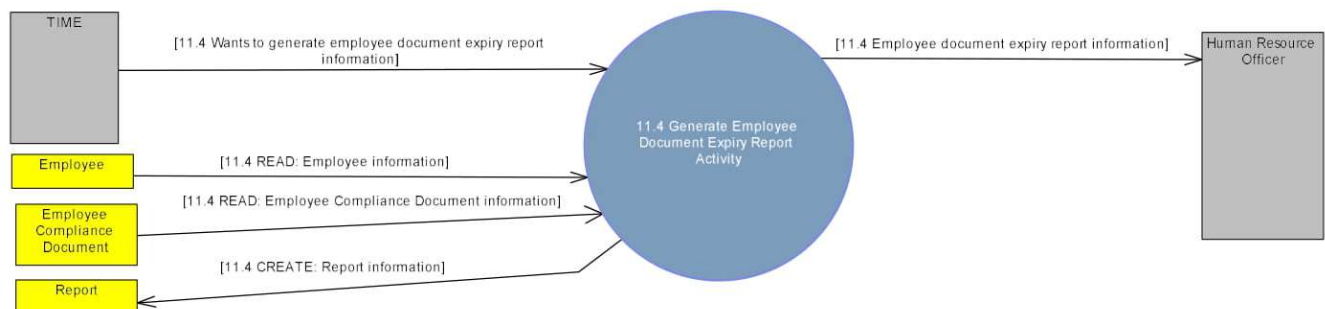
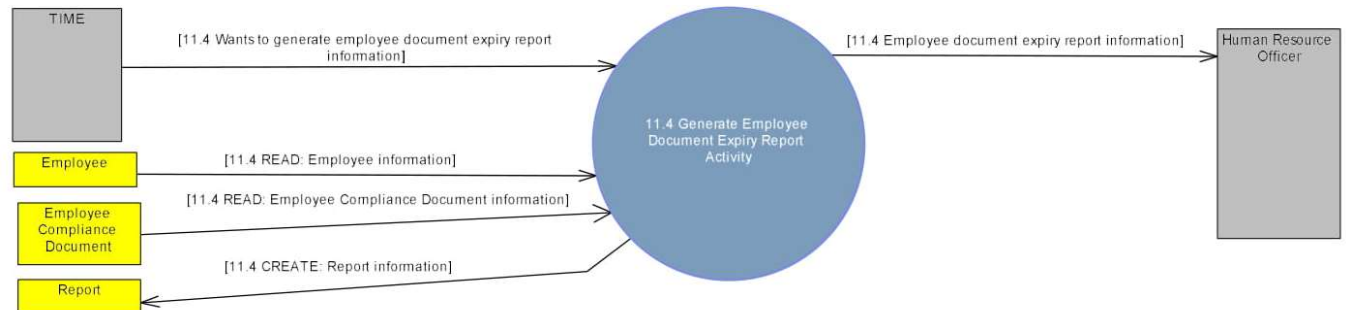
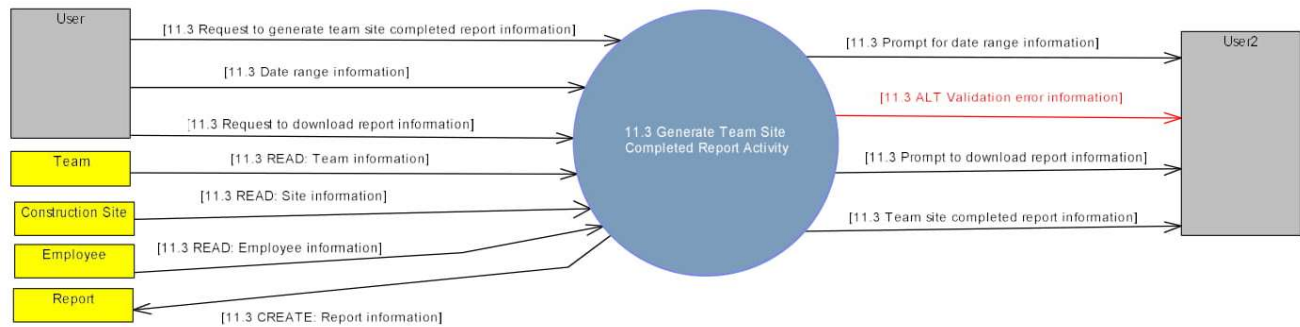
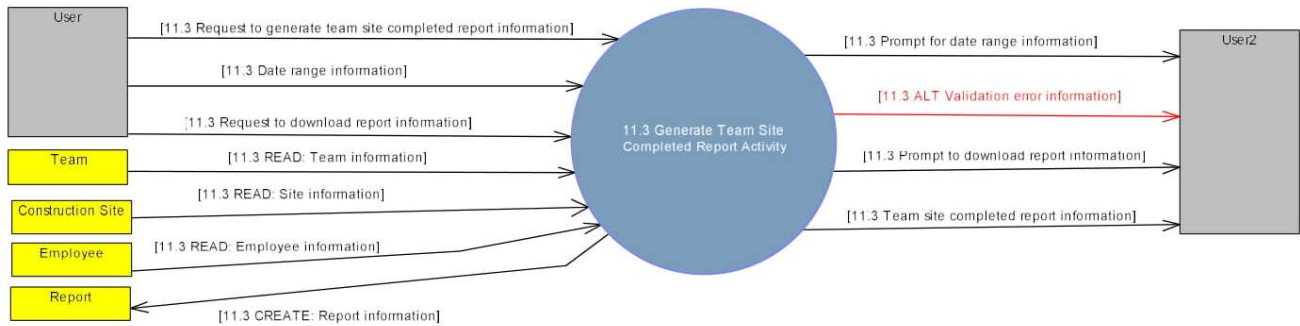
2.4.10 Inventory Management Subsystem

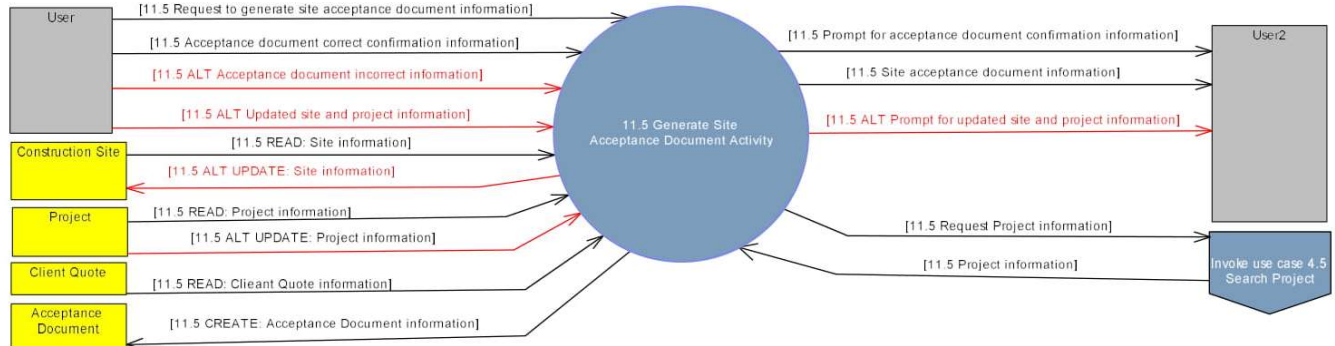
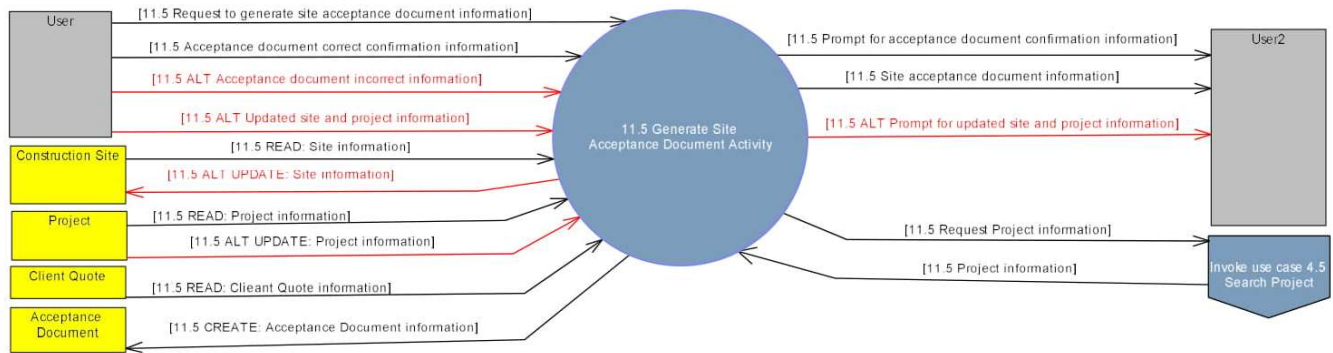




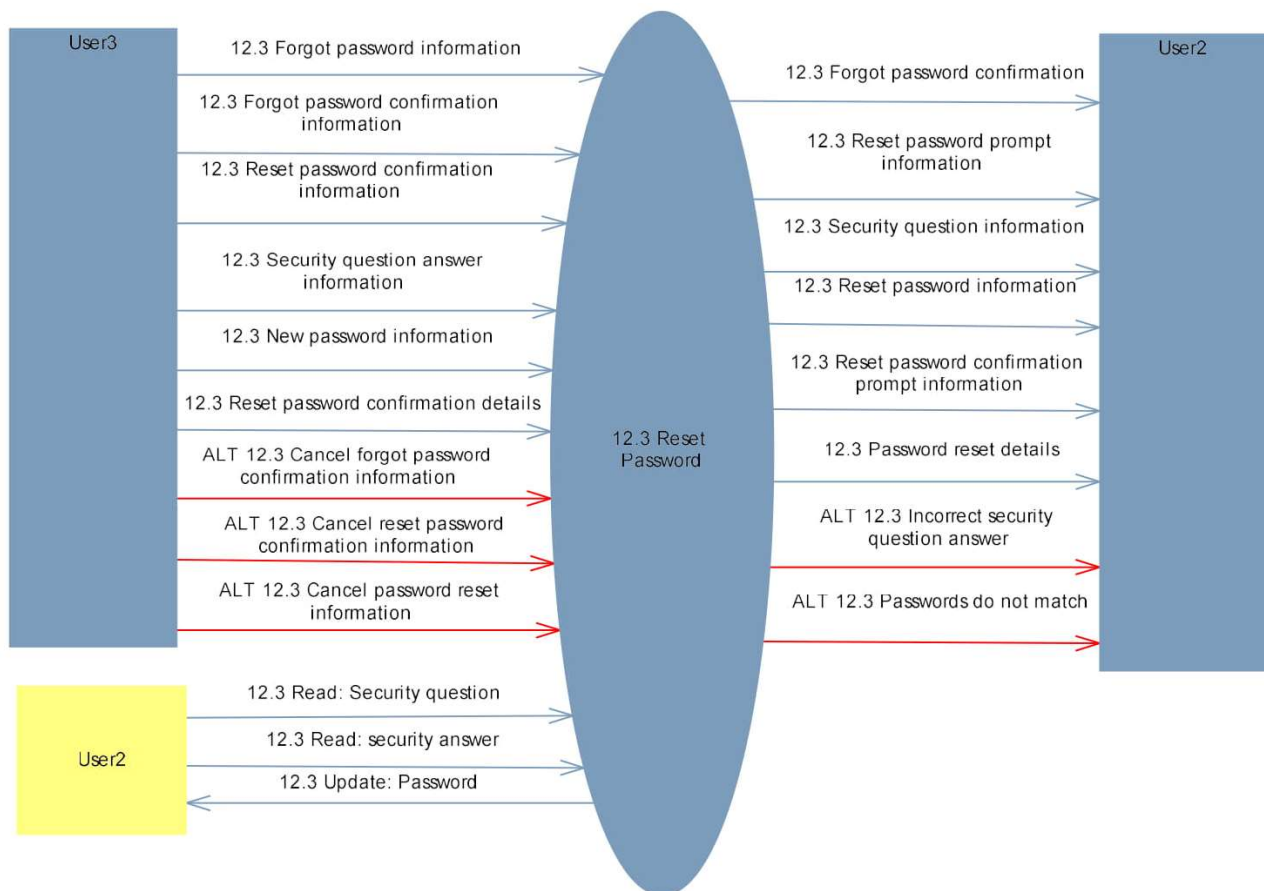
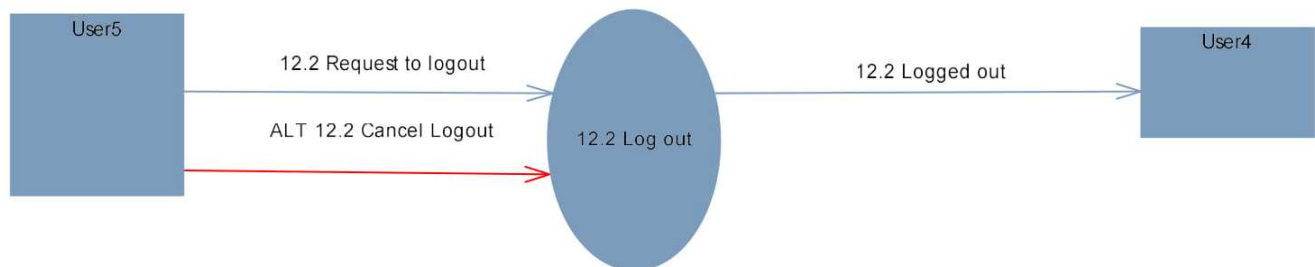
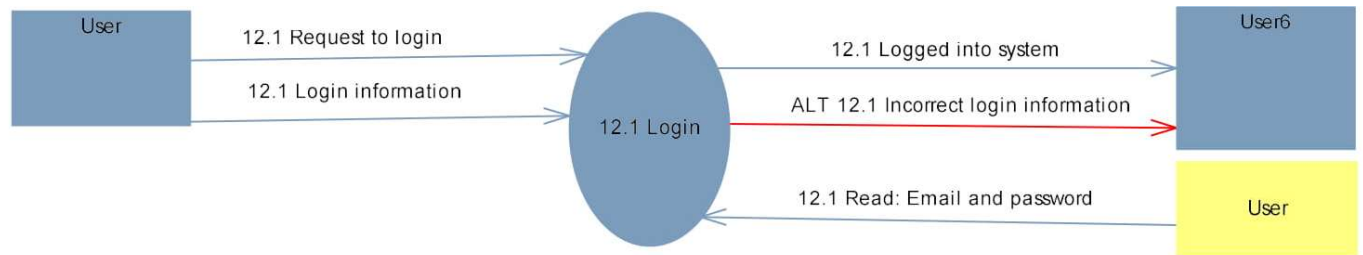
2.4.11 Report Subsystem







2.4.12 User Management Subsystem



Conclusions

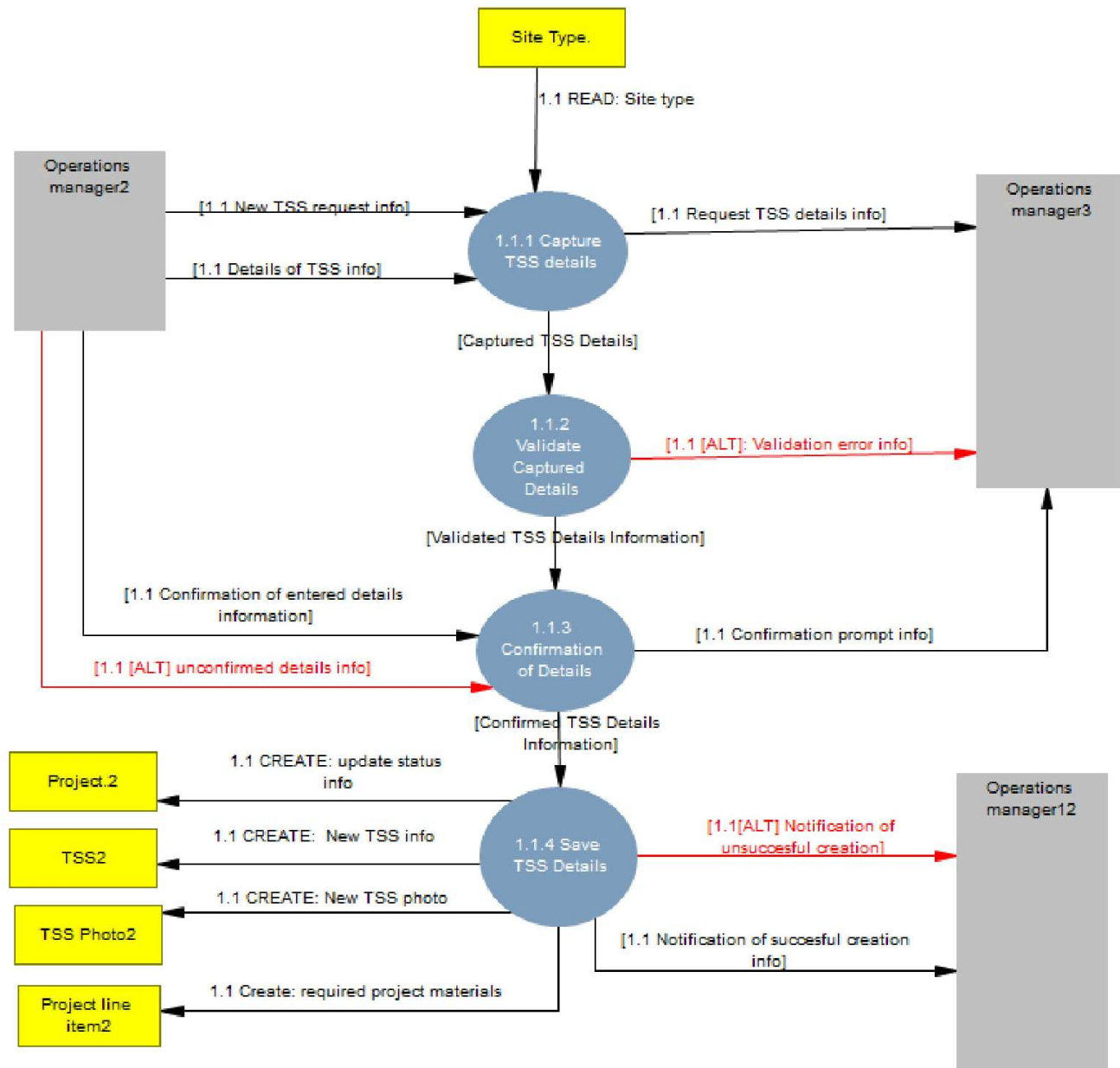
This concludes the Middle level Data Flow Diagrams and the representation of each use cases Data flows and interactions with the system.

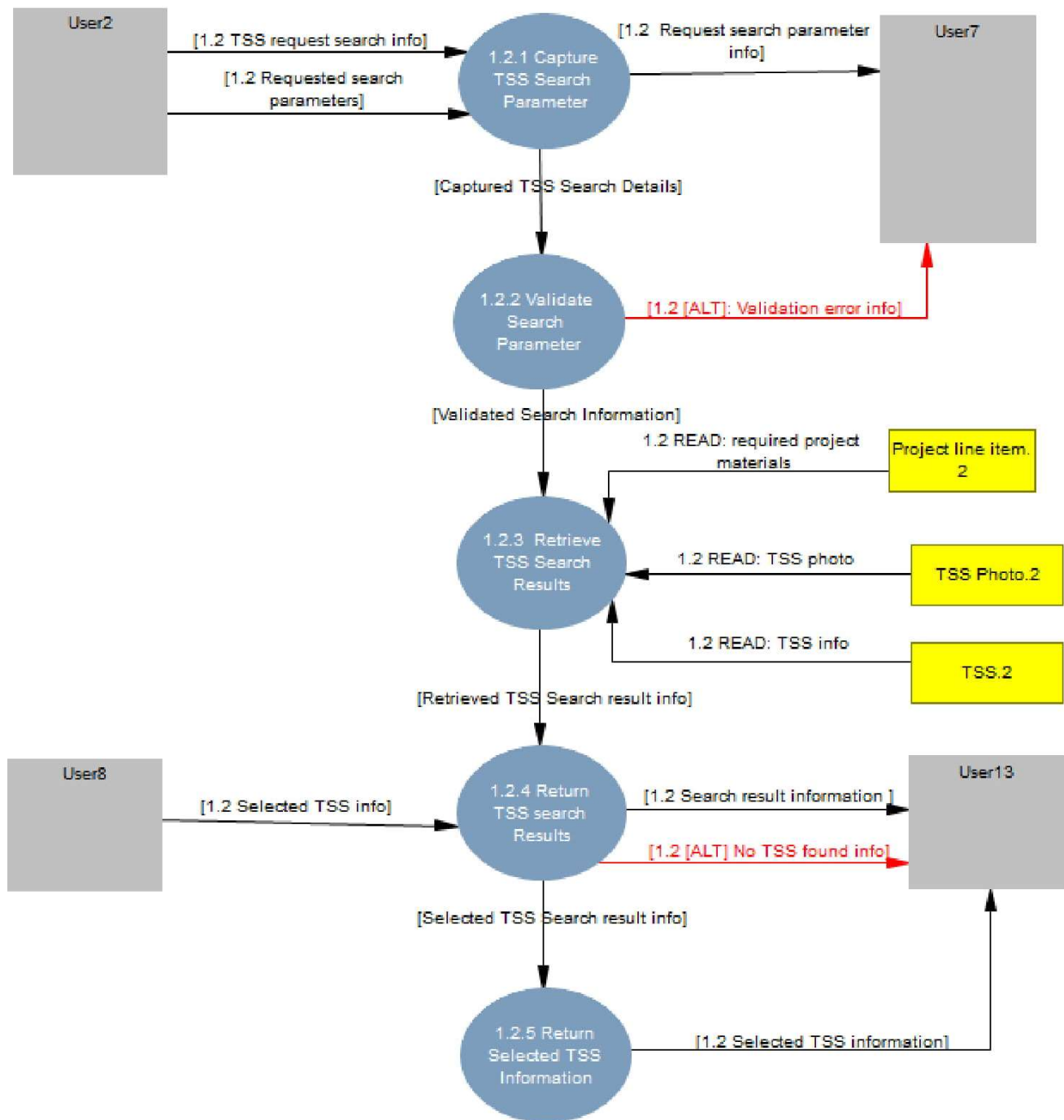
2.5 Primitive Level Data Flow Diagram

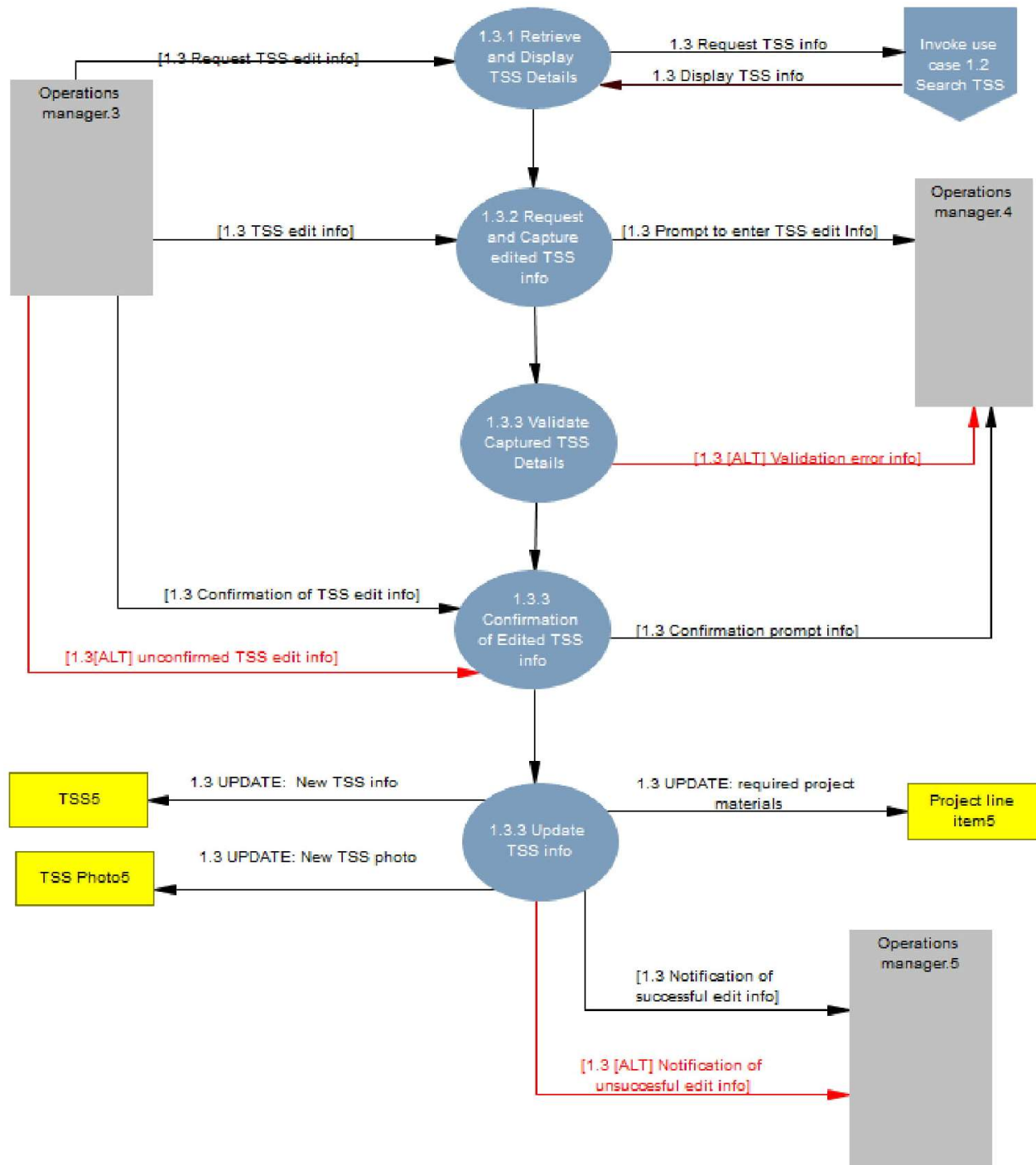
Introduction

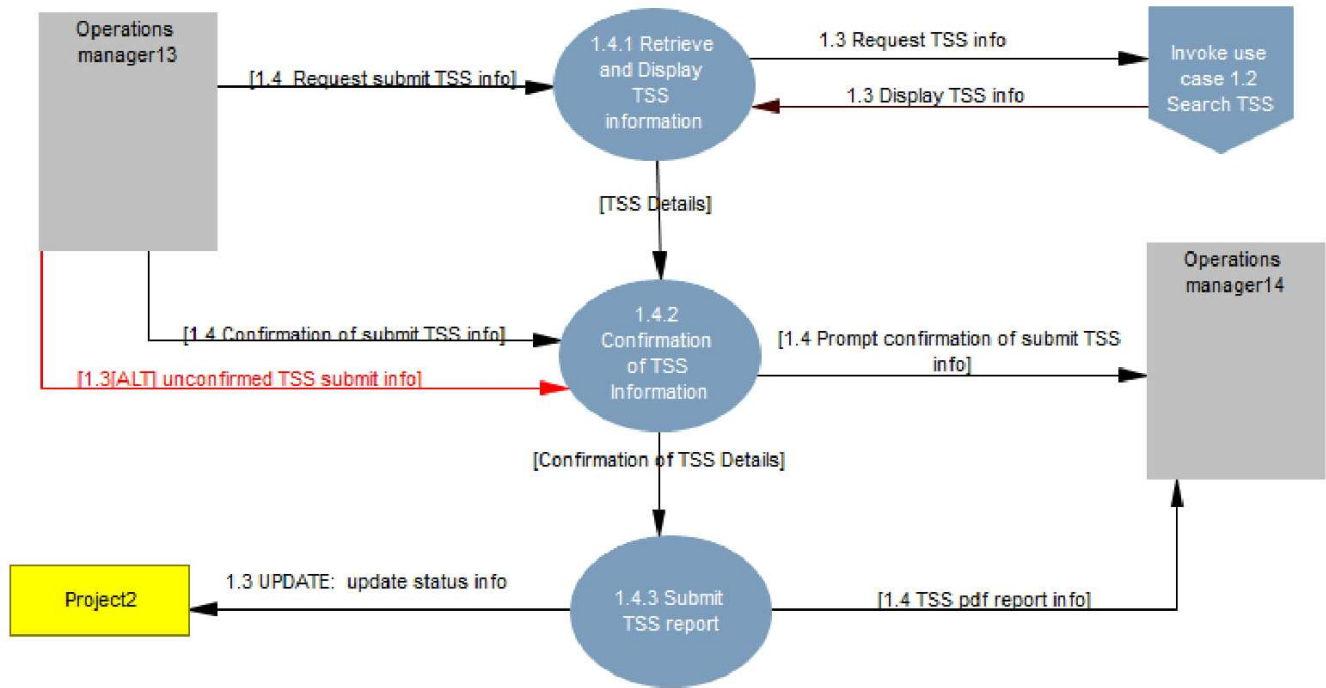
This section contains the primitive Data flow diagrams for each use case in the relevant system. Detailing the exact logical process, the system will go through once the use case has been initiated.

2.5.1 Establishment Subsystem

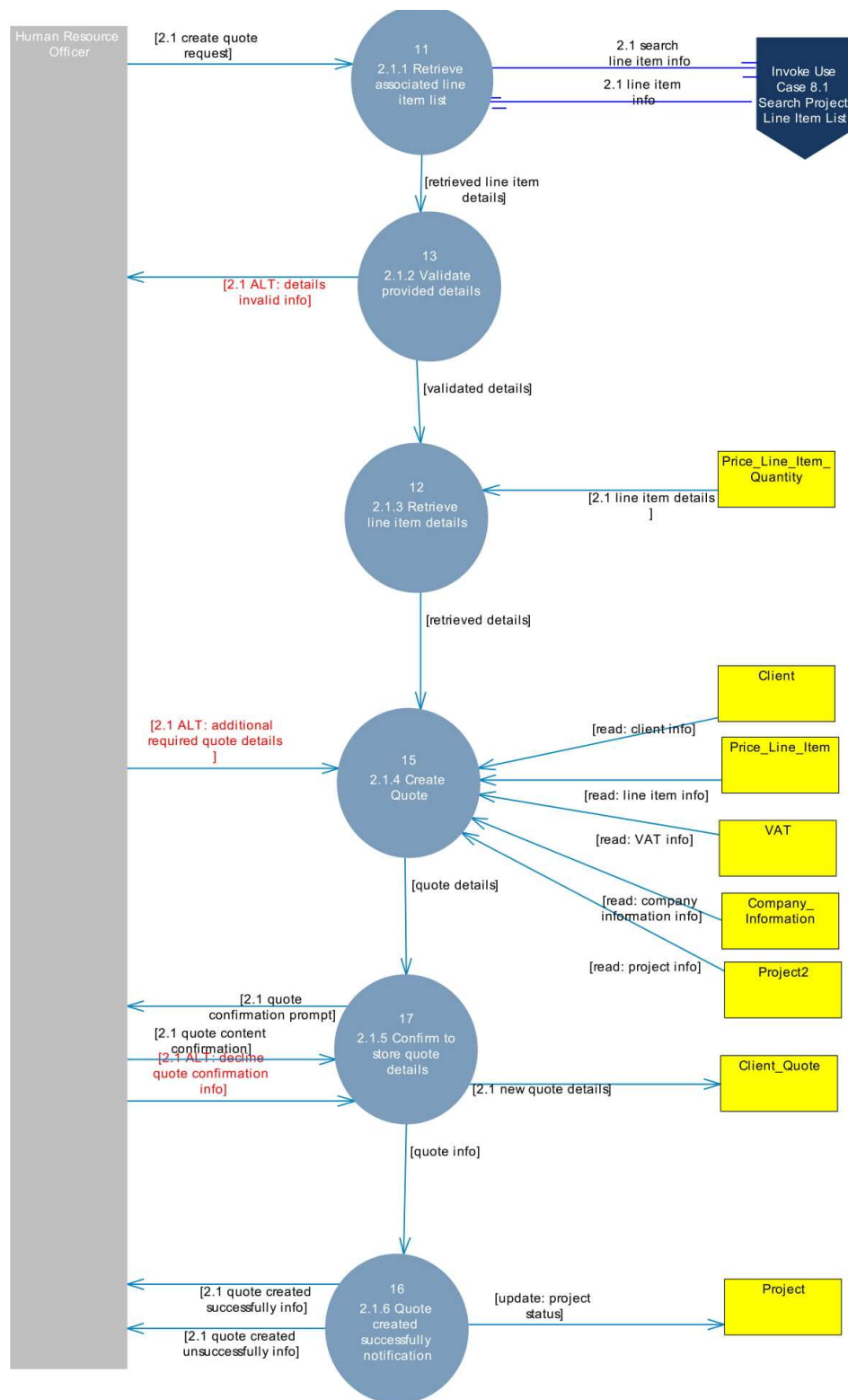


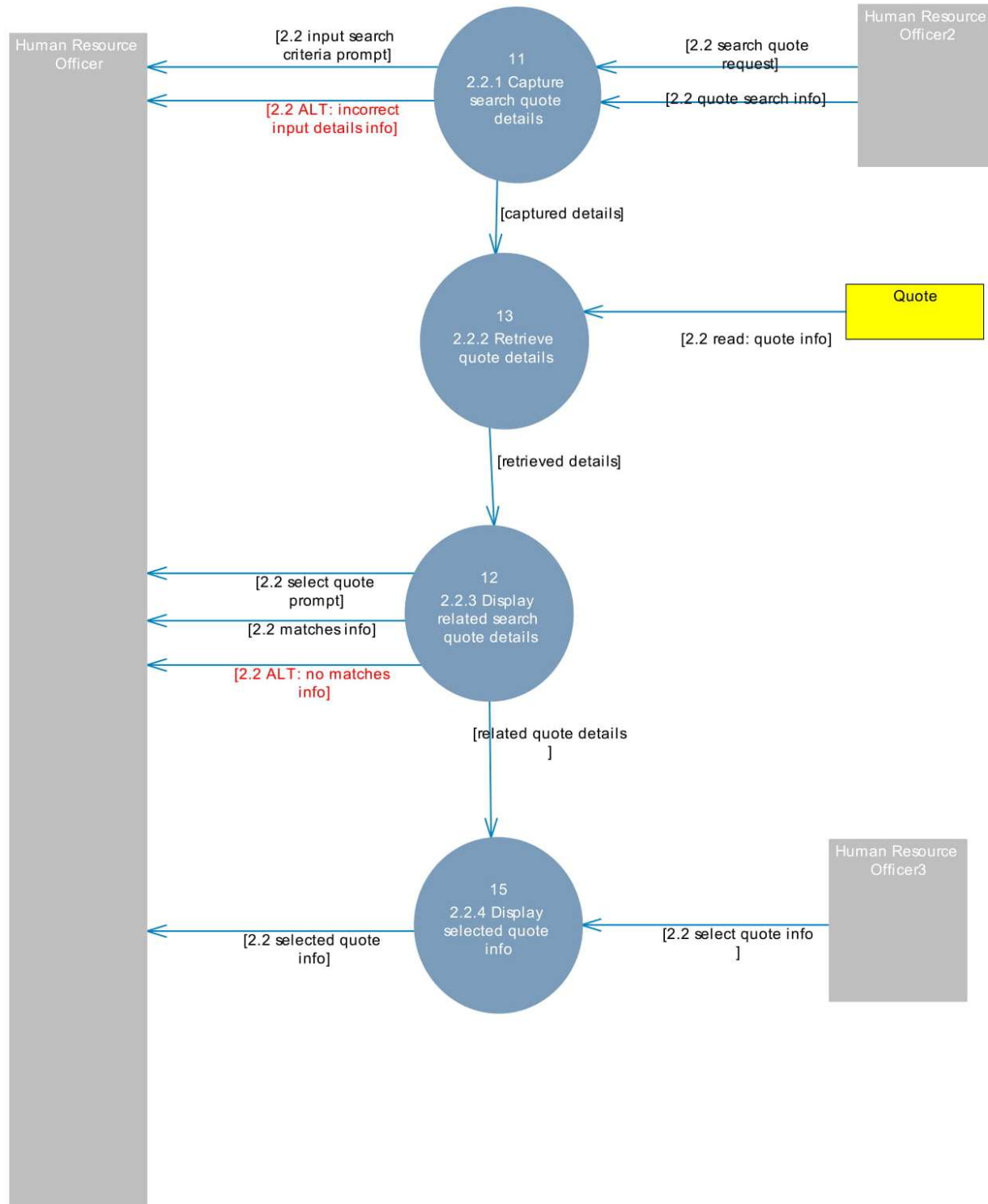


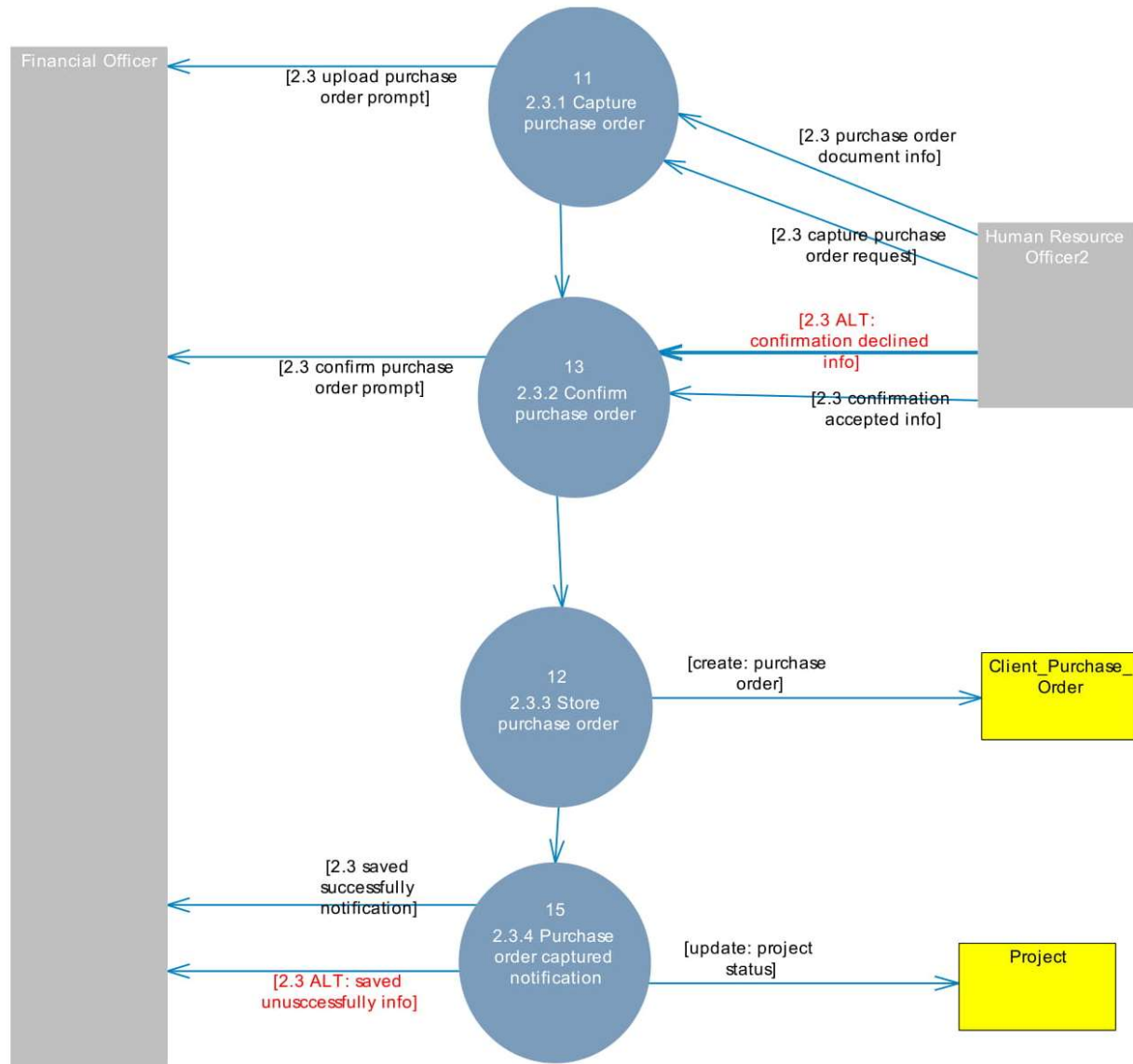




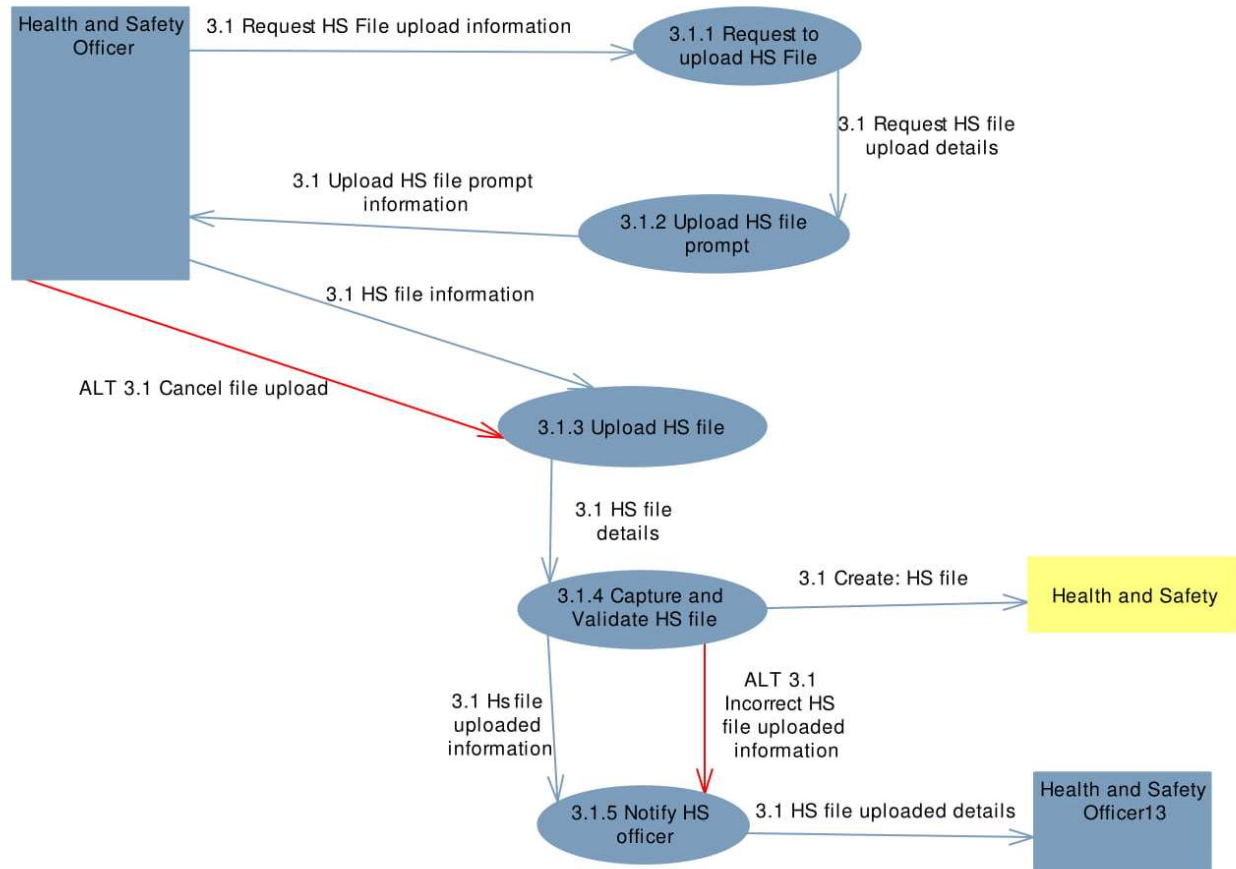
2.5.2 Quotation Subsystem

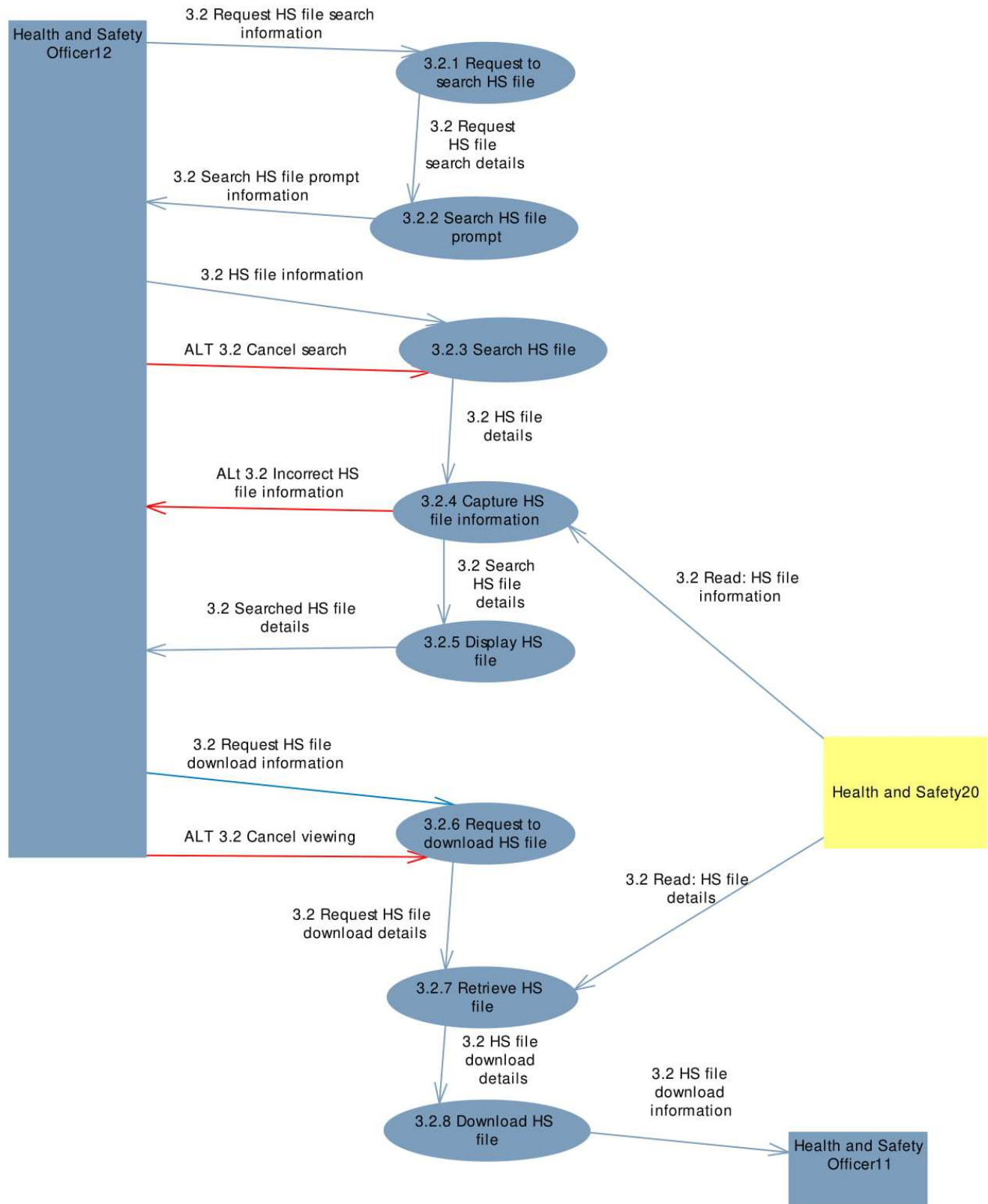


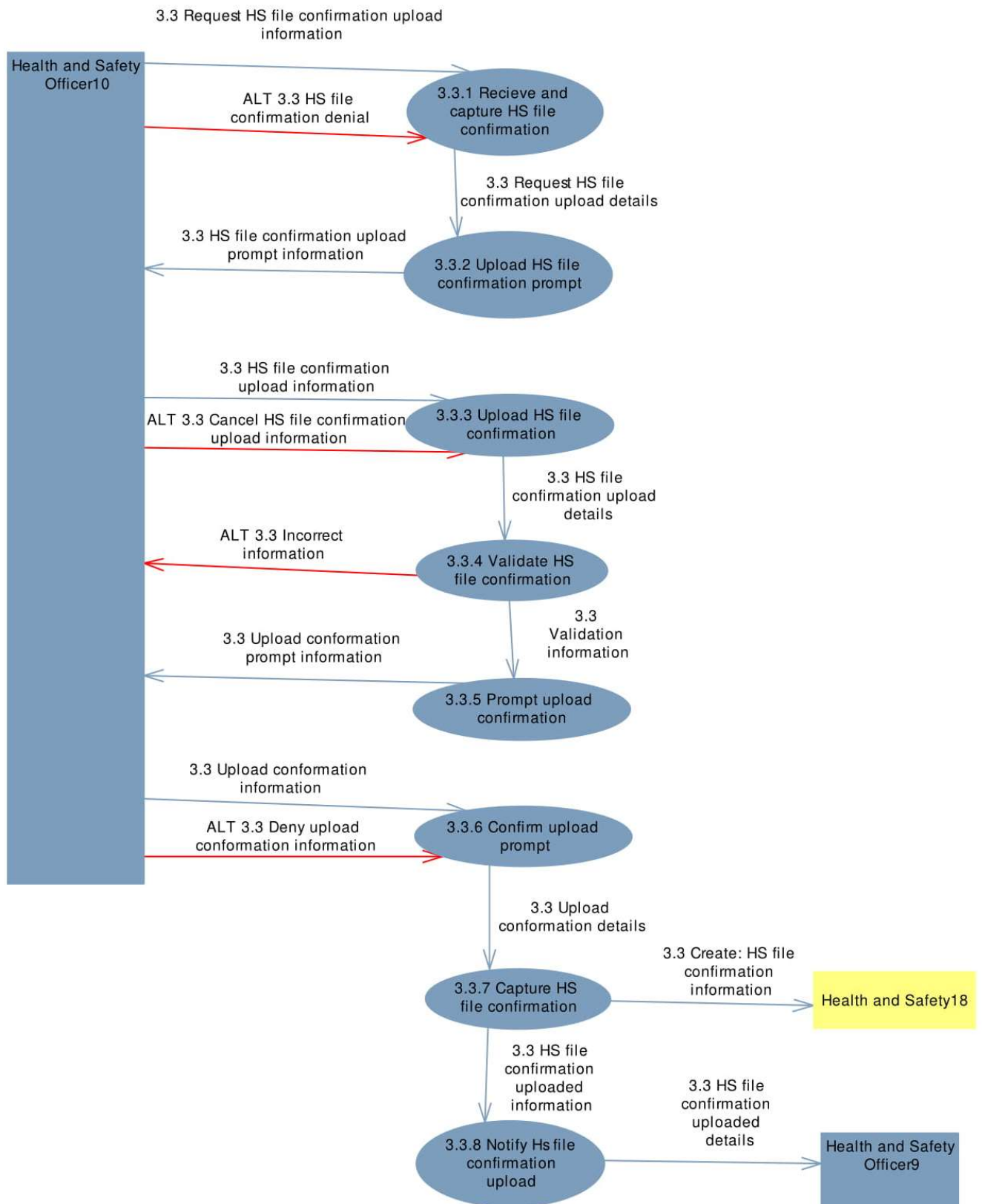


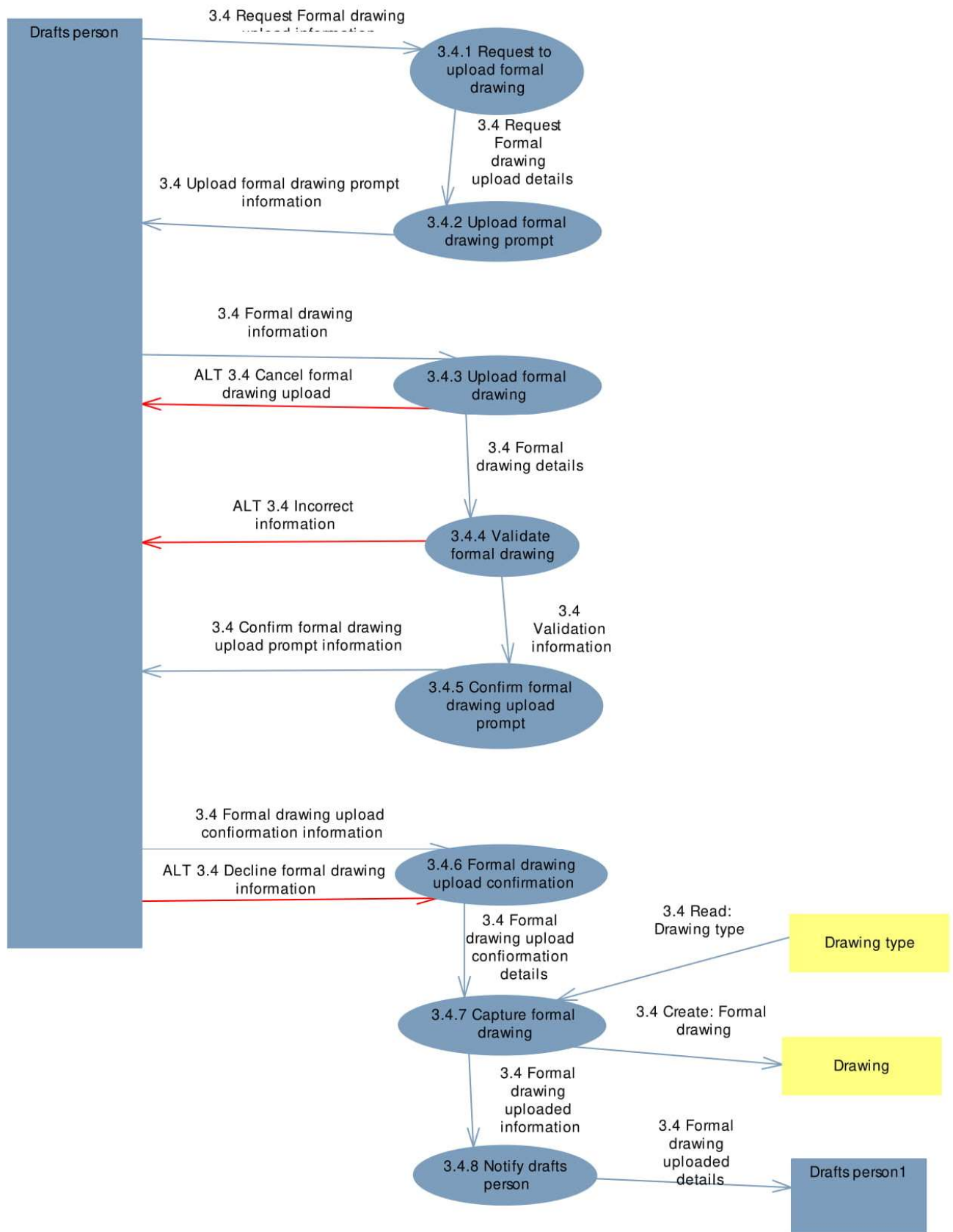


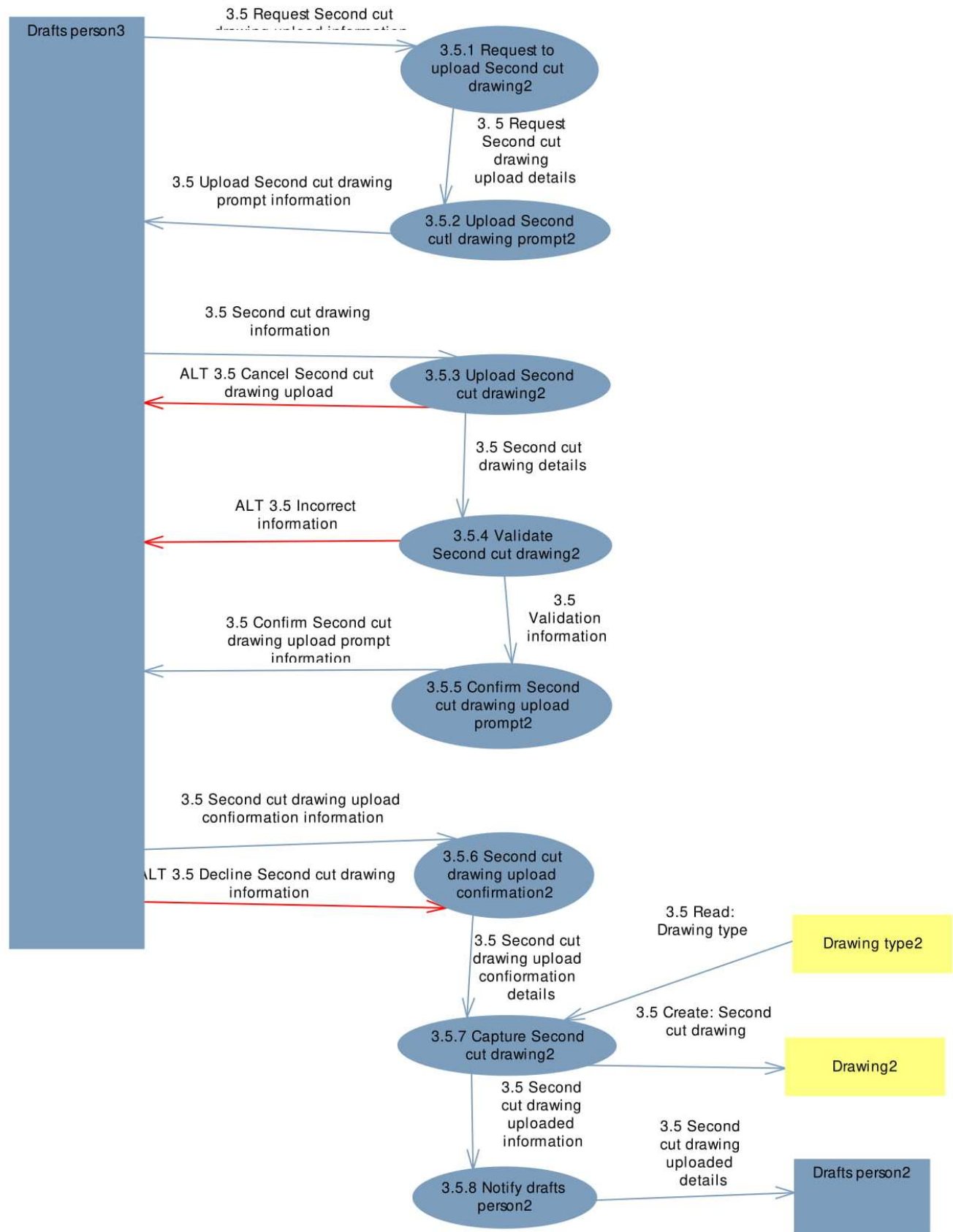
2.5.3 Administration Subsystem

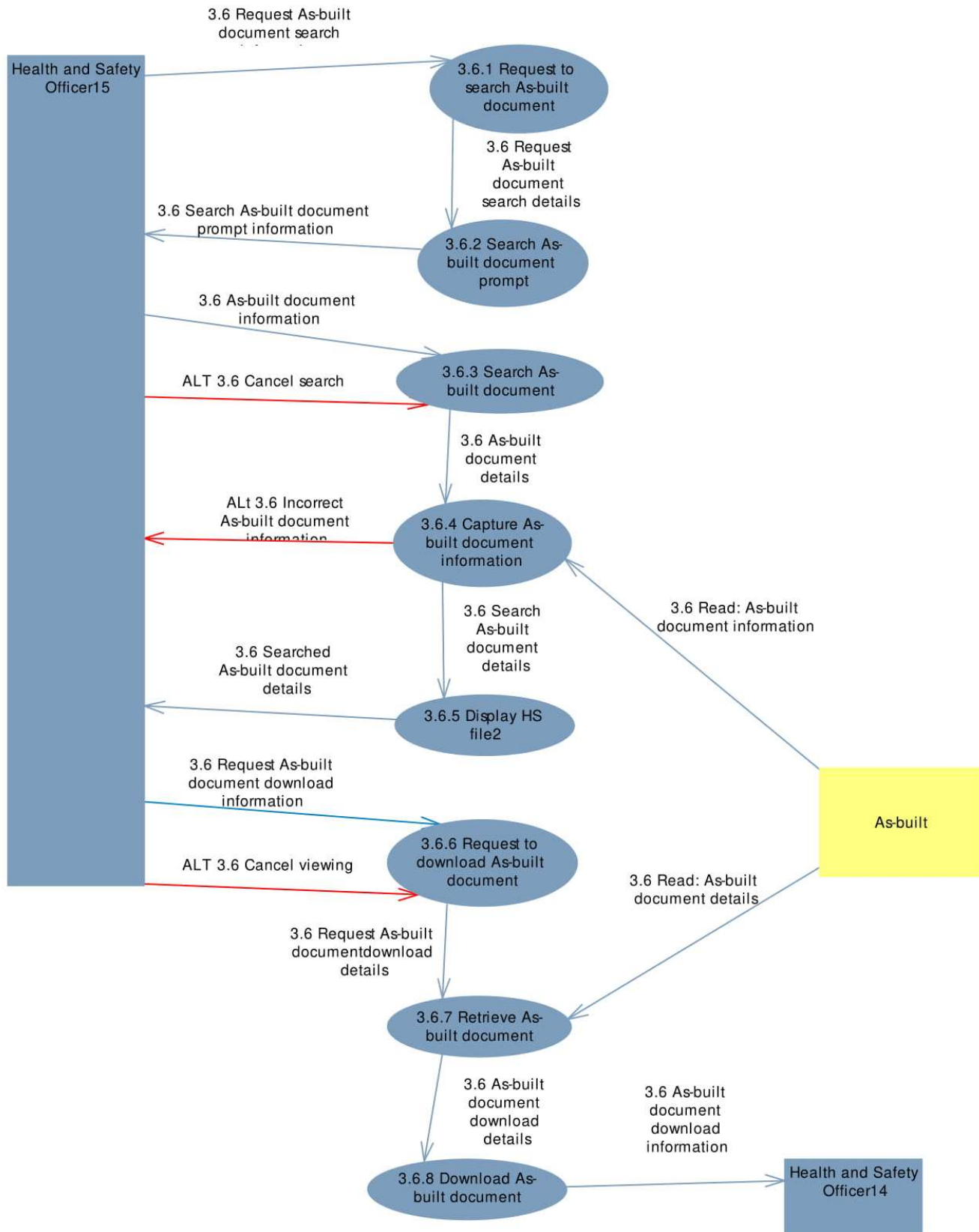


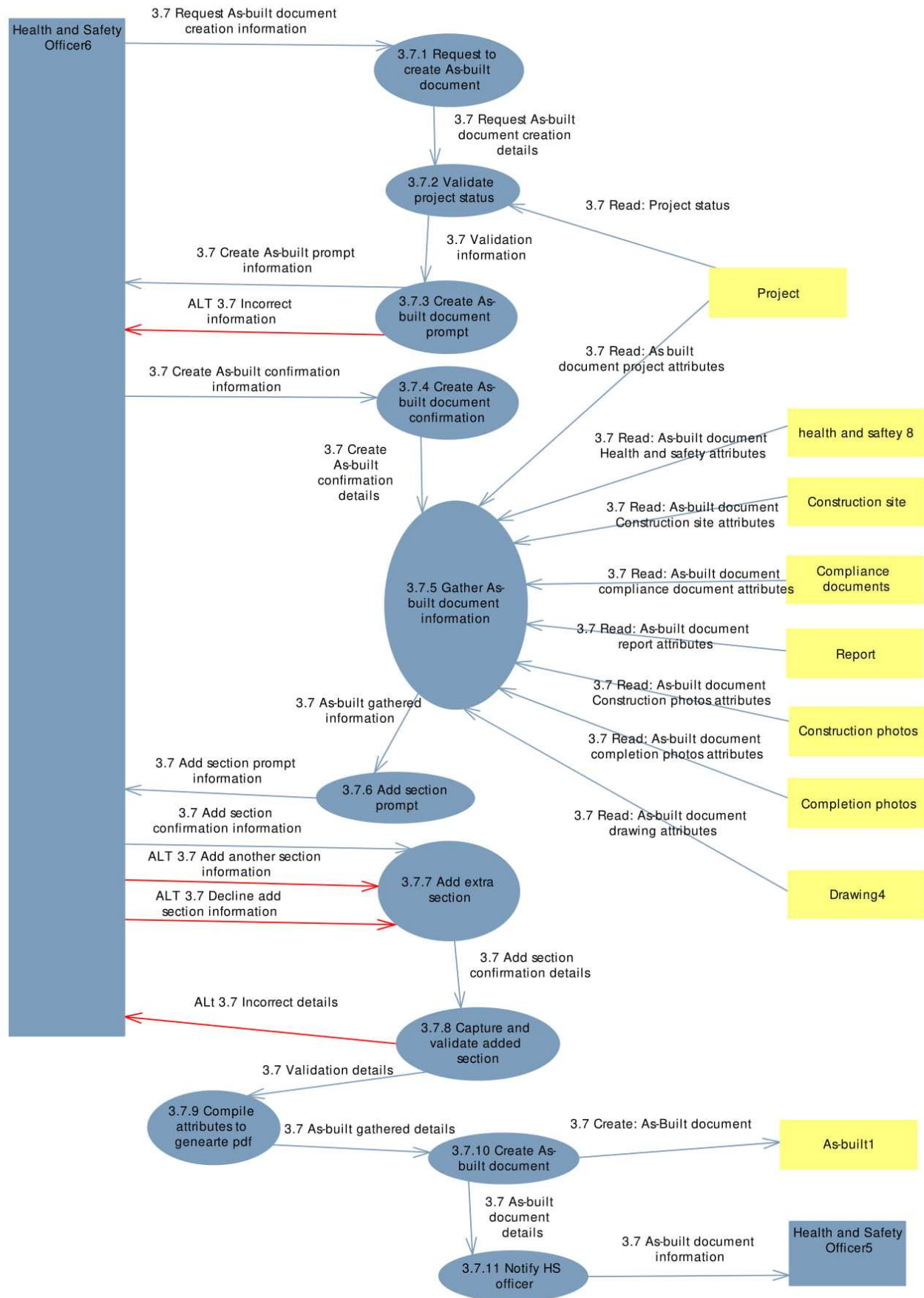




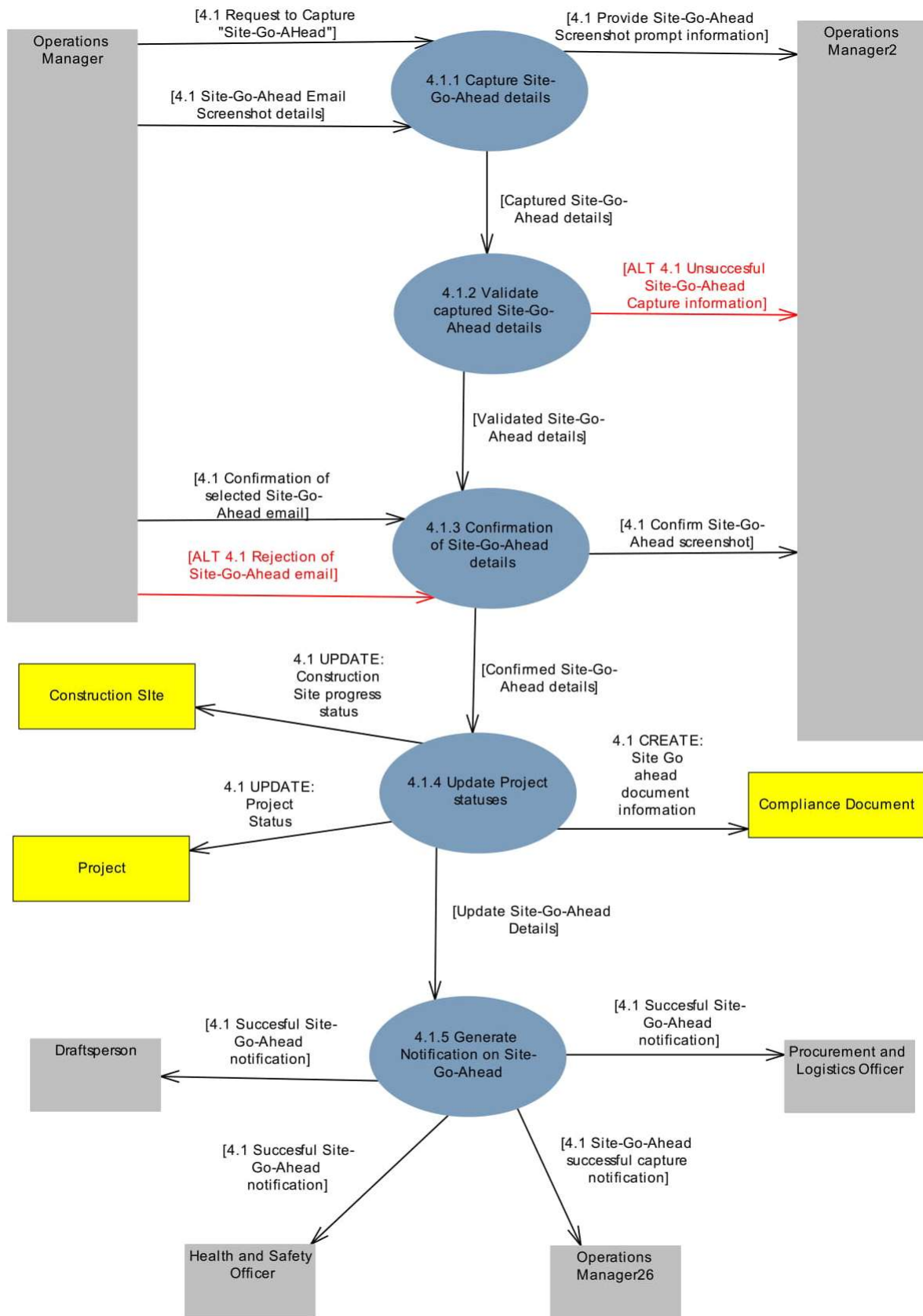


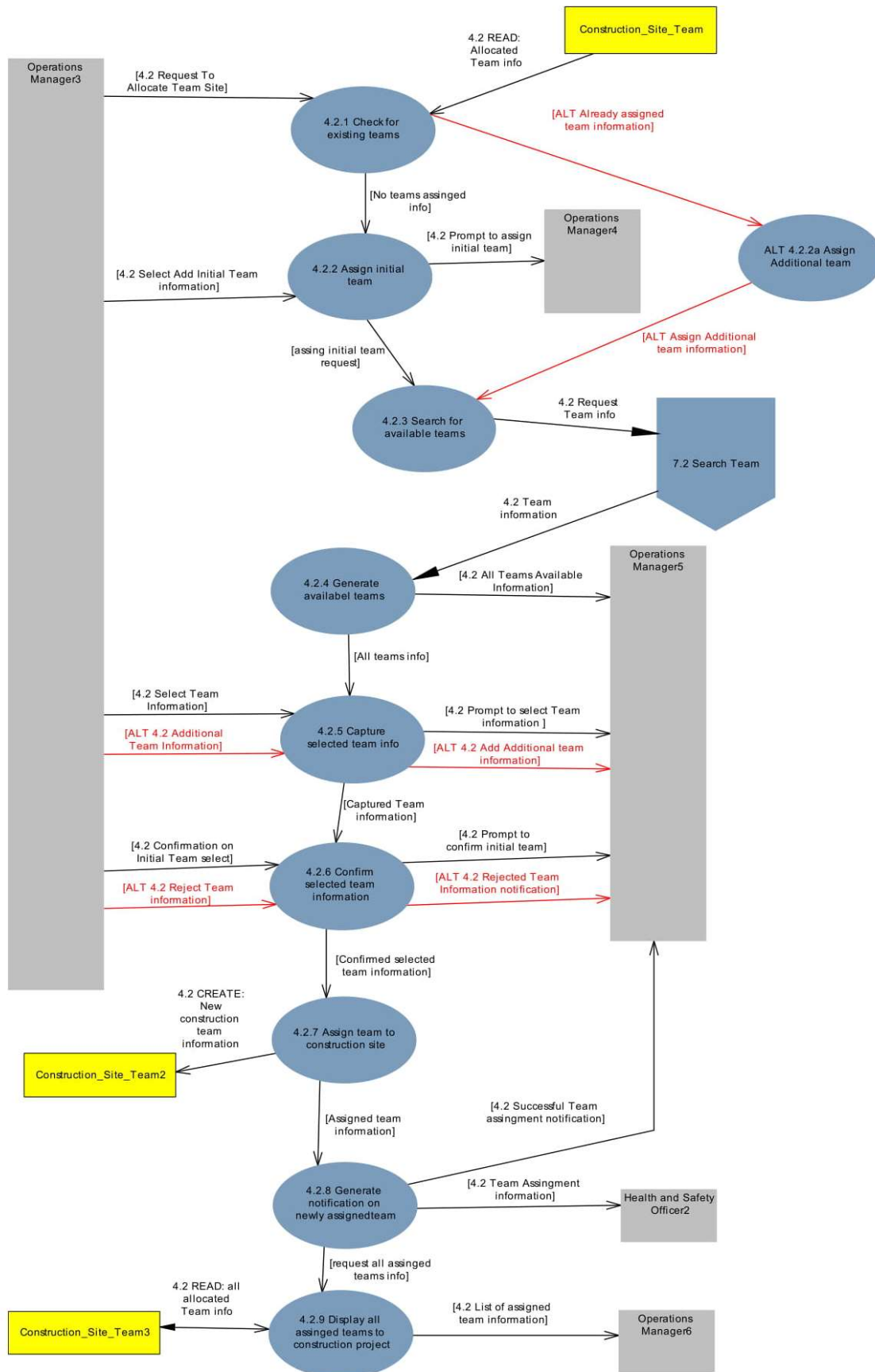


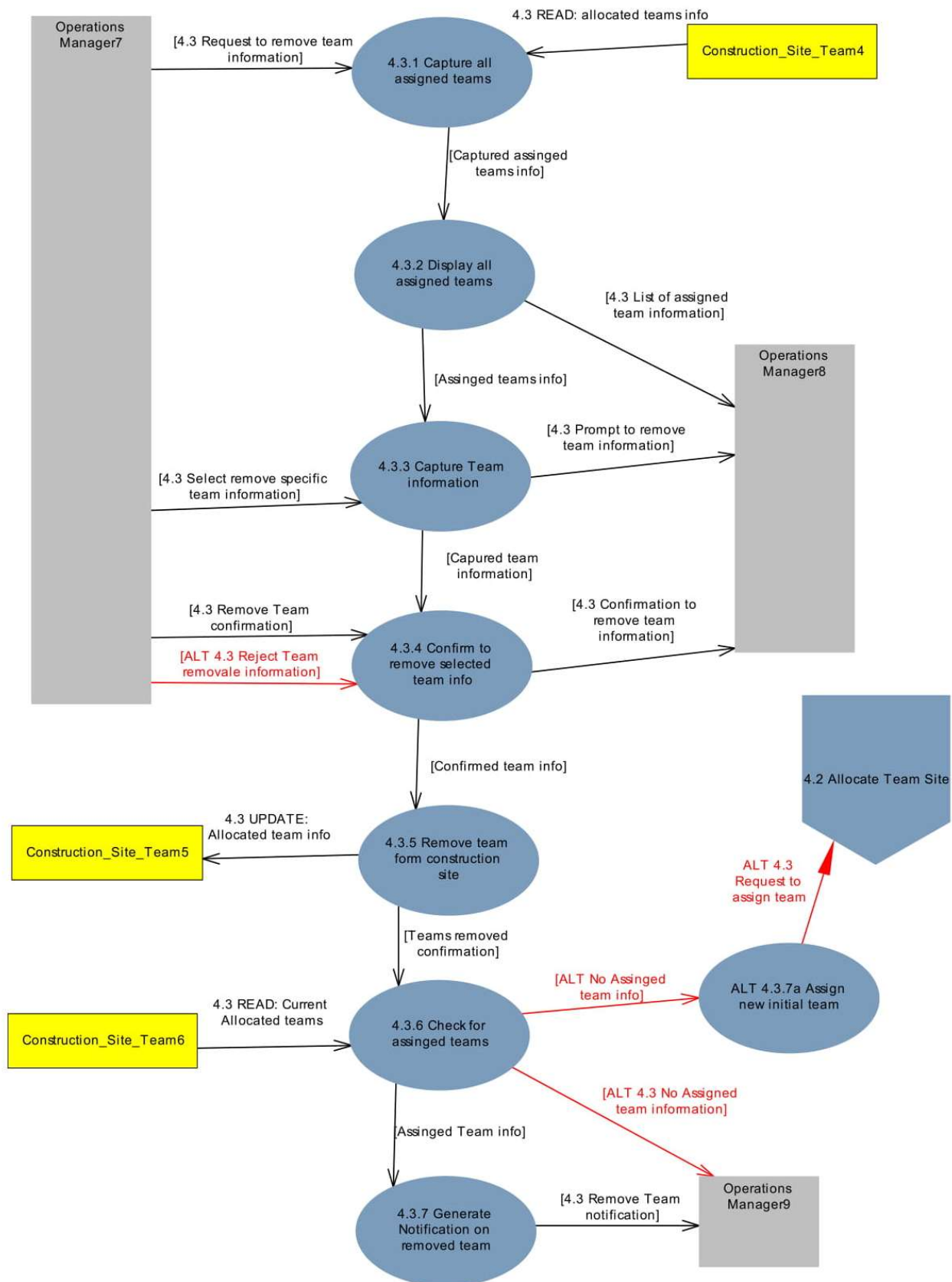


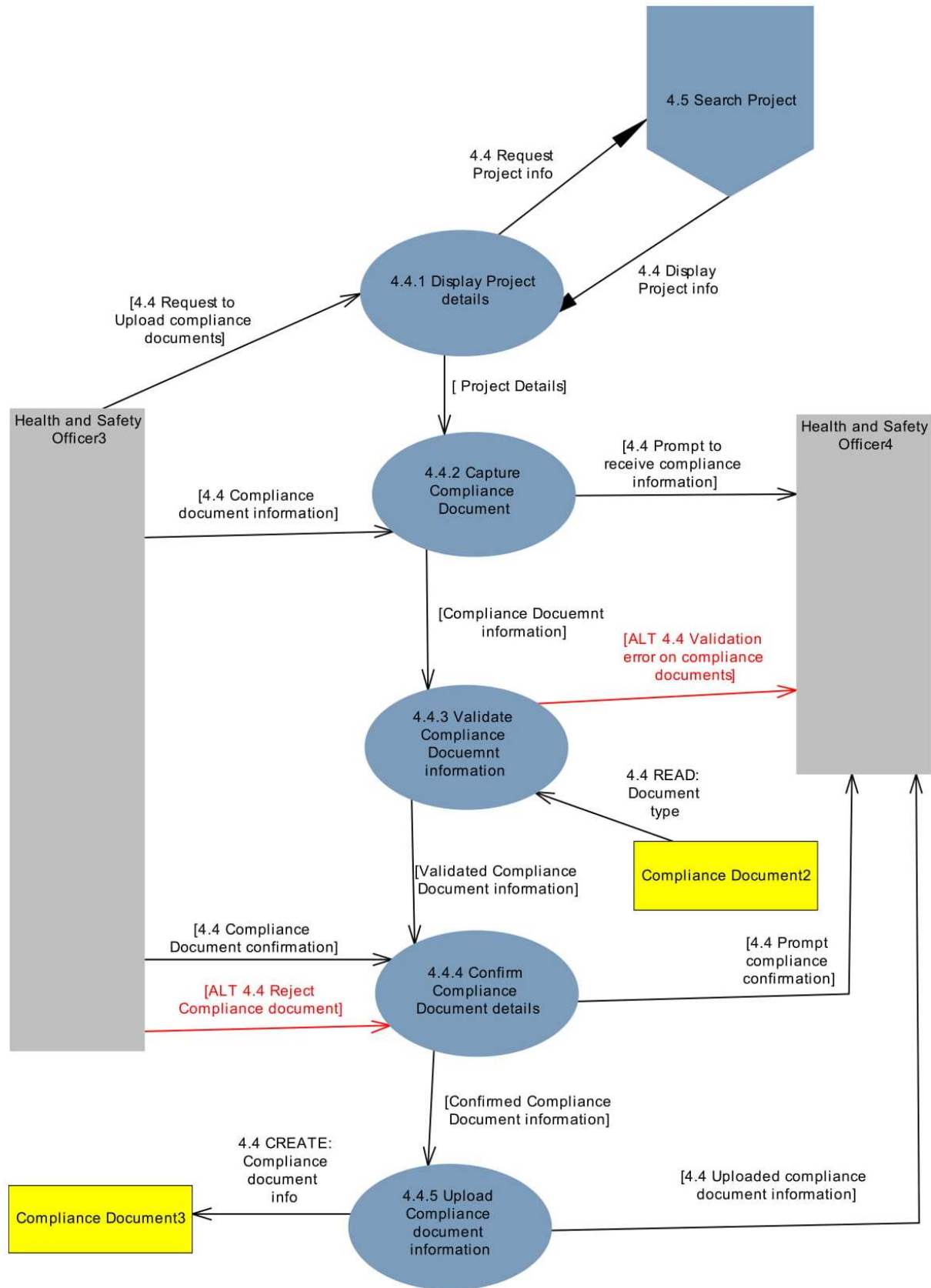


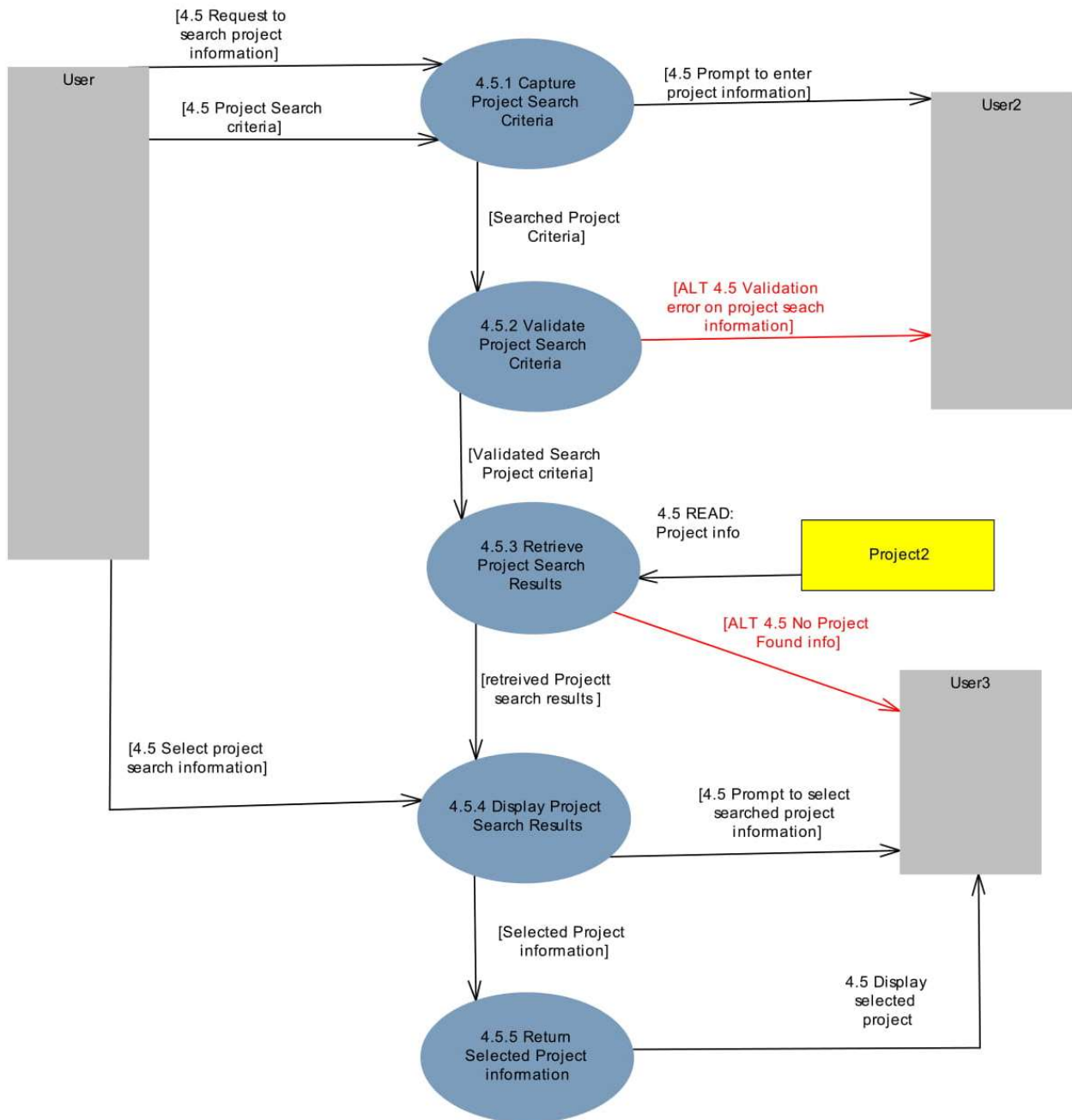
2.5.4 Construction Subsystem

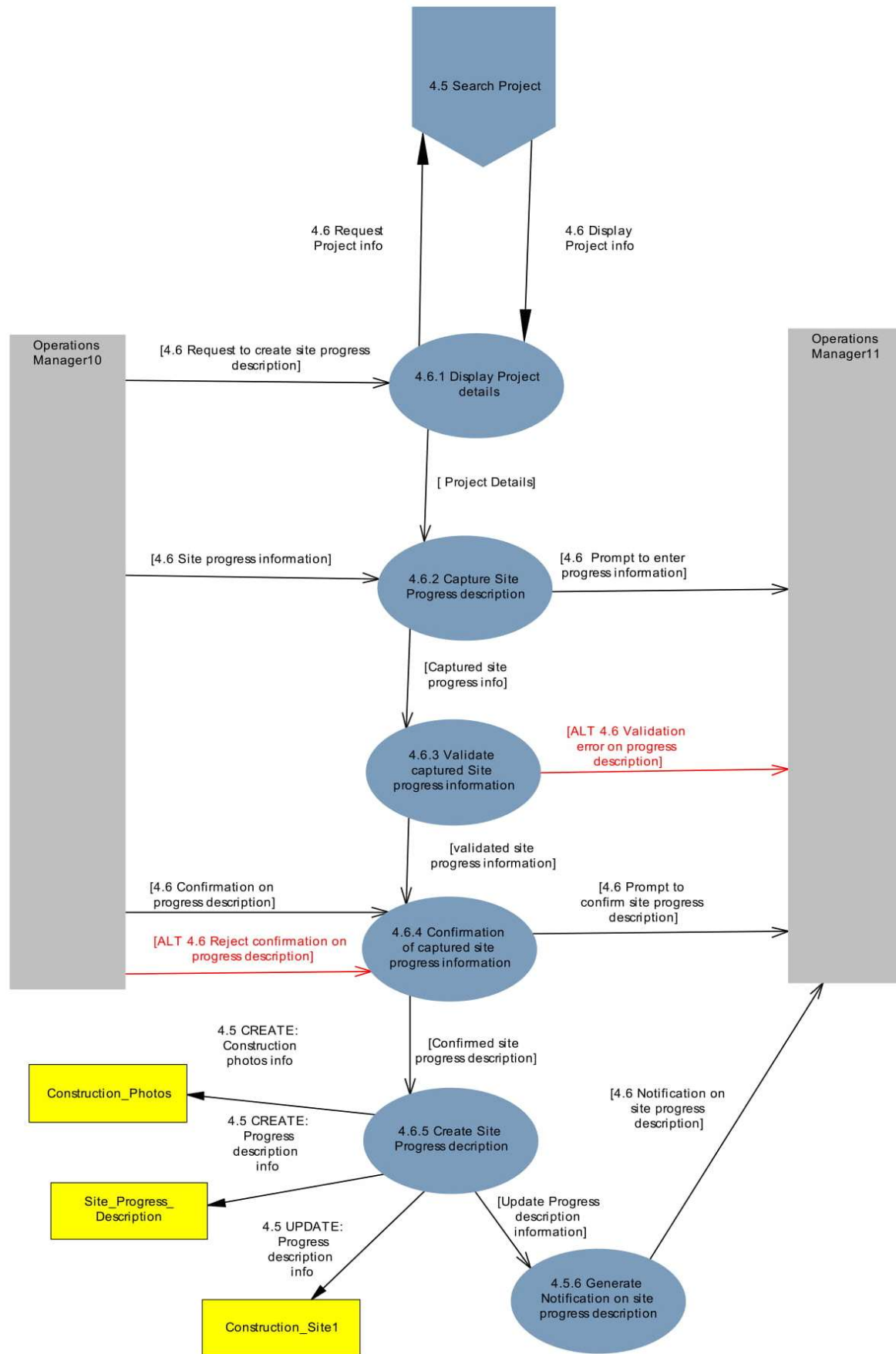


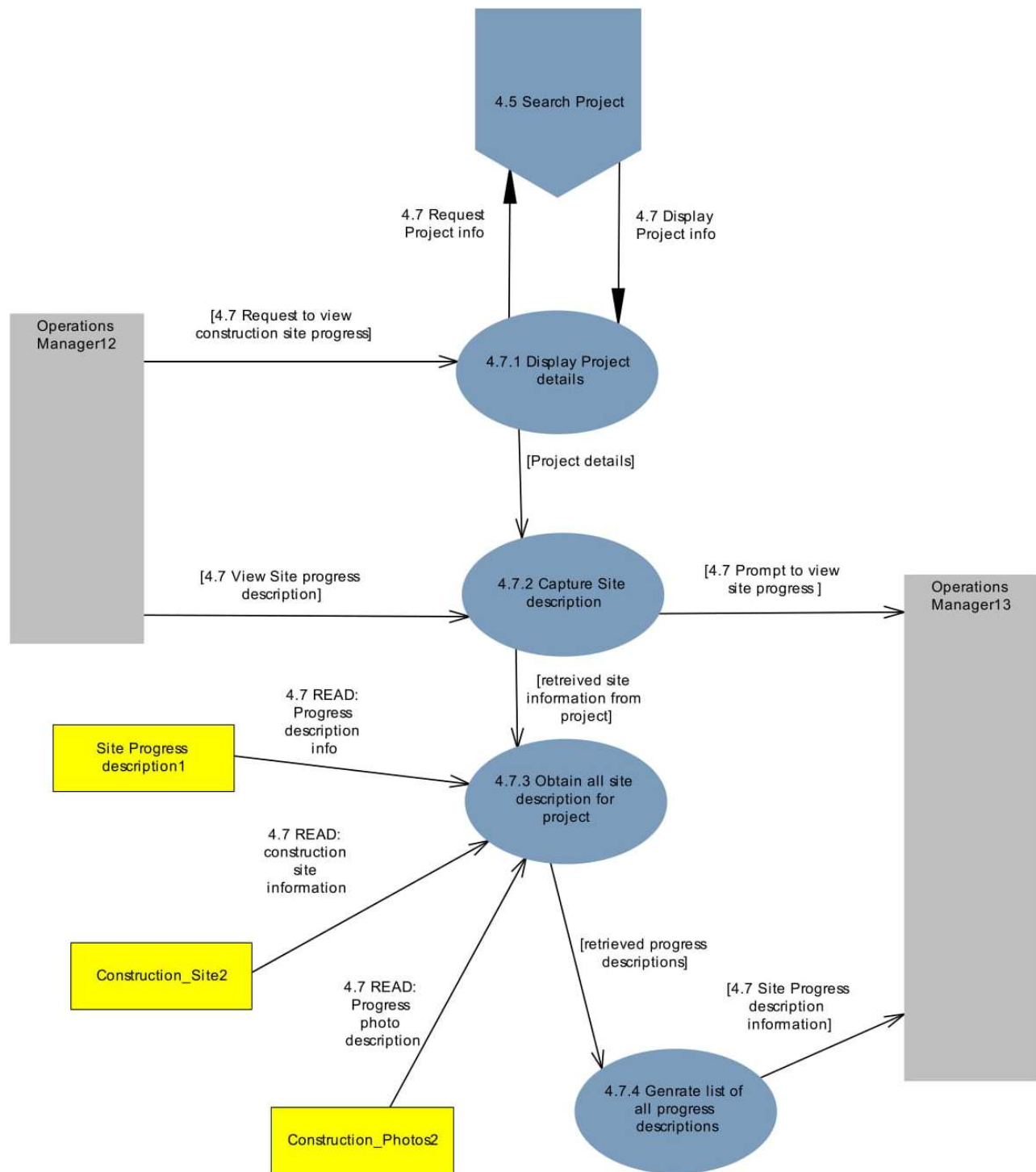


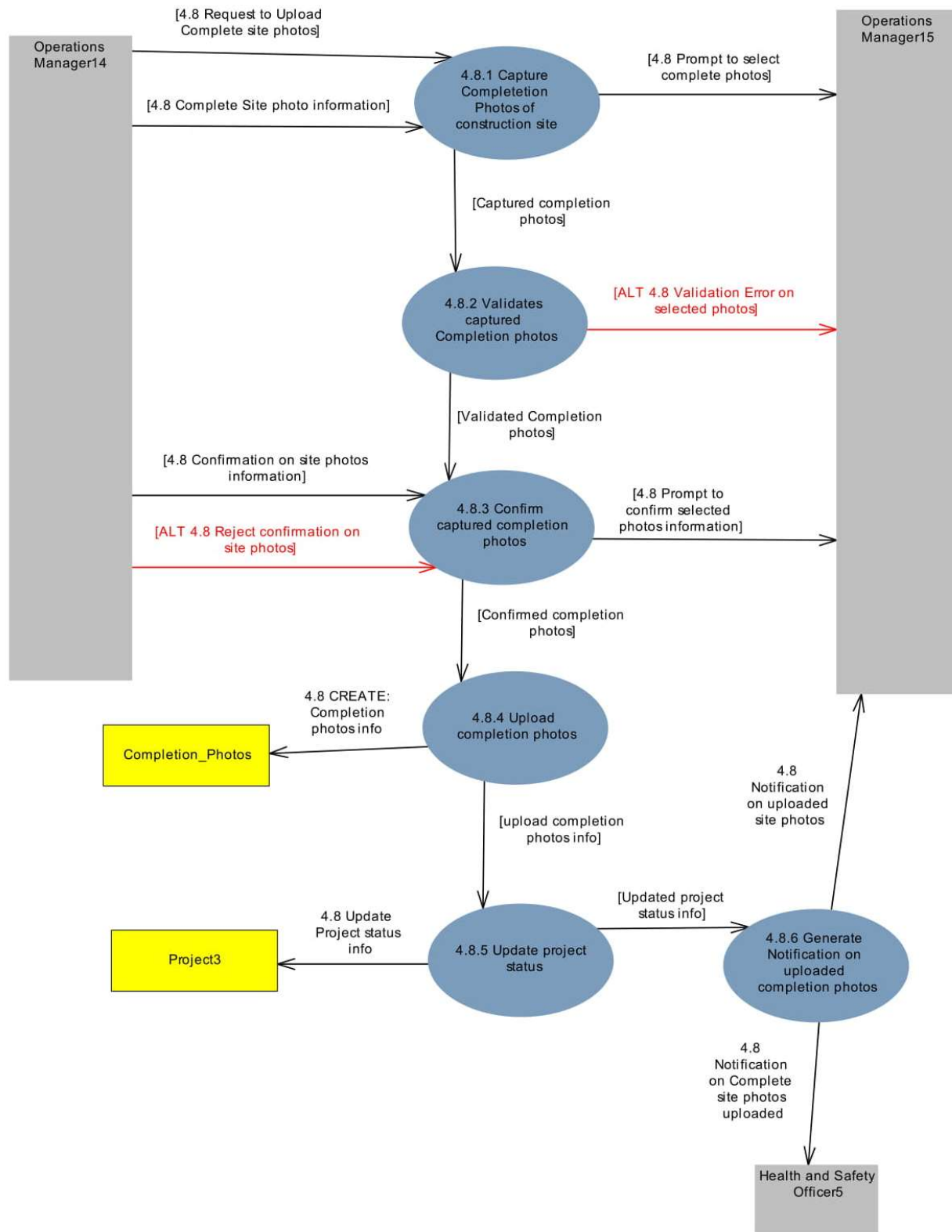


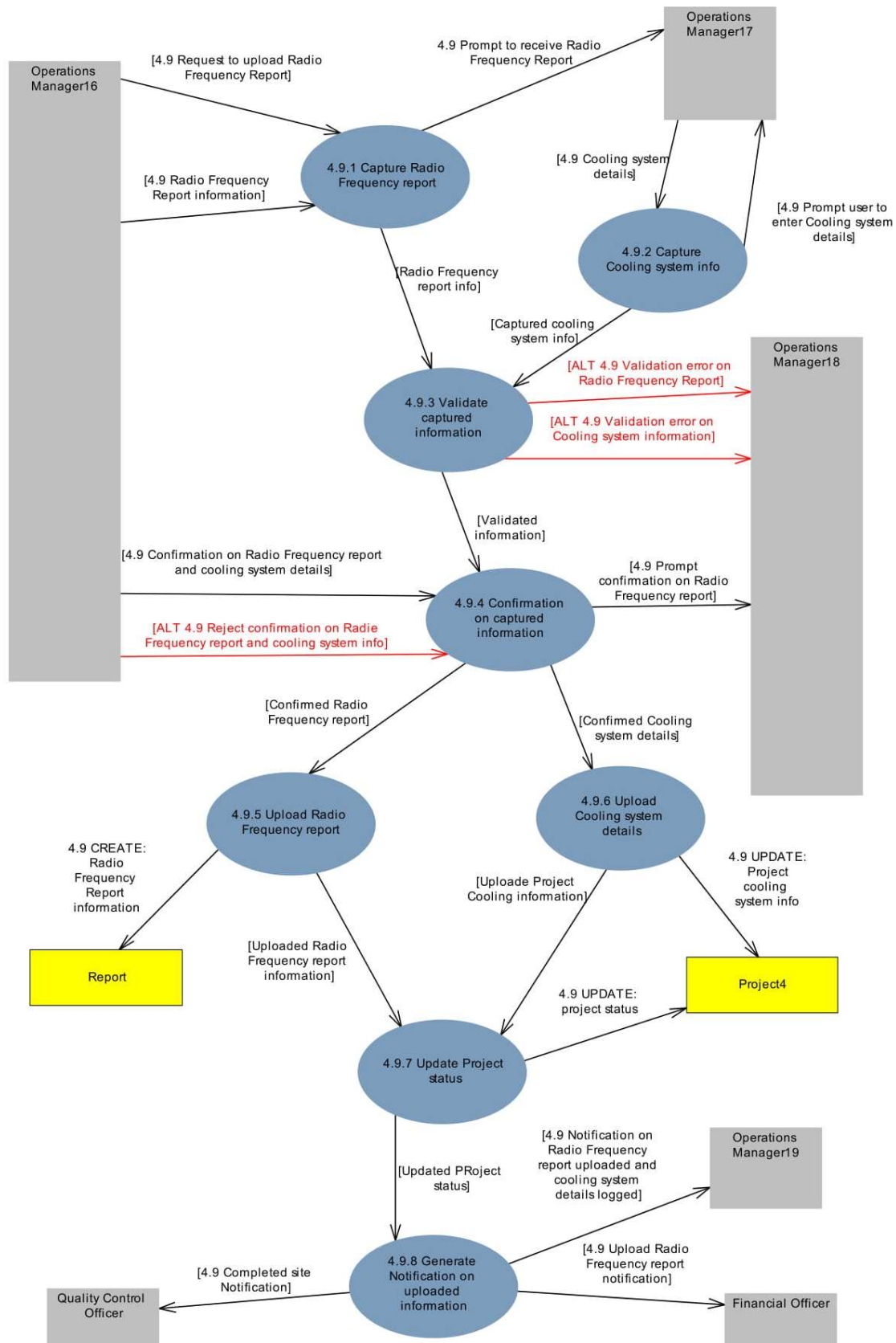


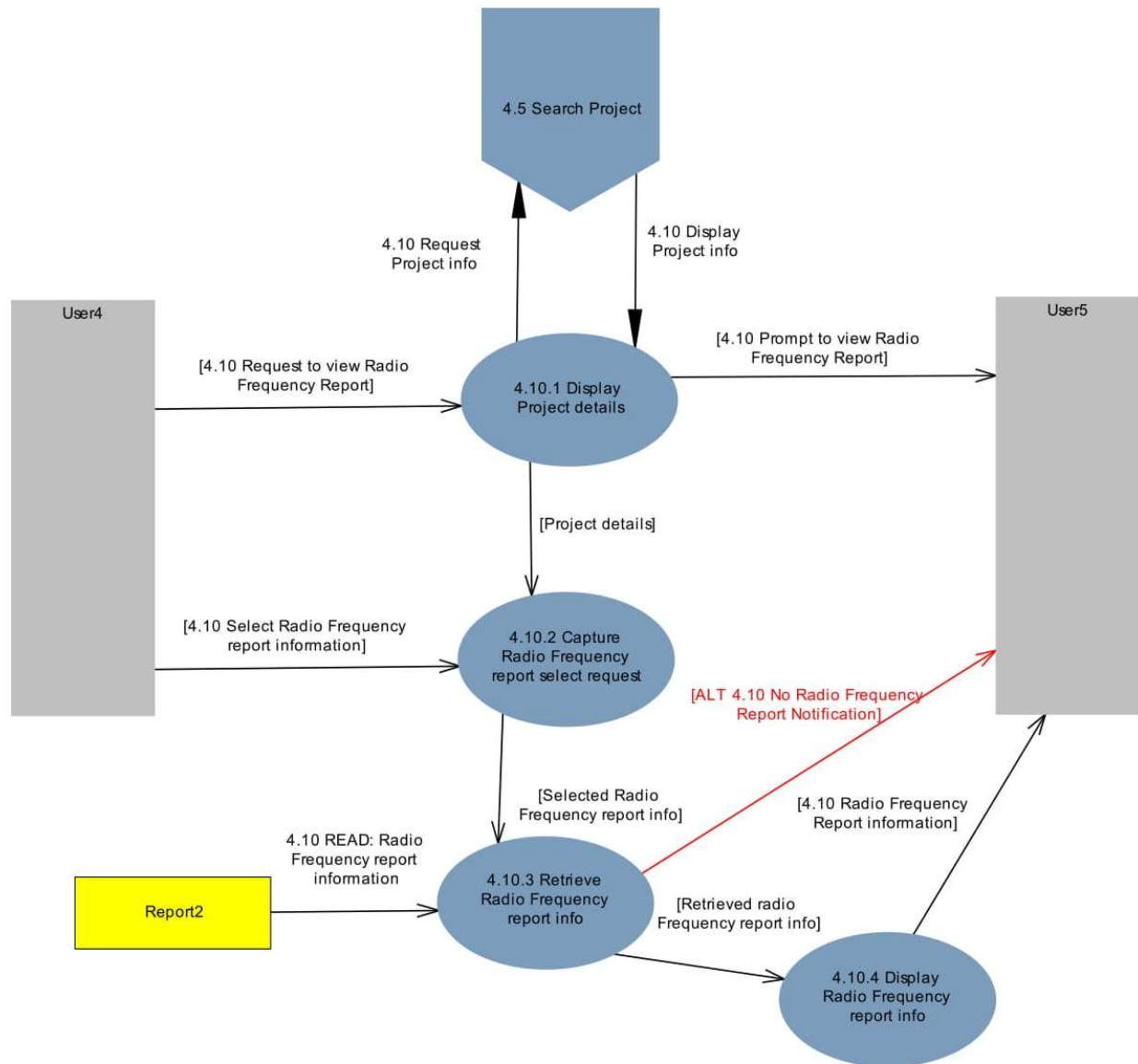


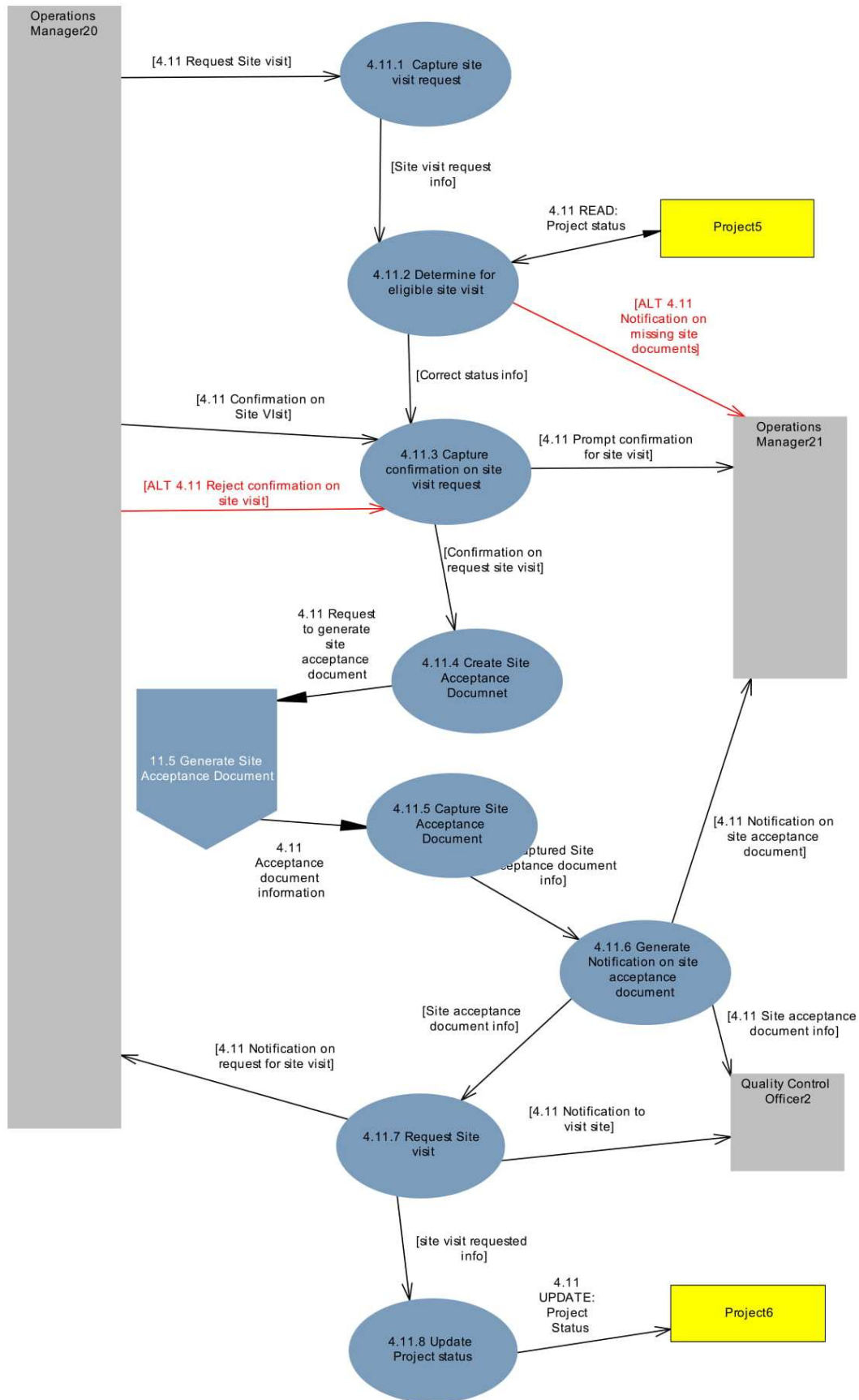


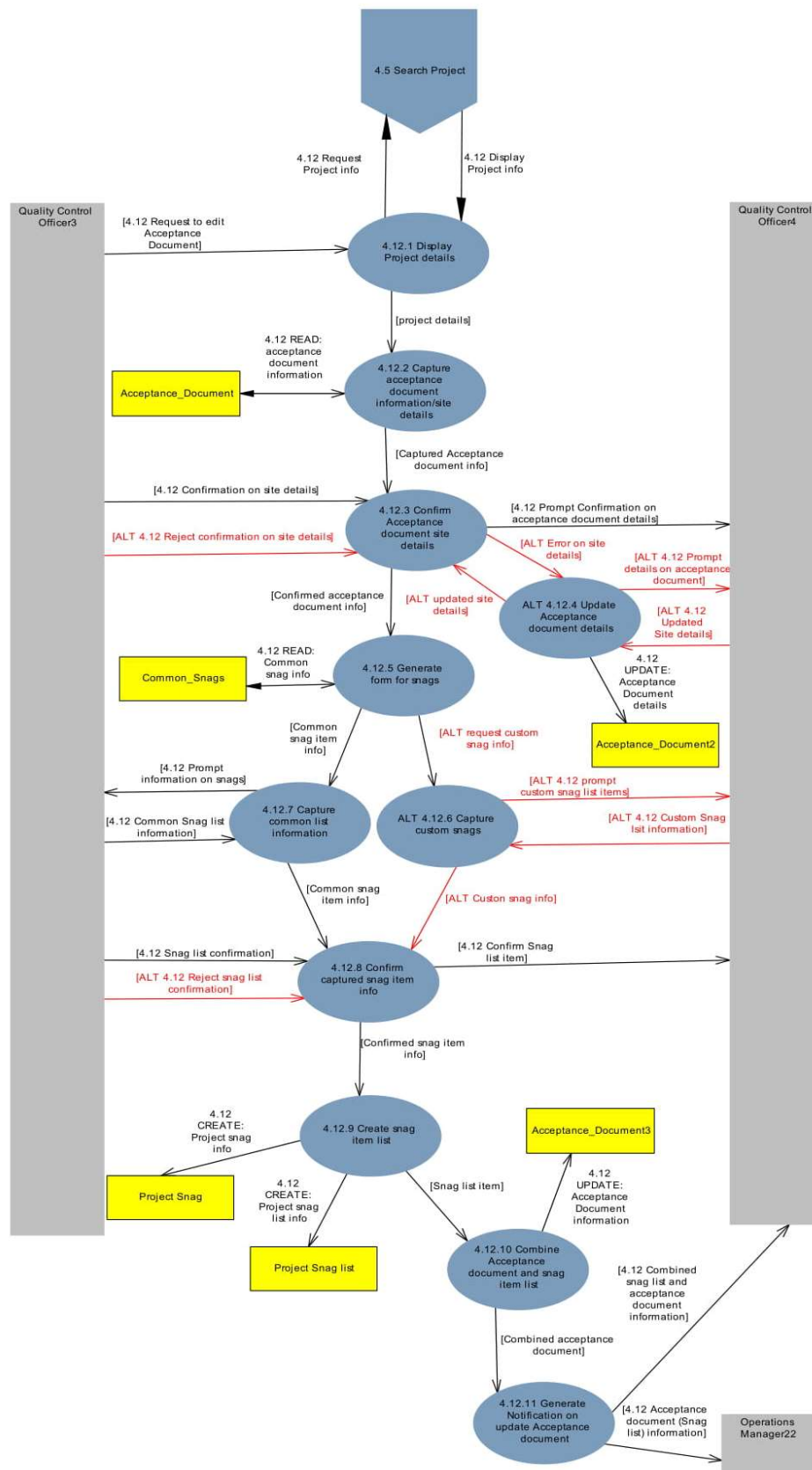


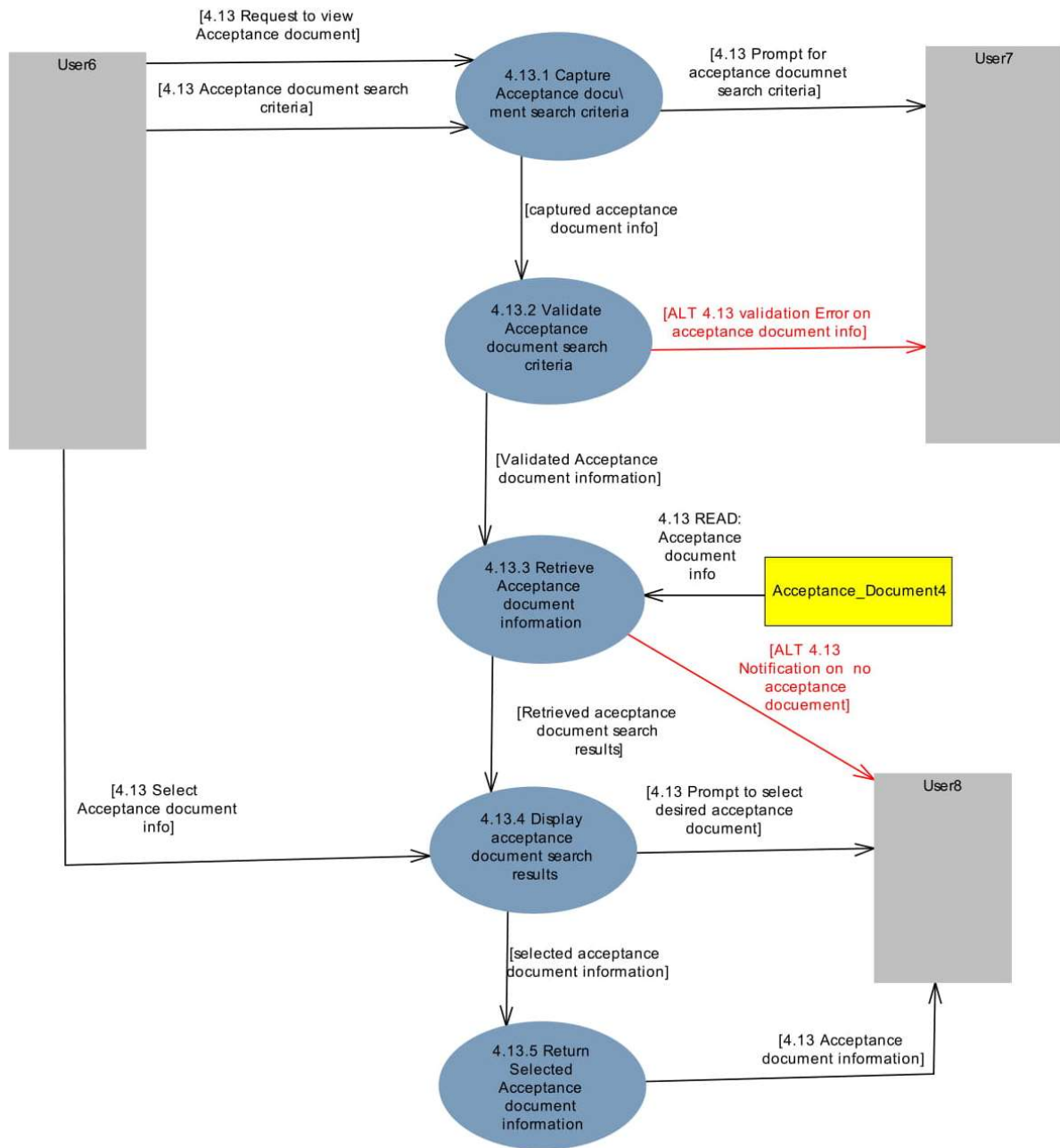


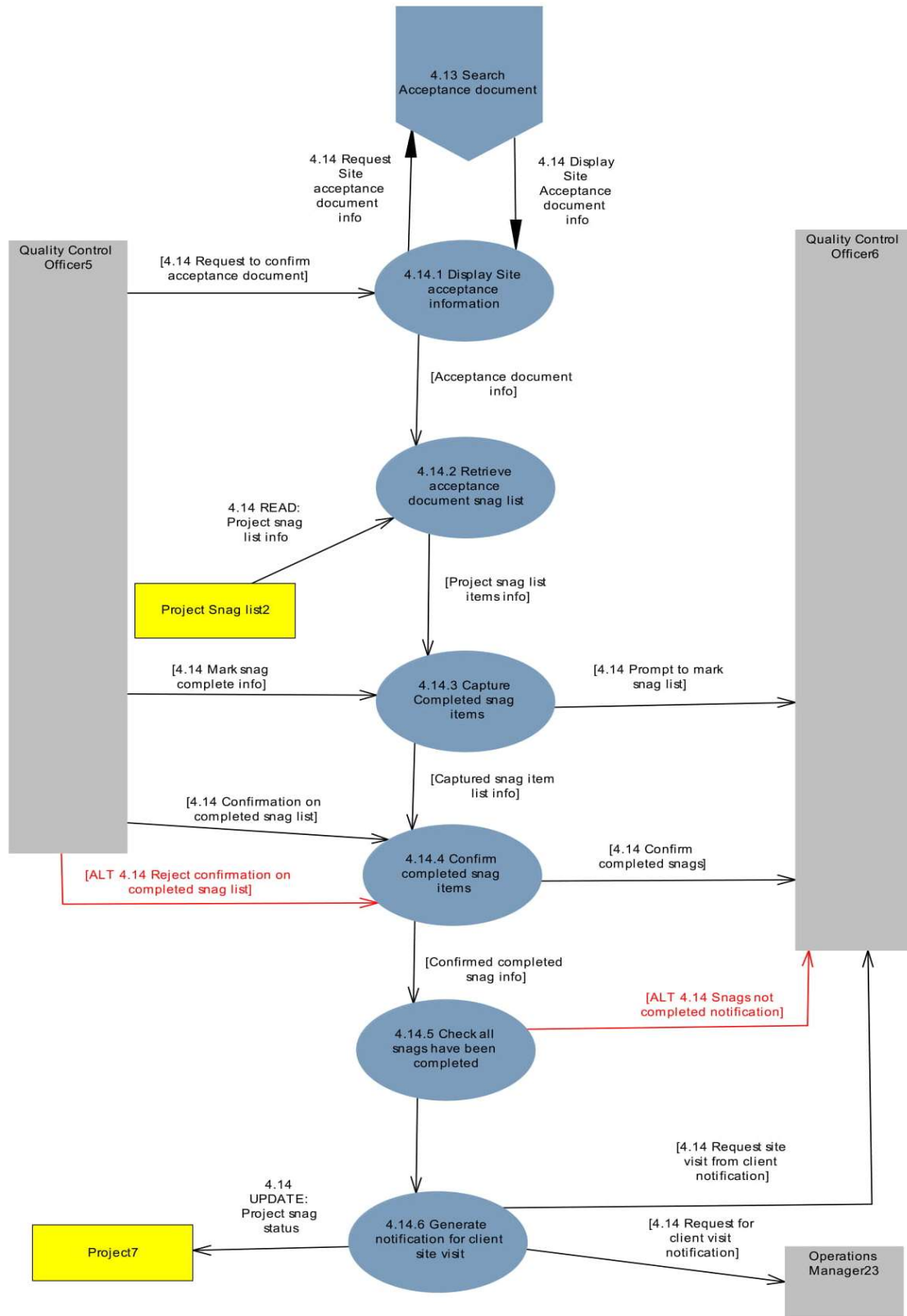


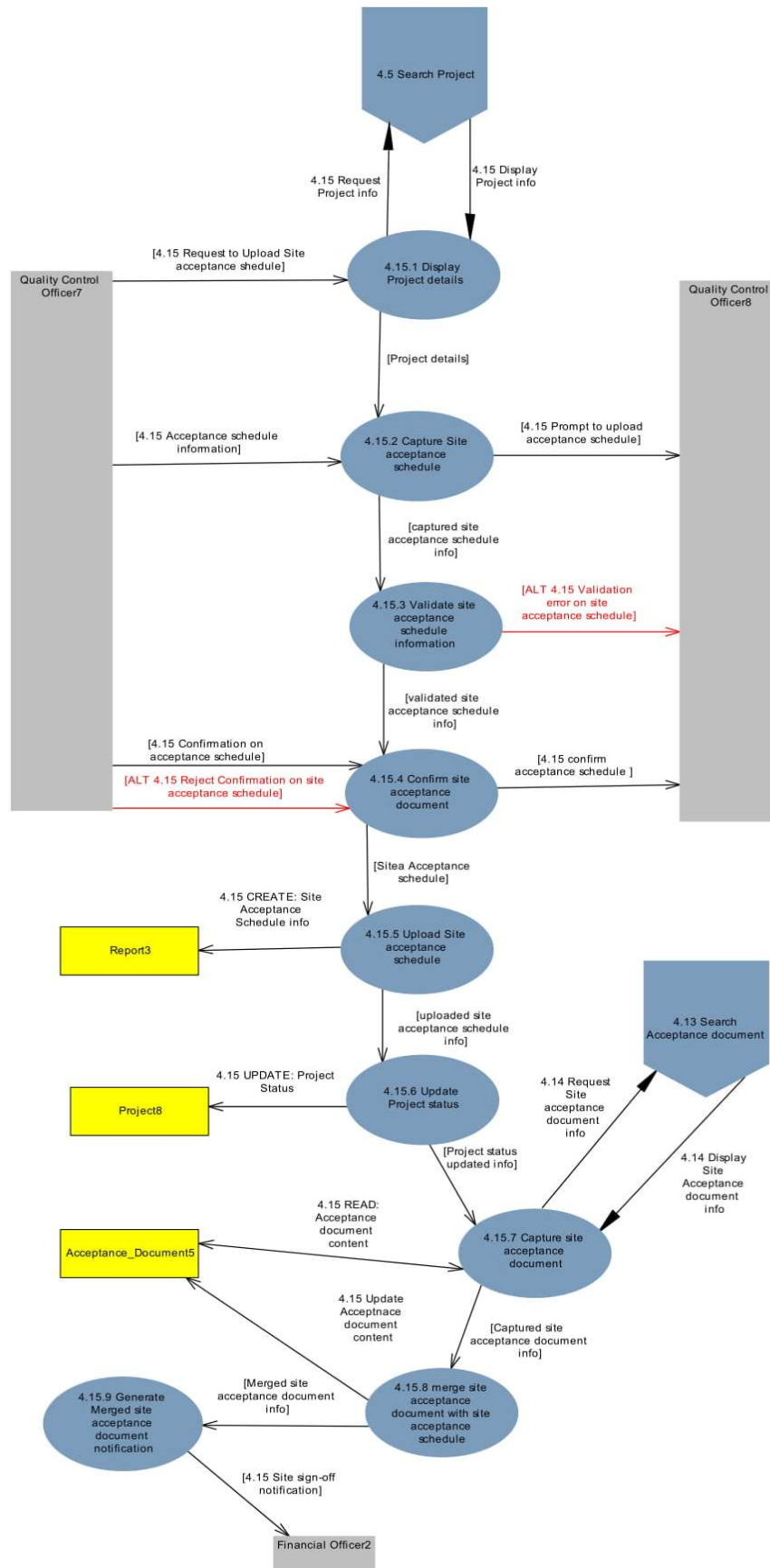


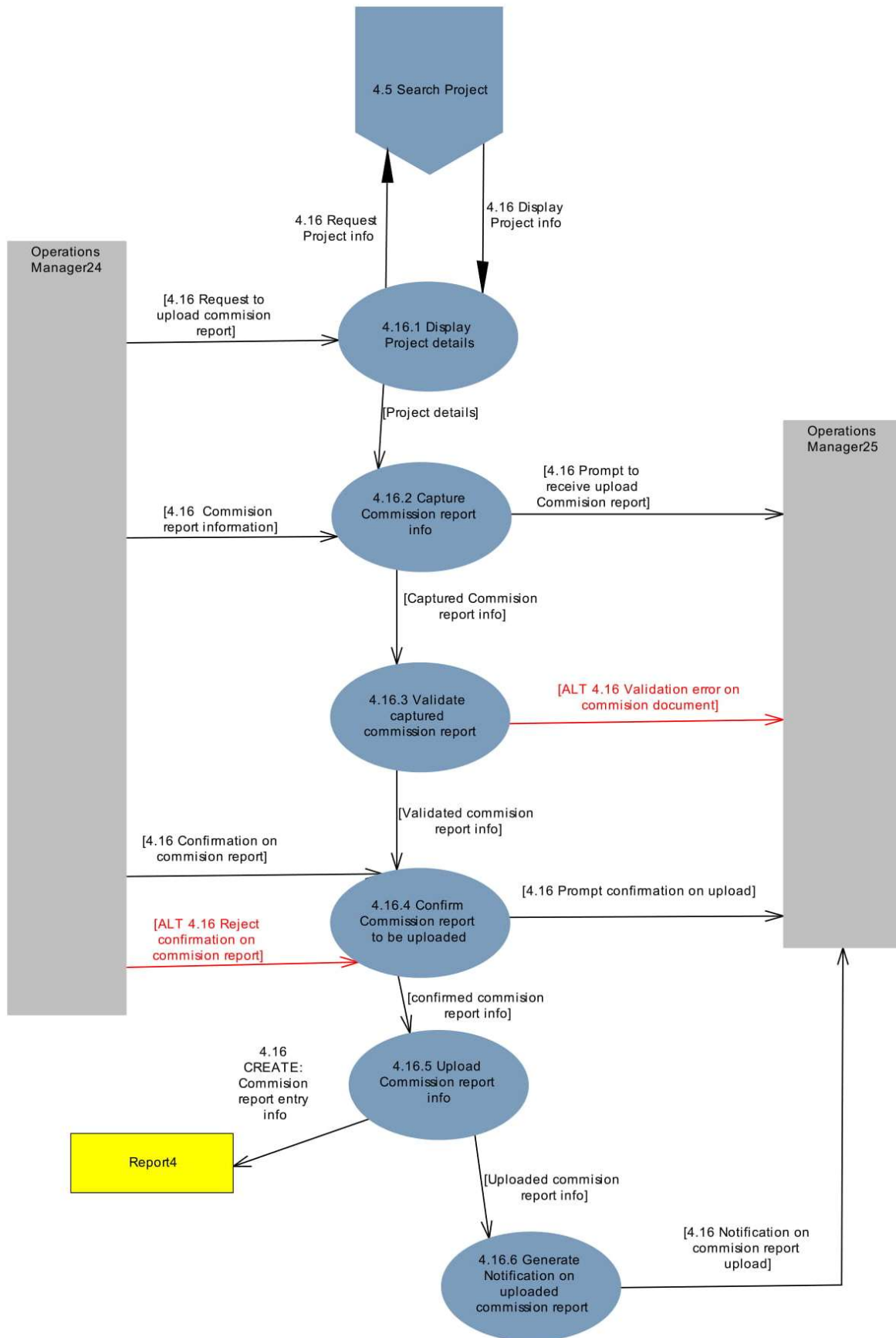




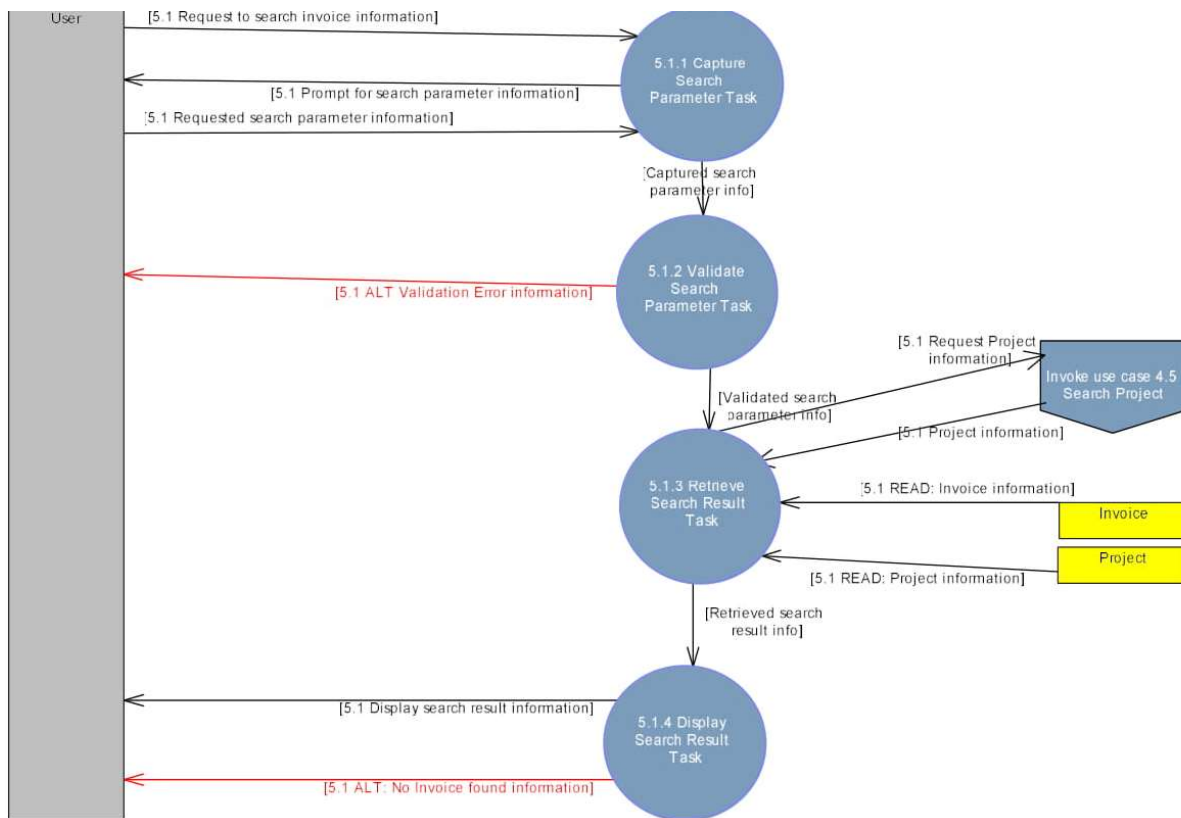


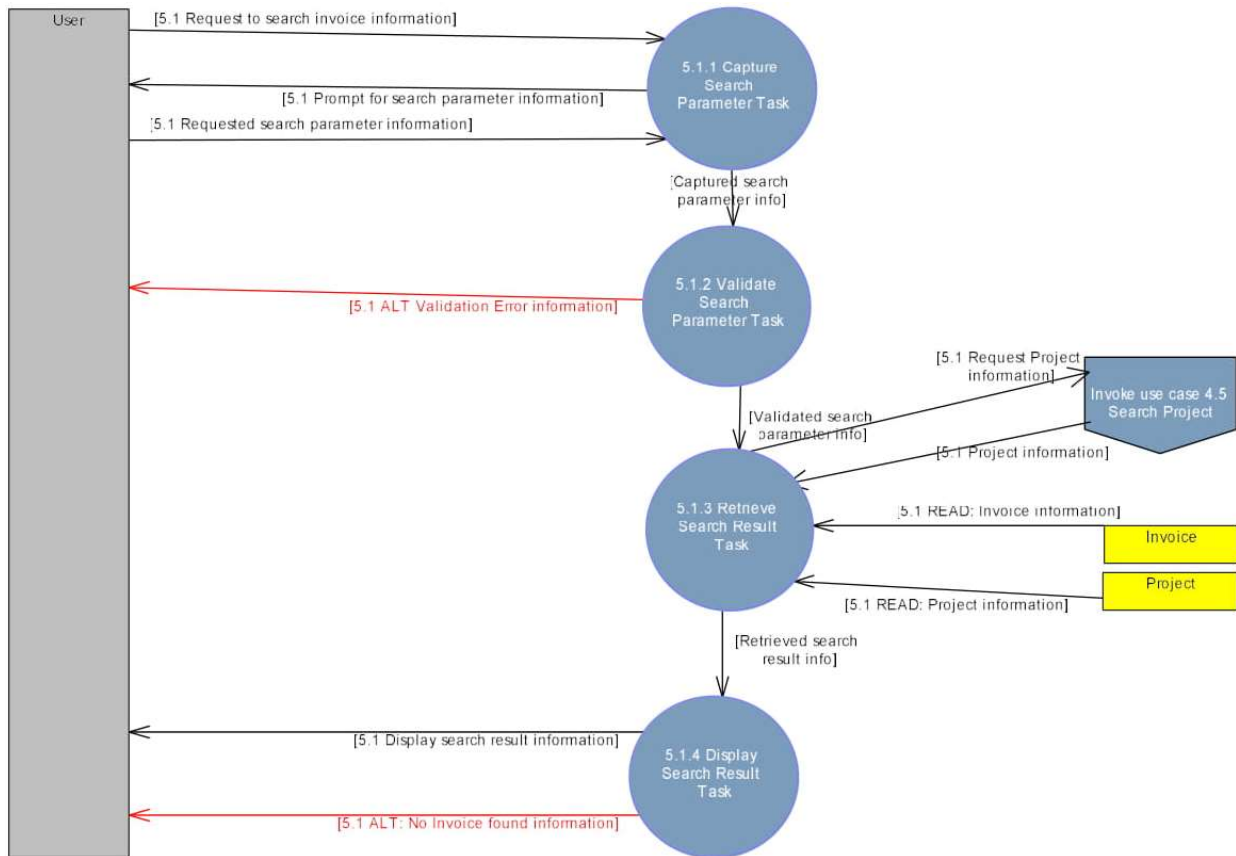


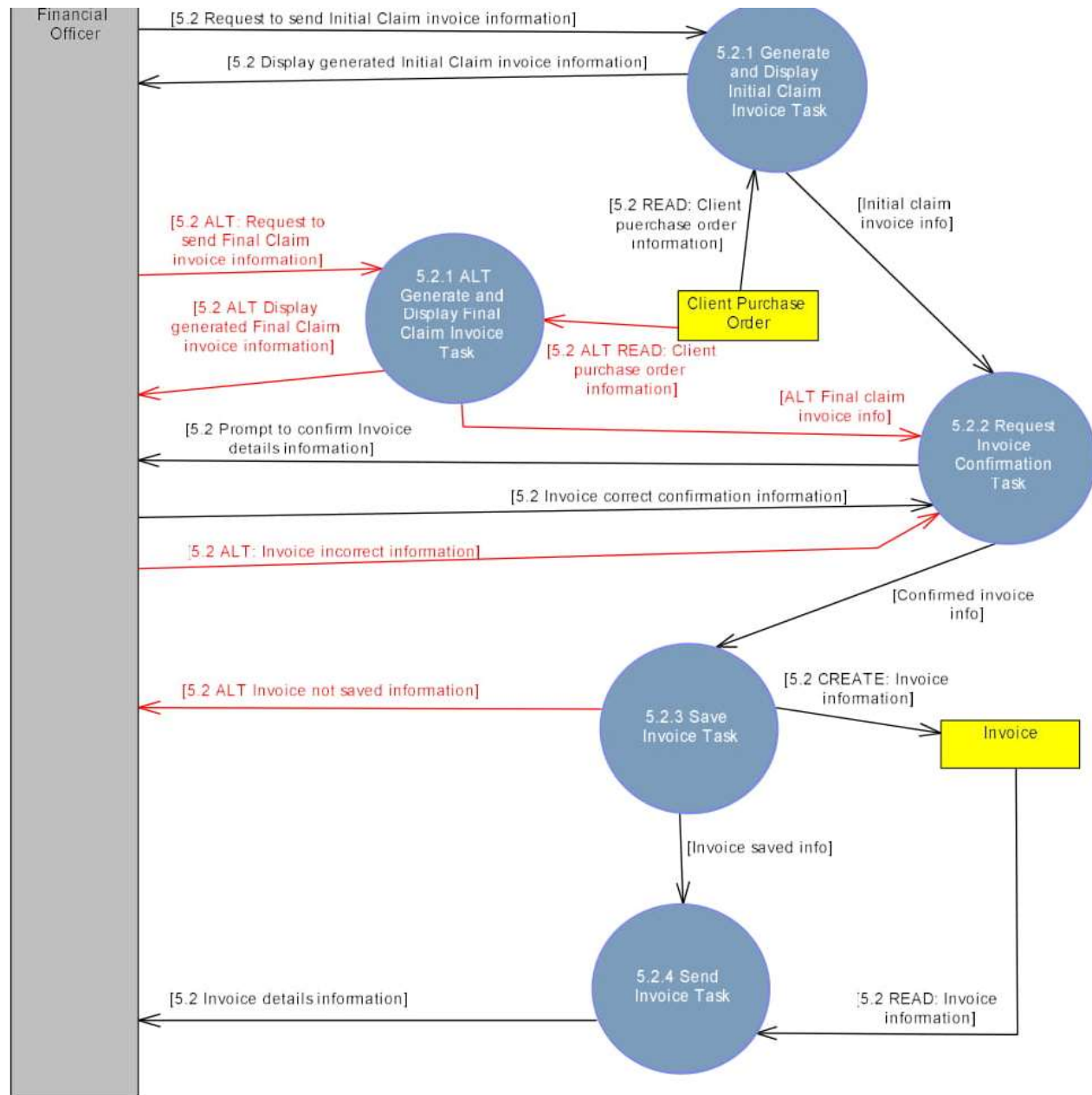


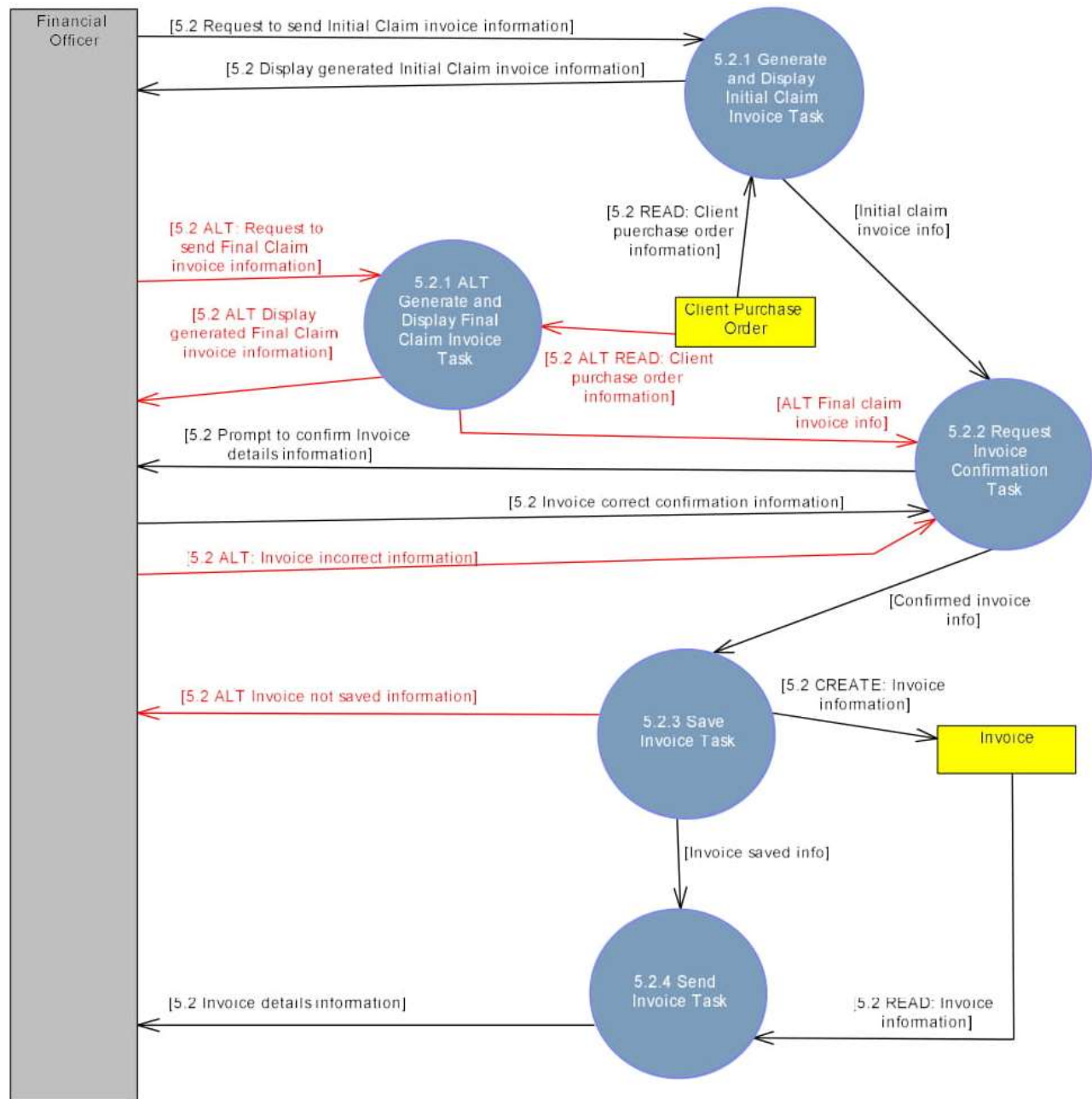


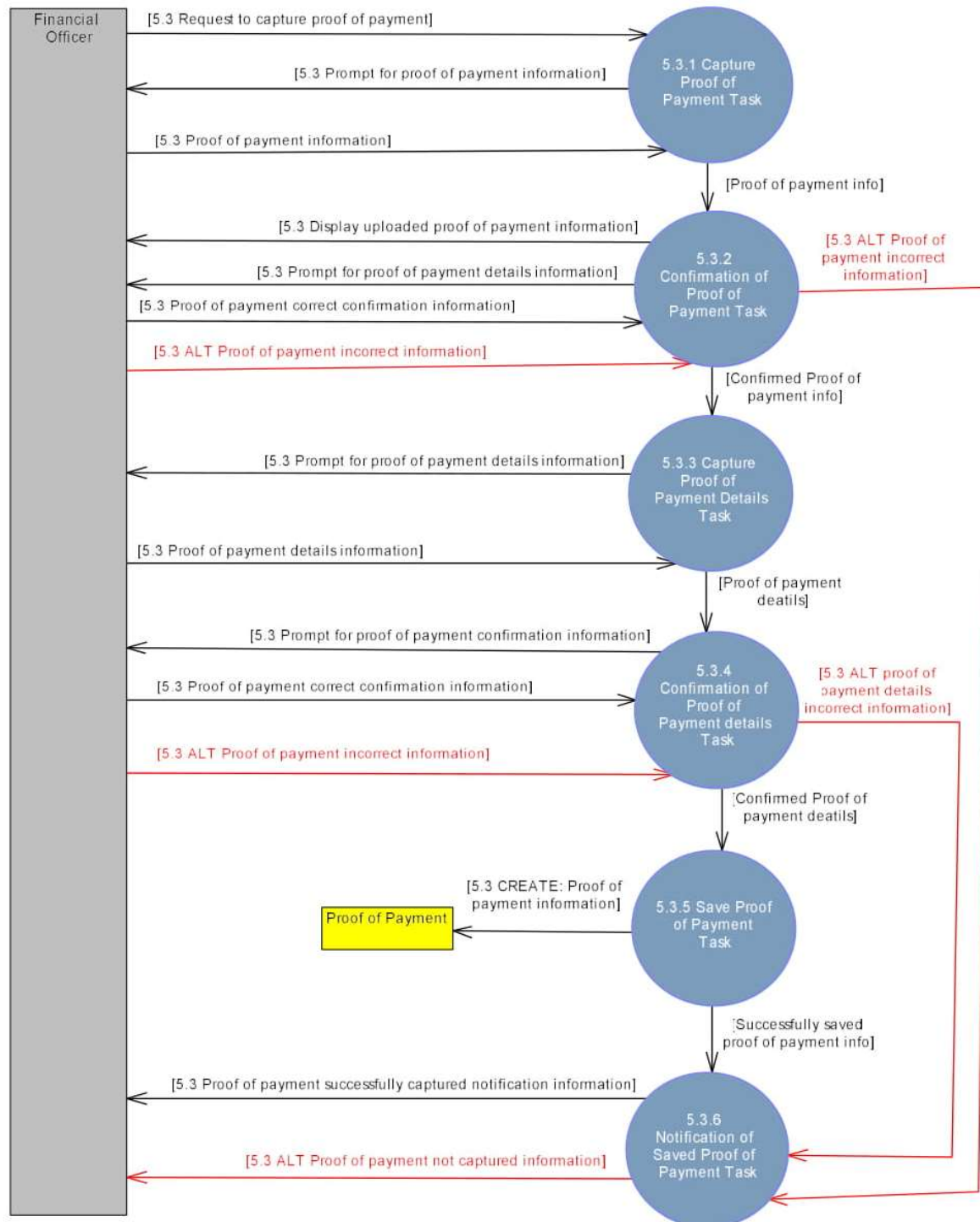
2.5.5 Invoicing Subsystem

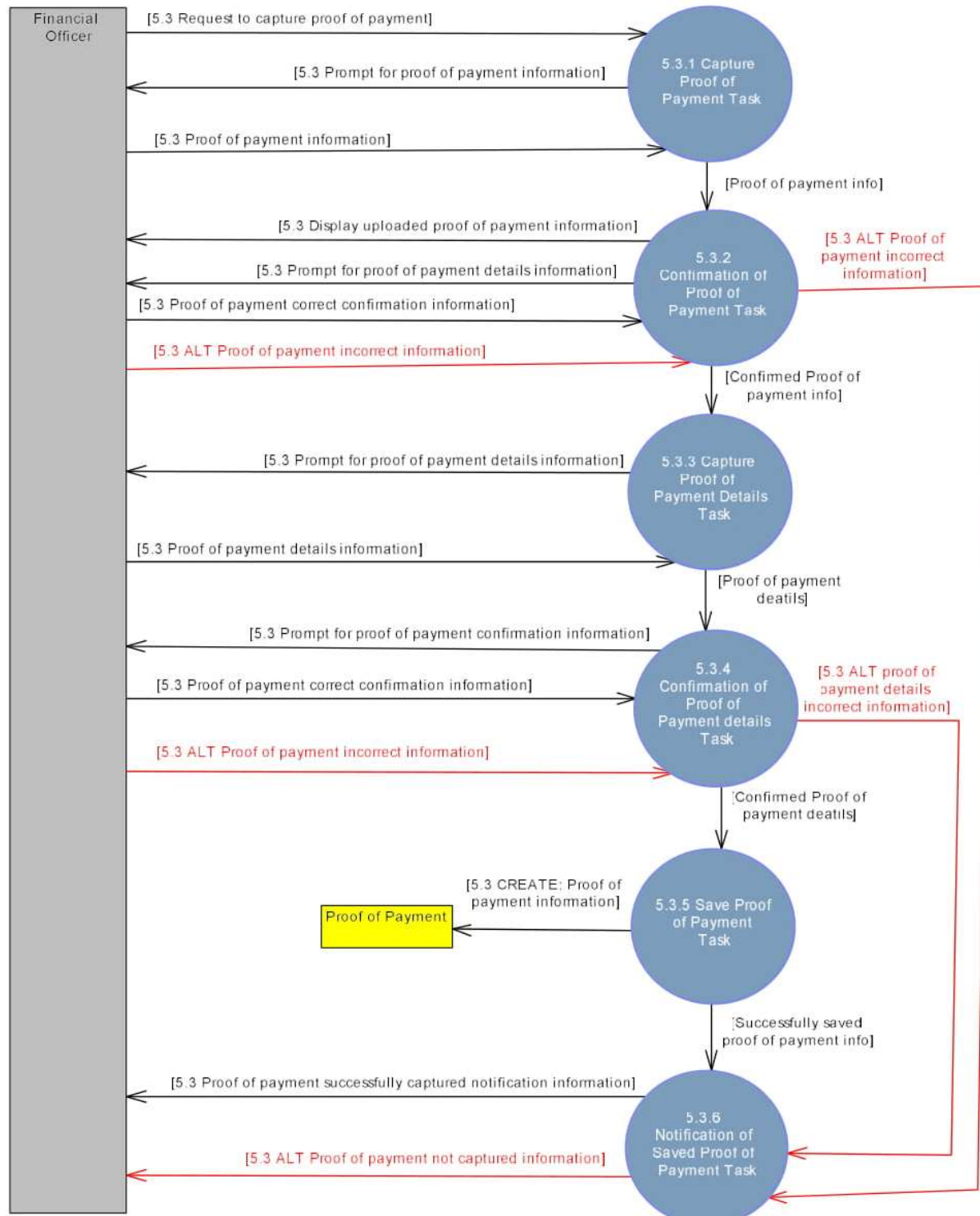


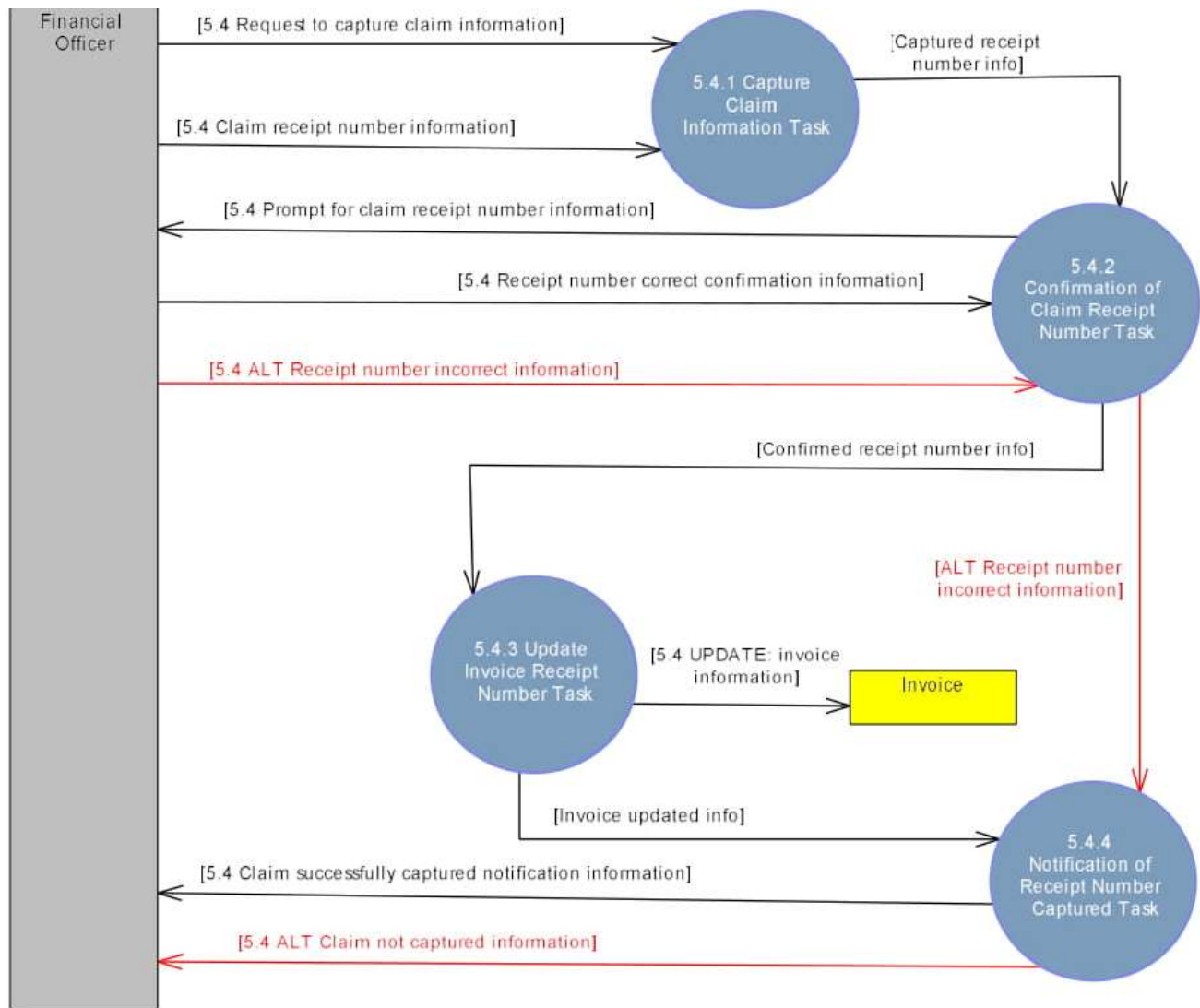


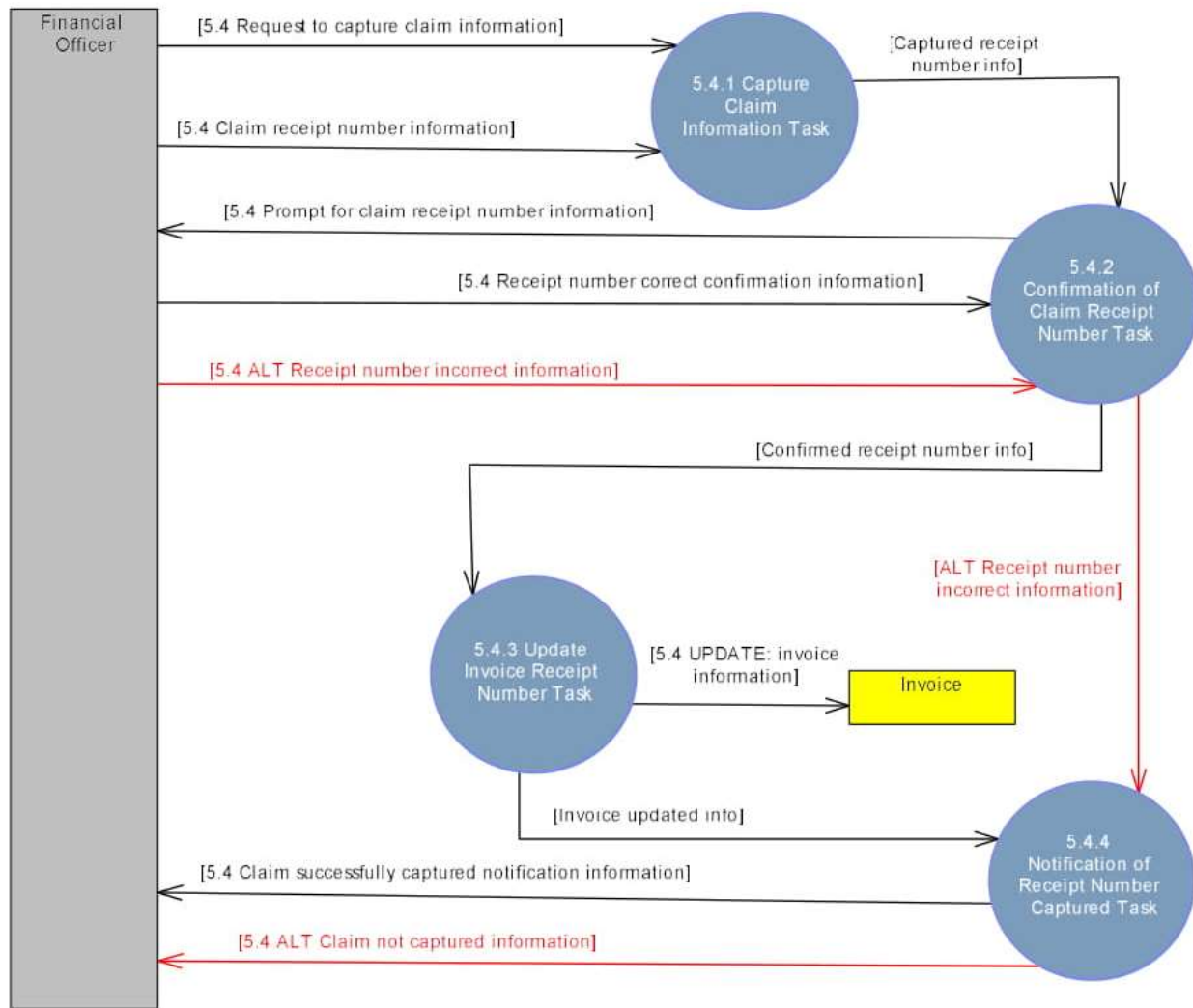




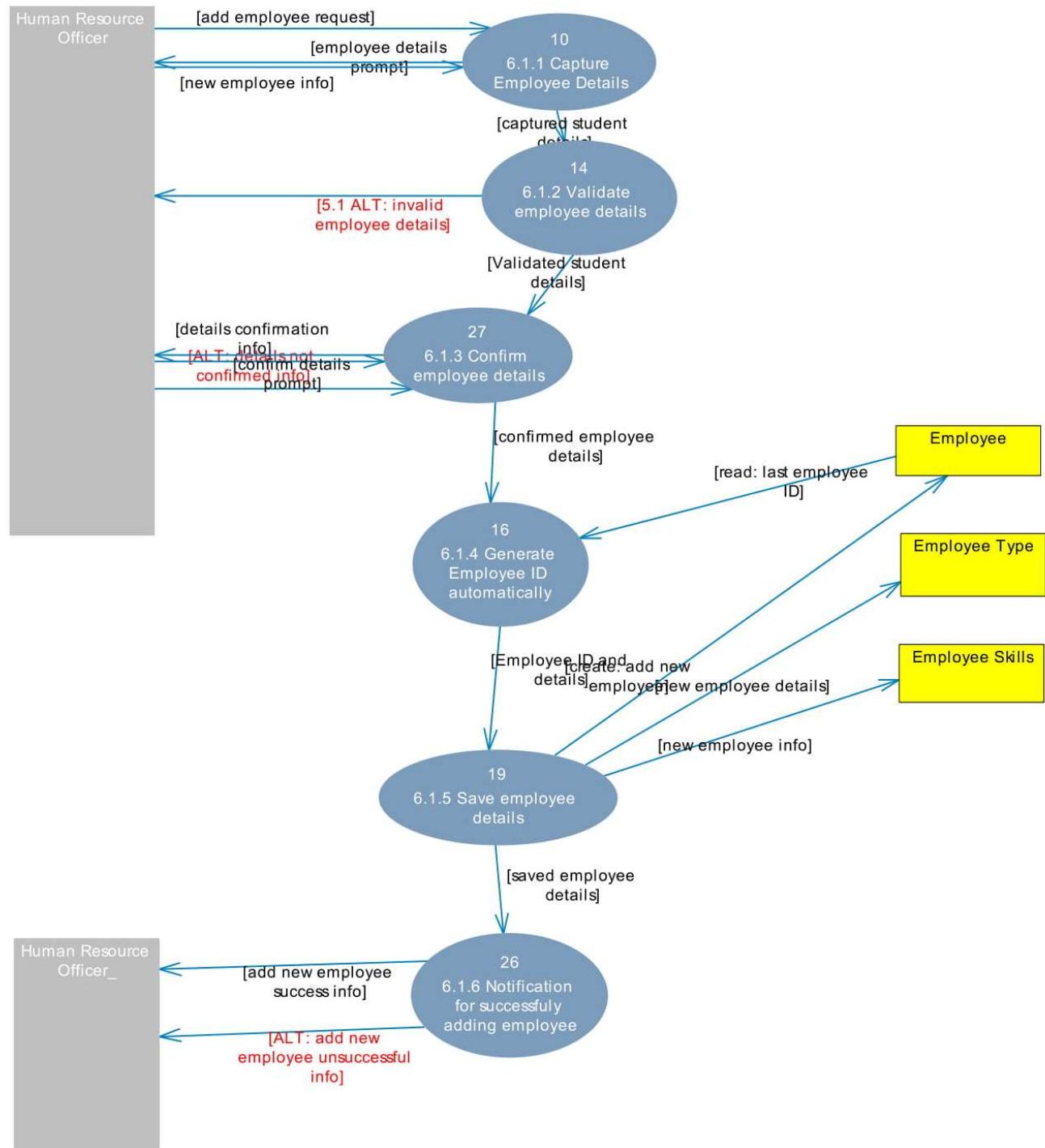


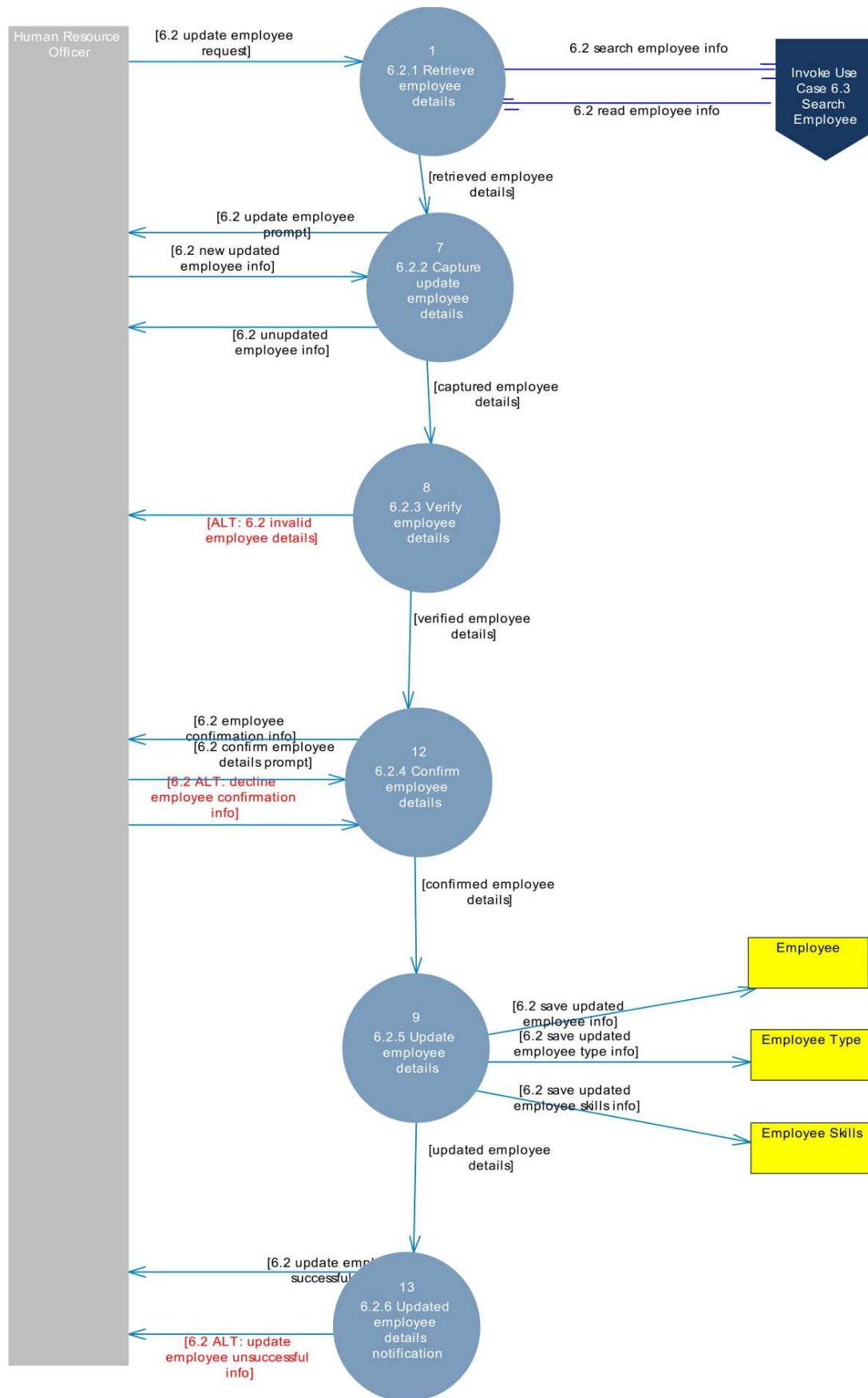


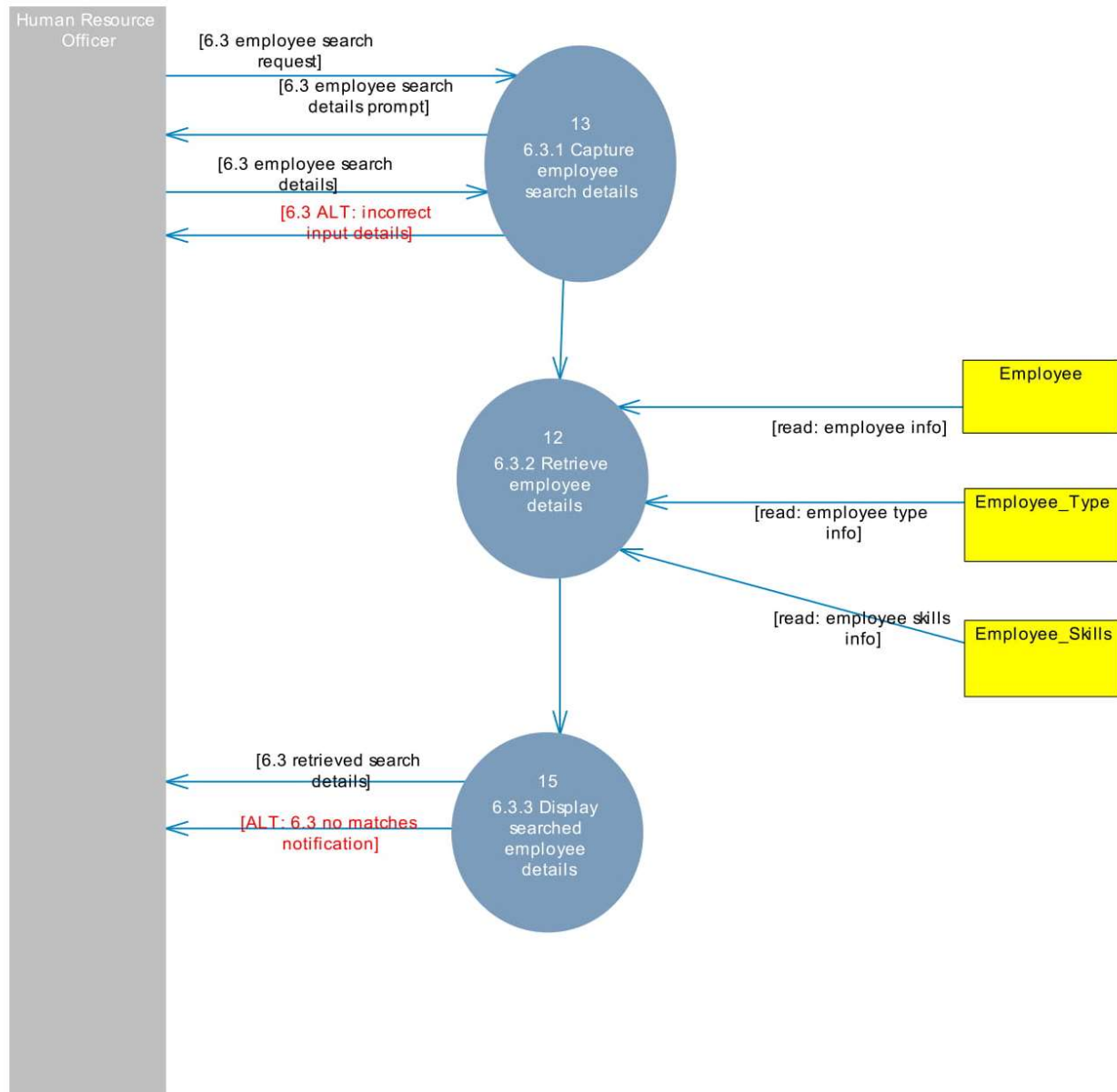


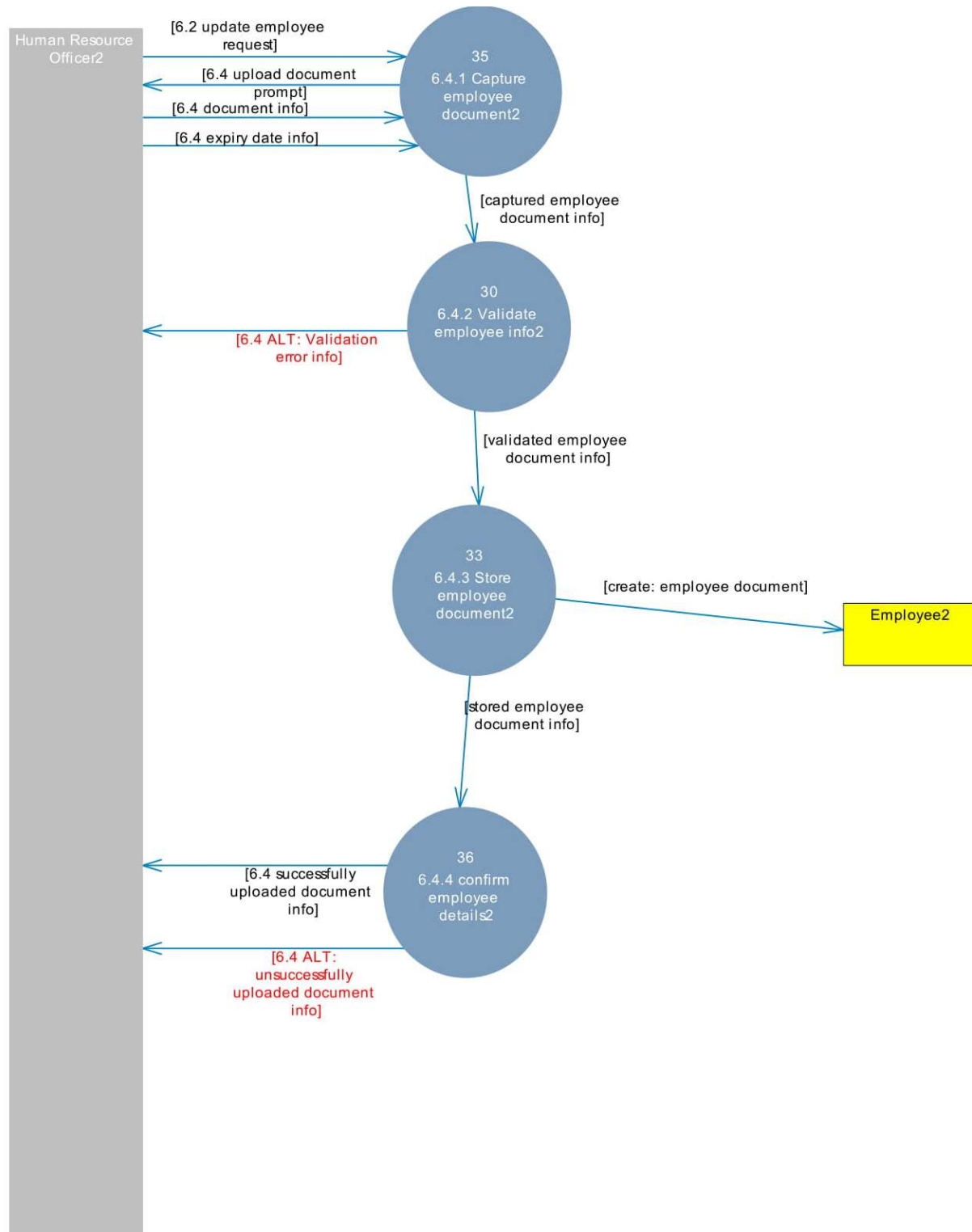


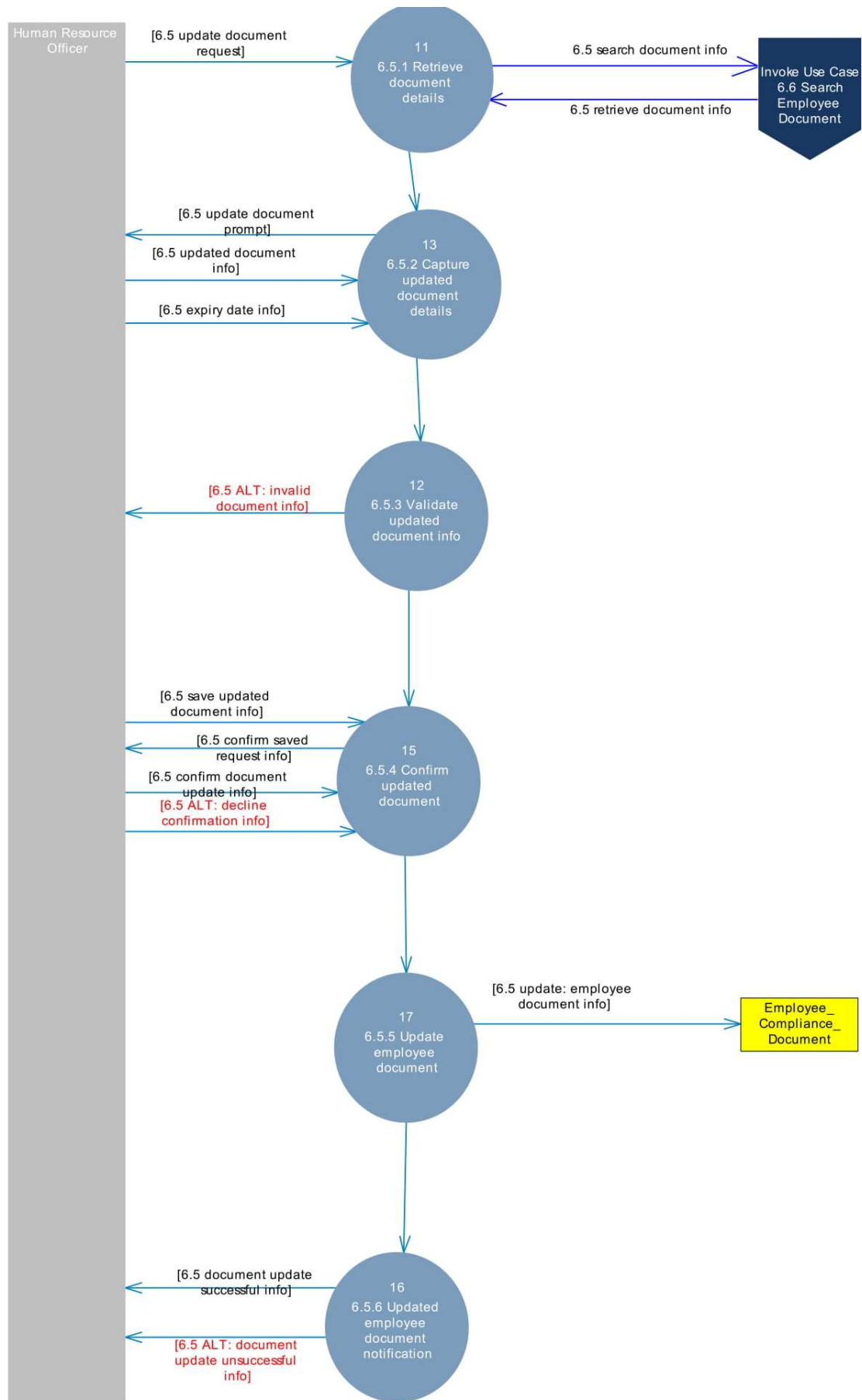
2.5.6 Human Resource Subsystem

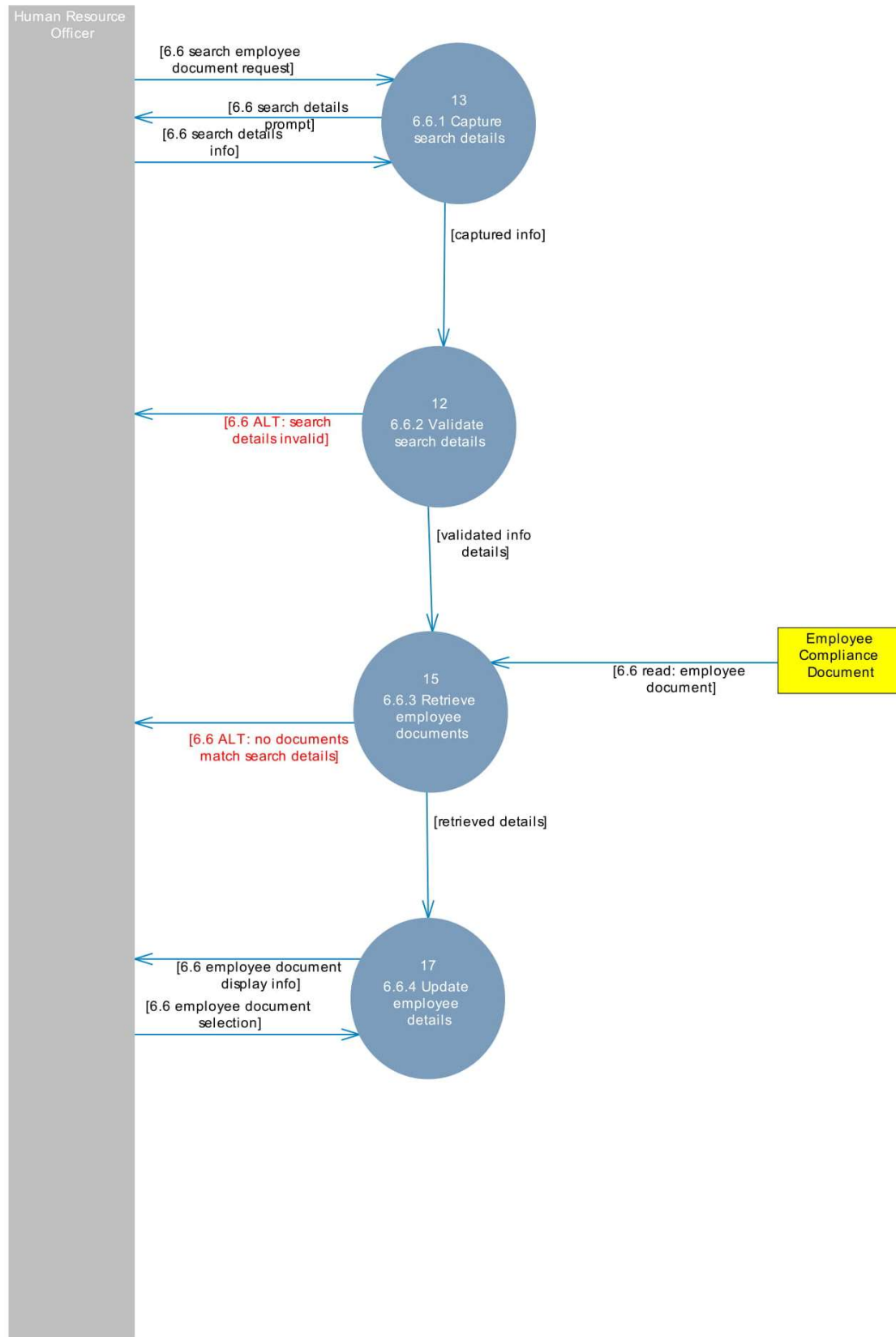


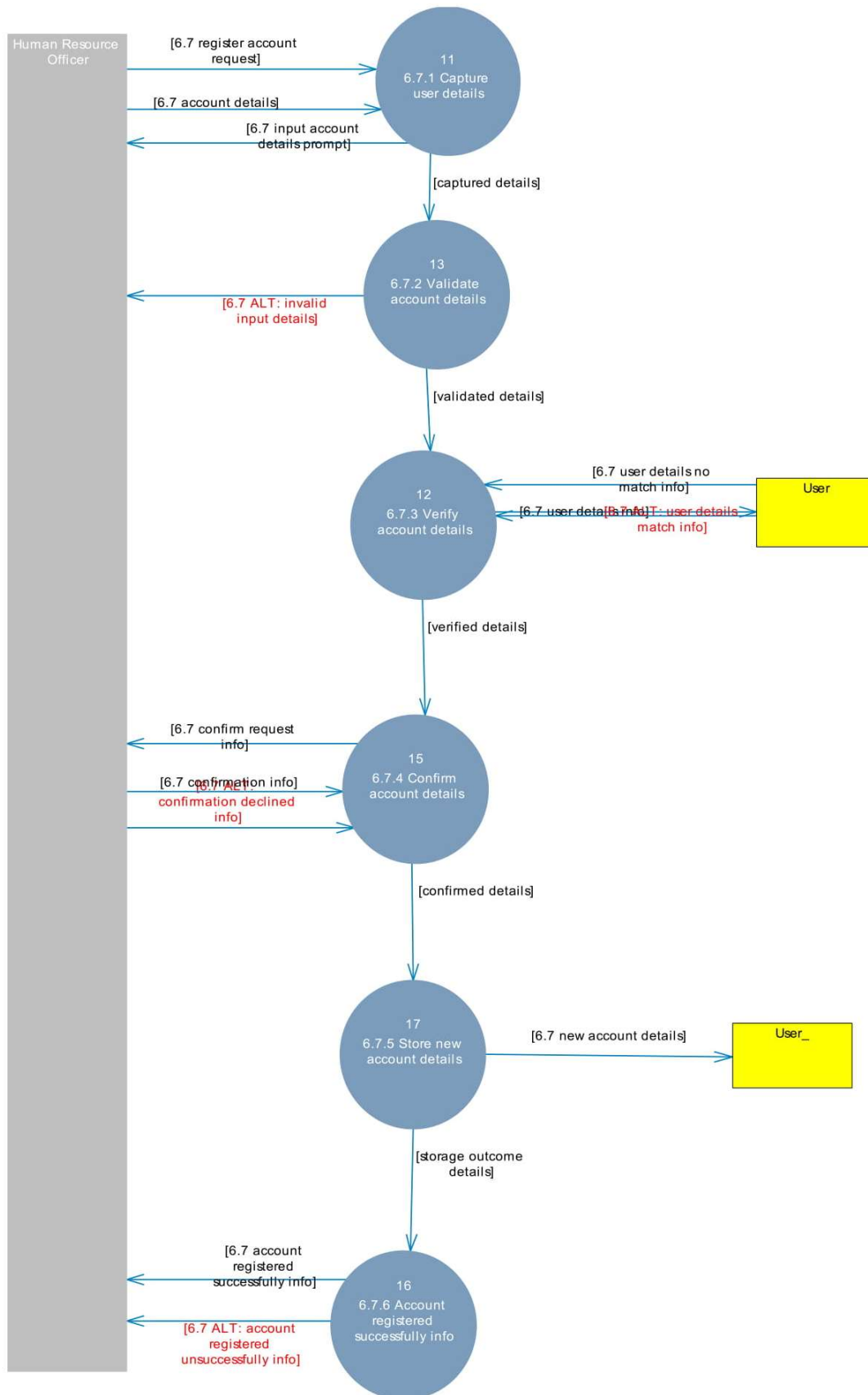


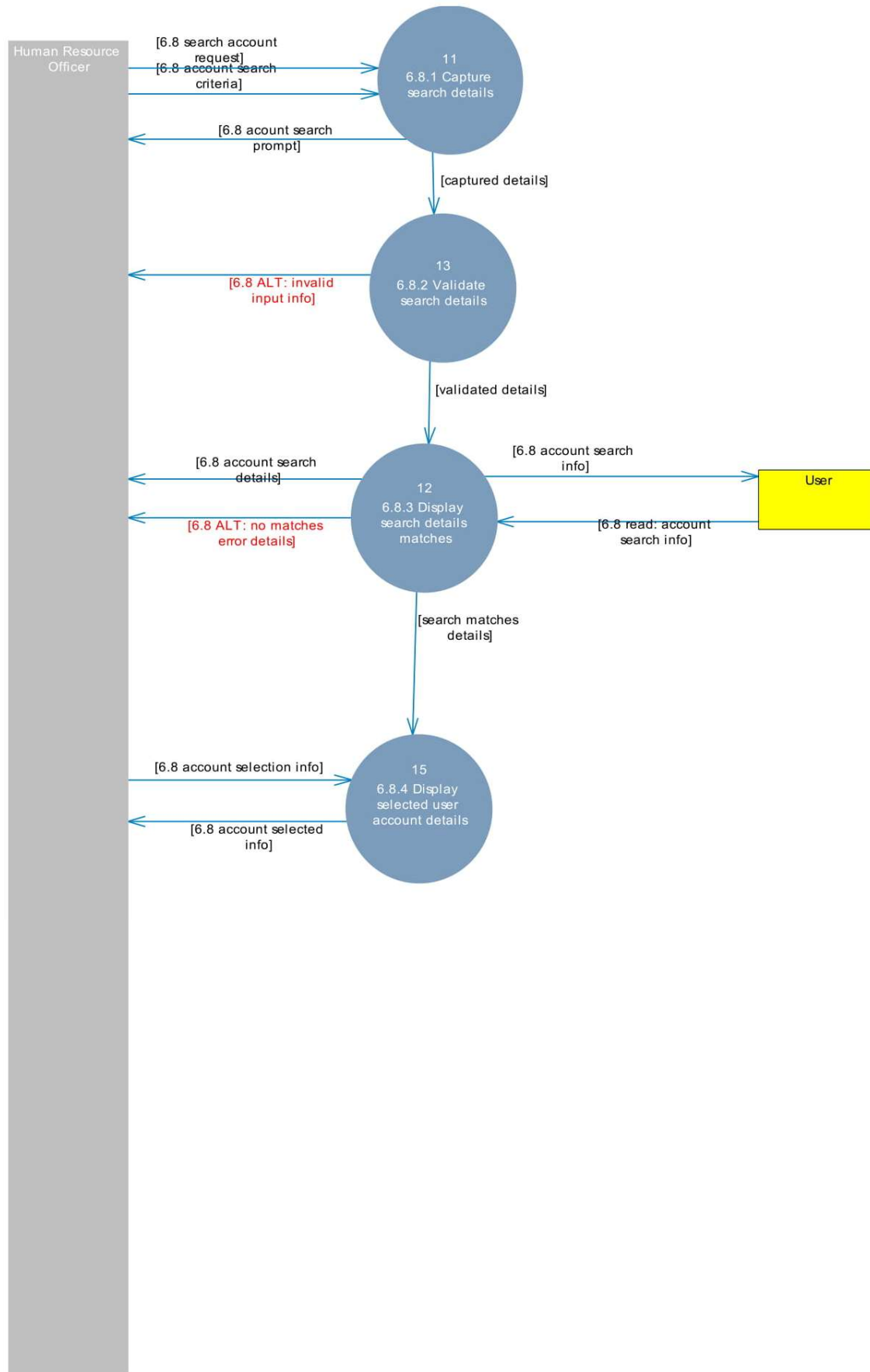


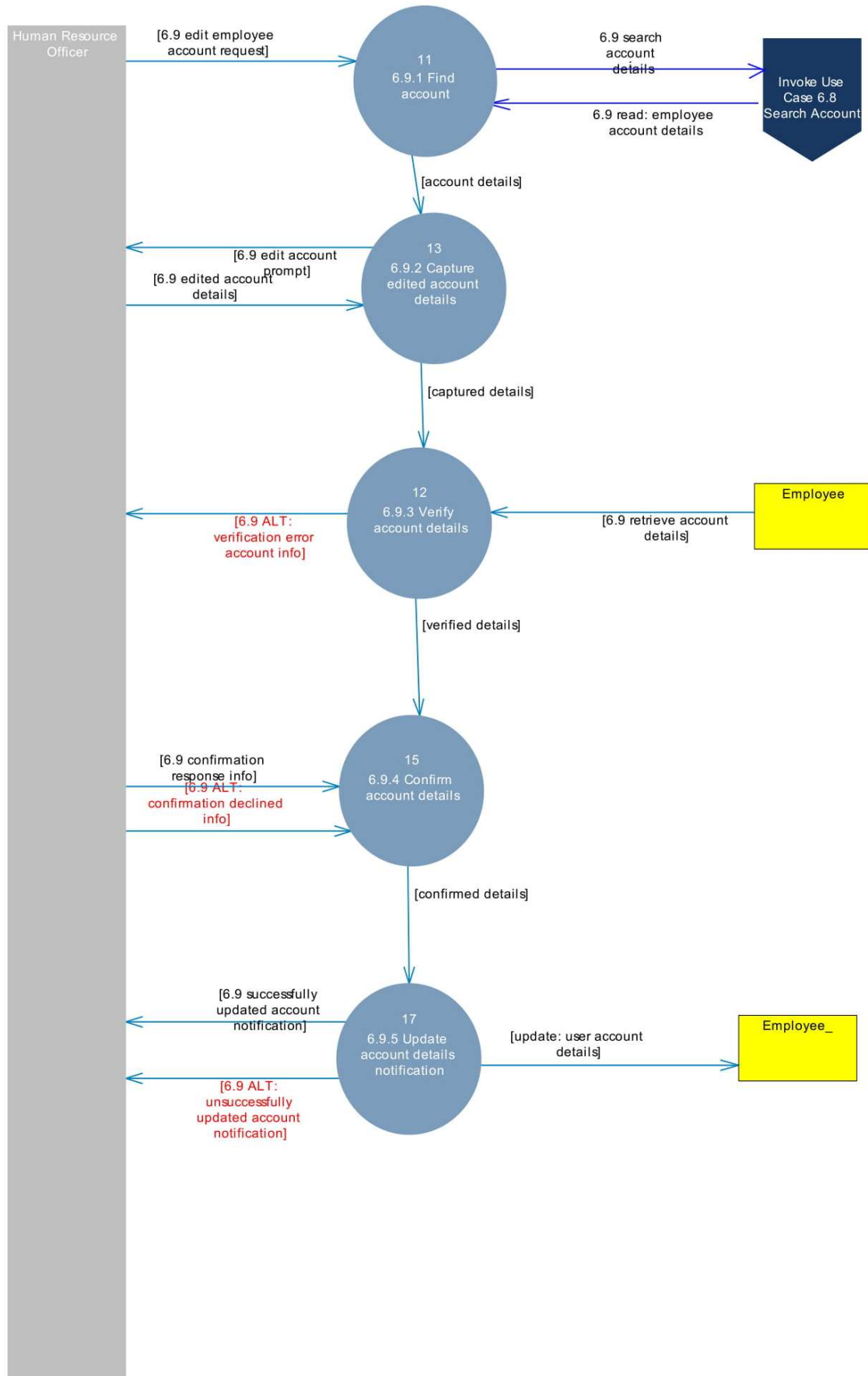




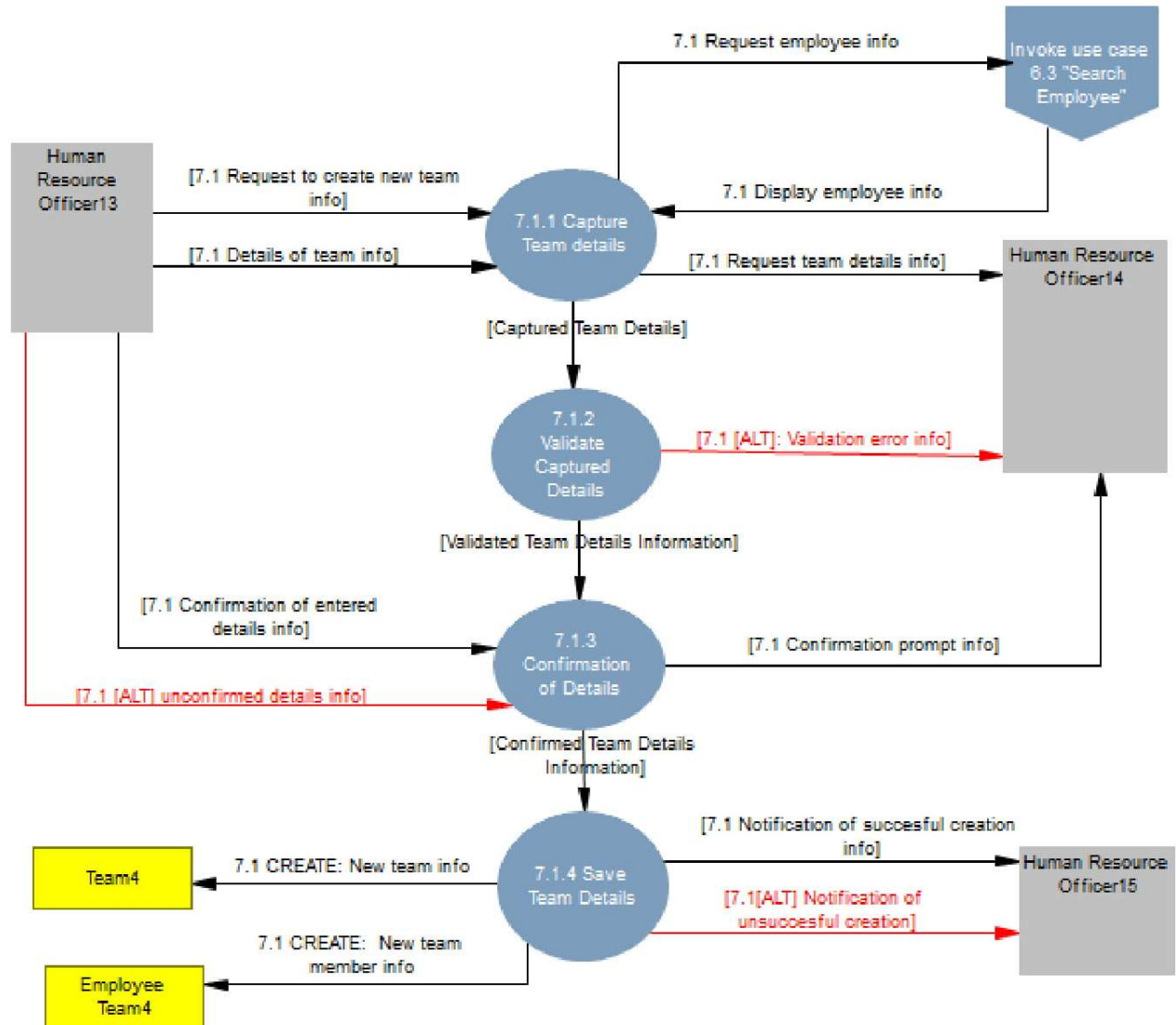


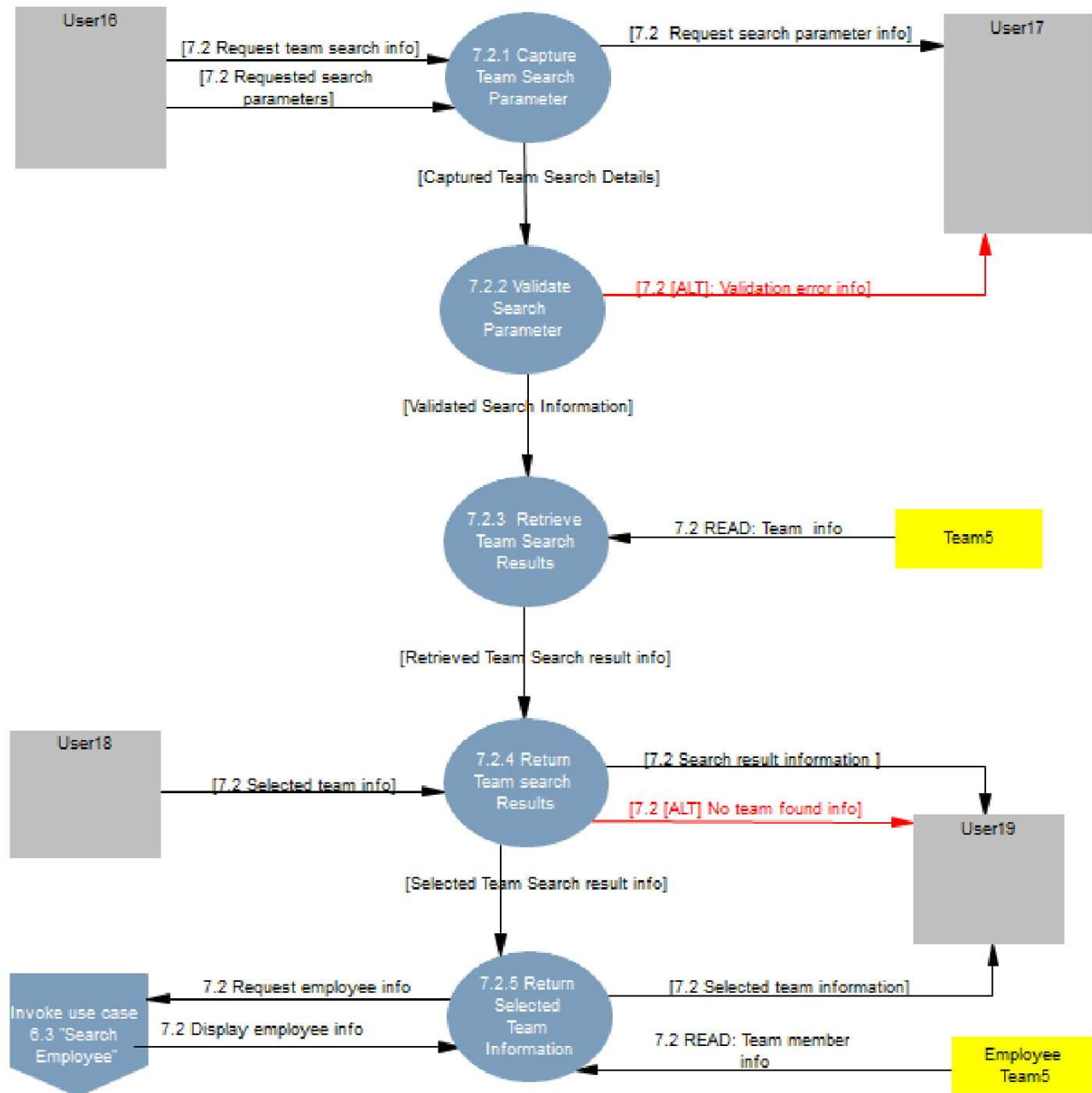


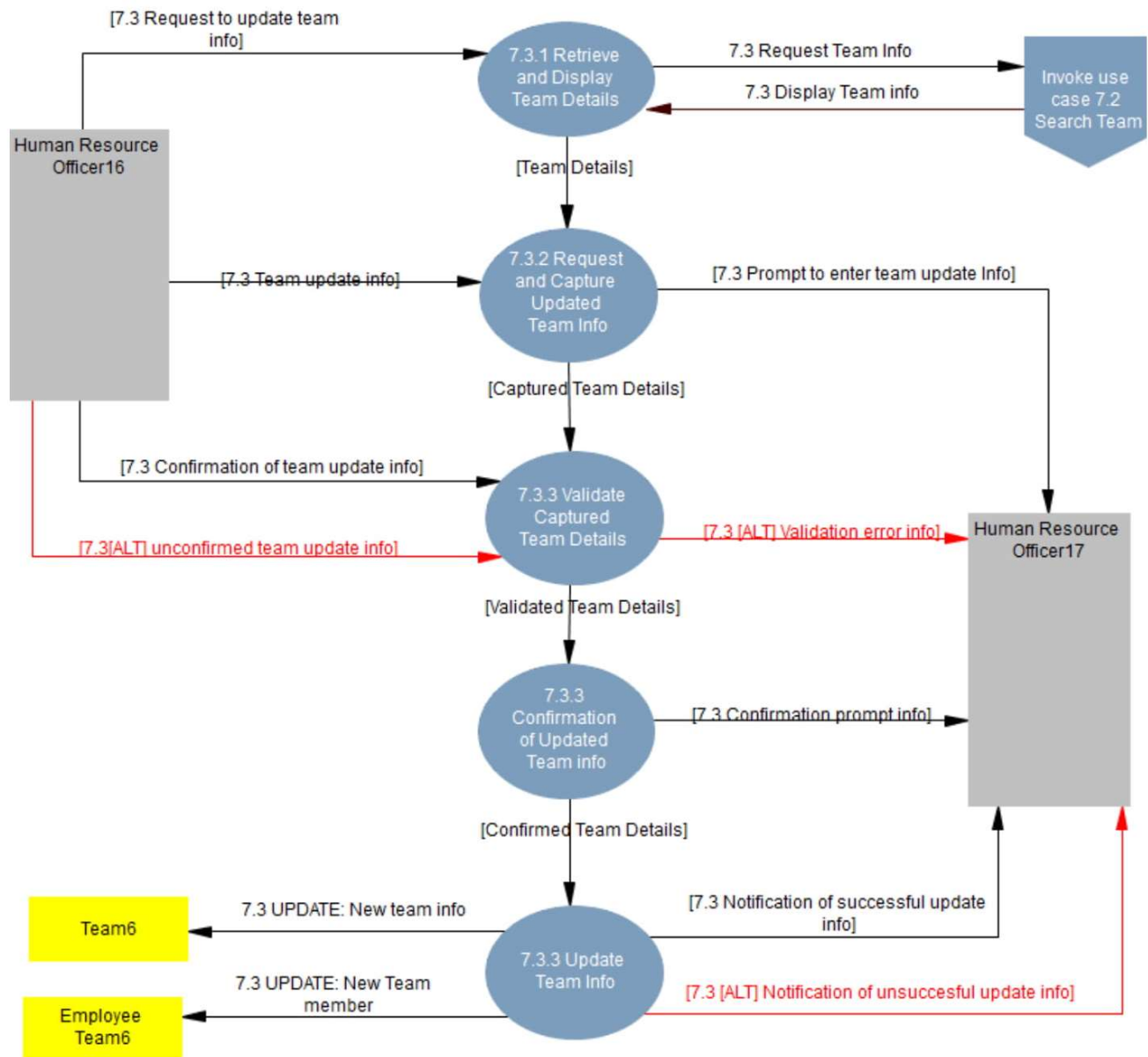




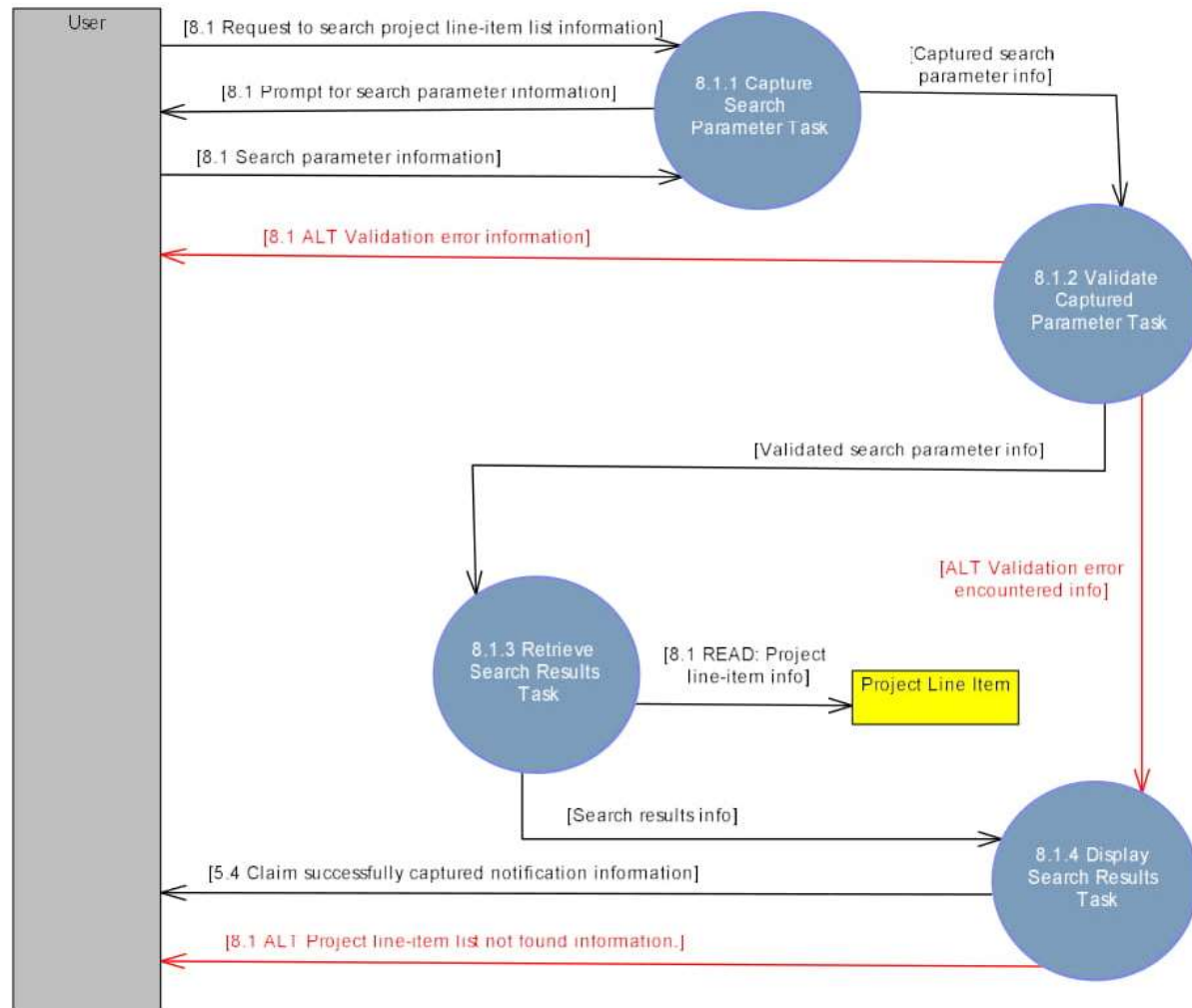
2.5.7 Team Subsystem

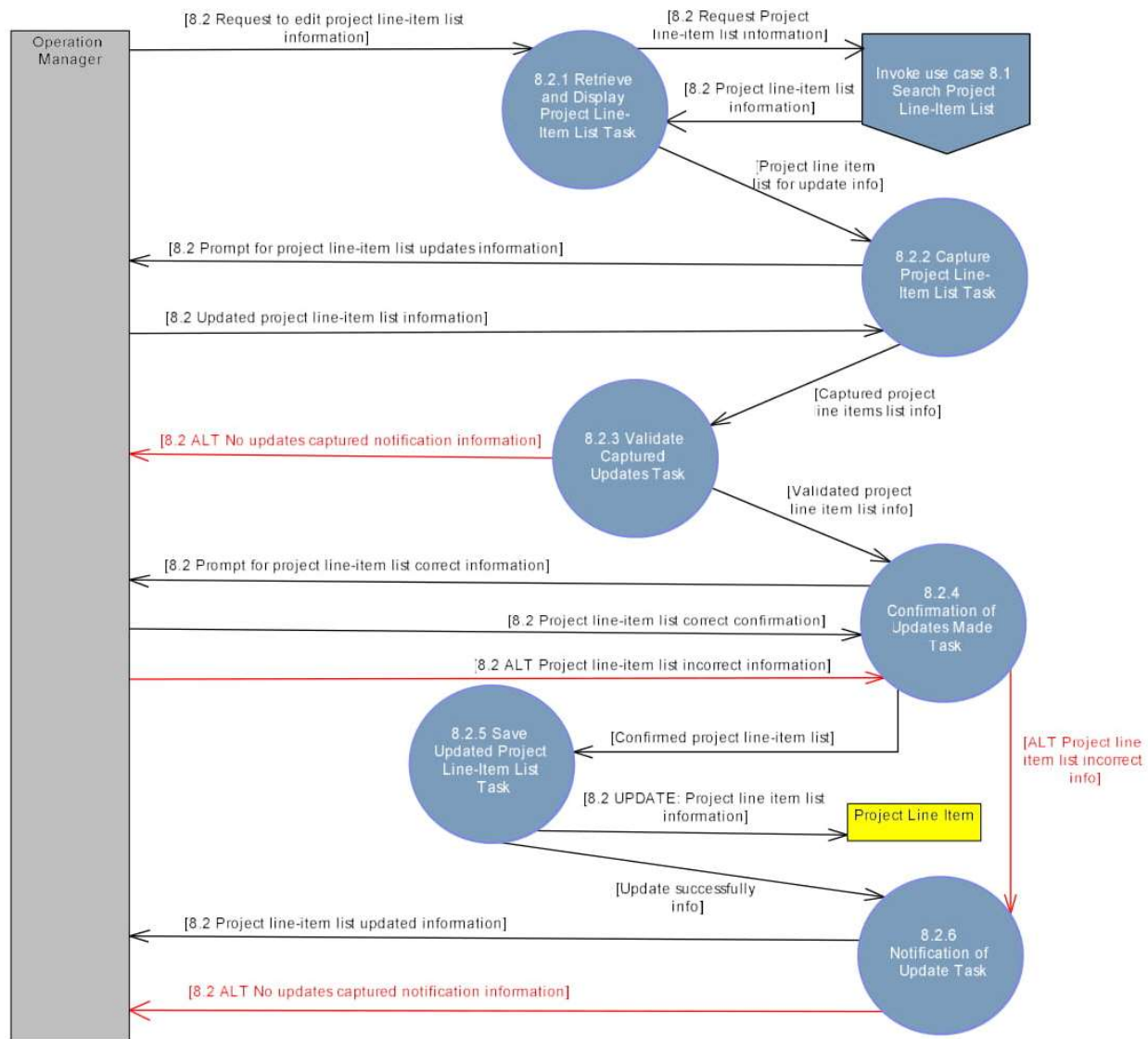


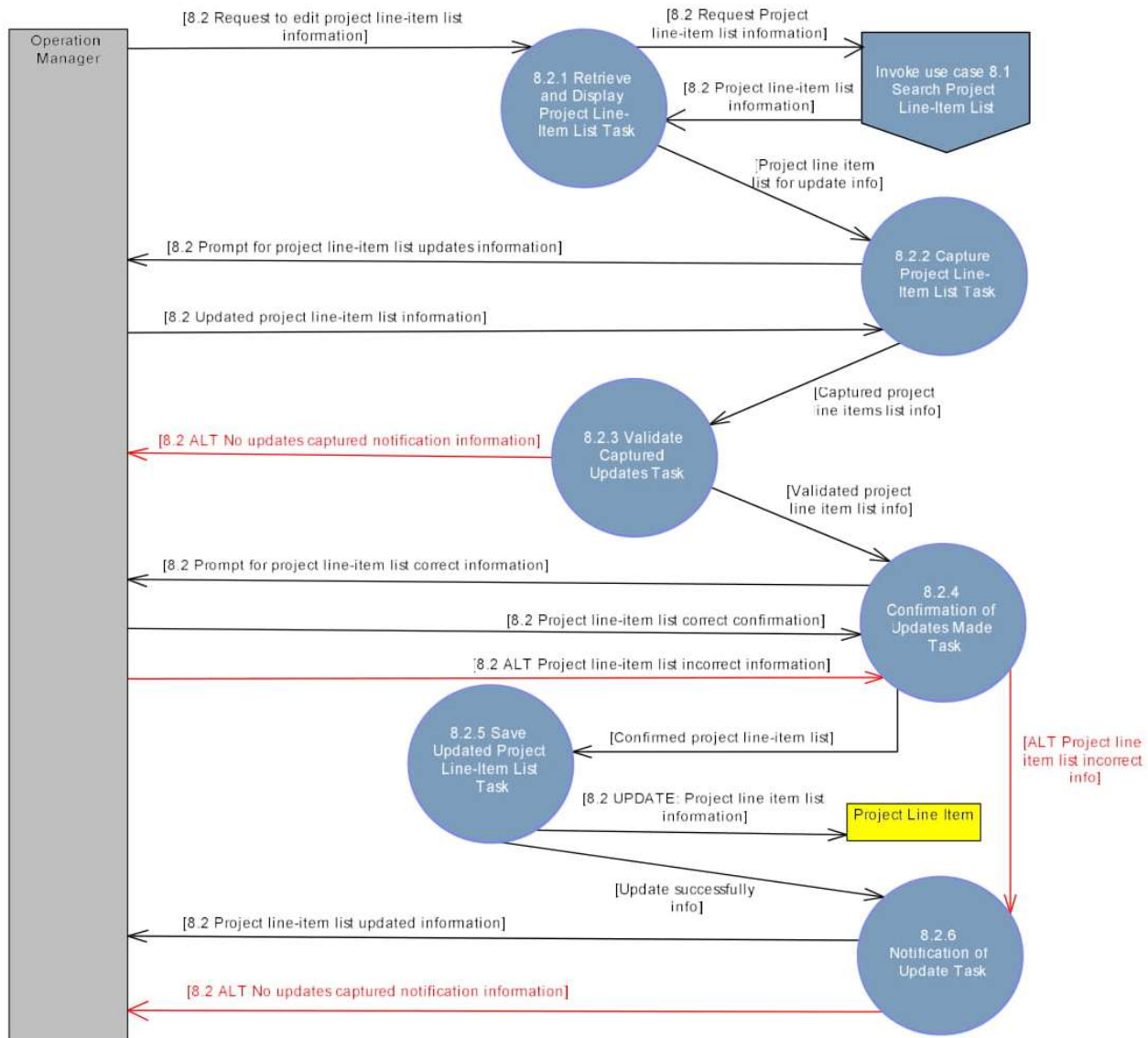




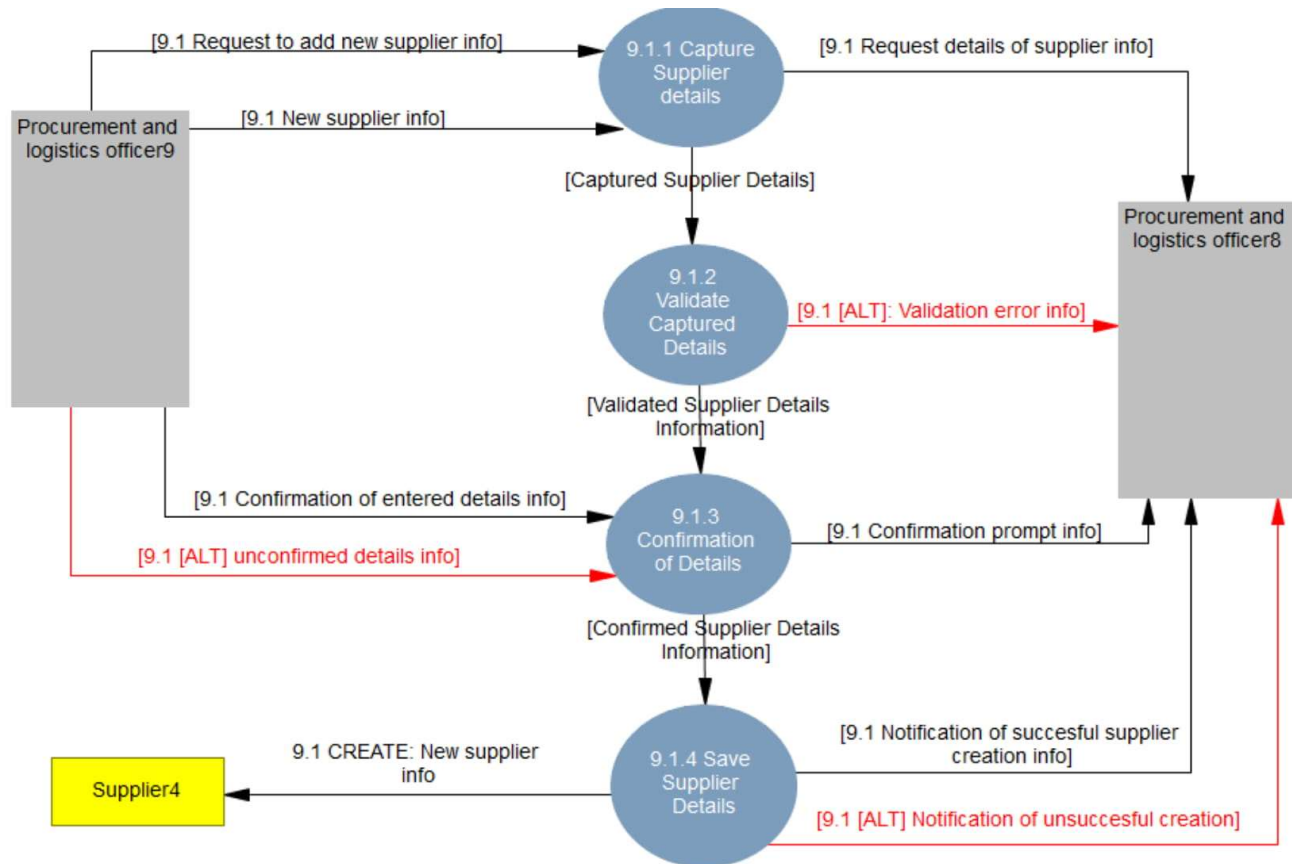
2.5.8 Supplier Order Subsystem

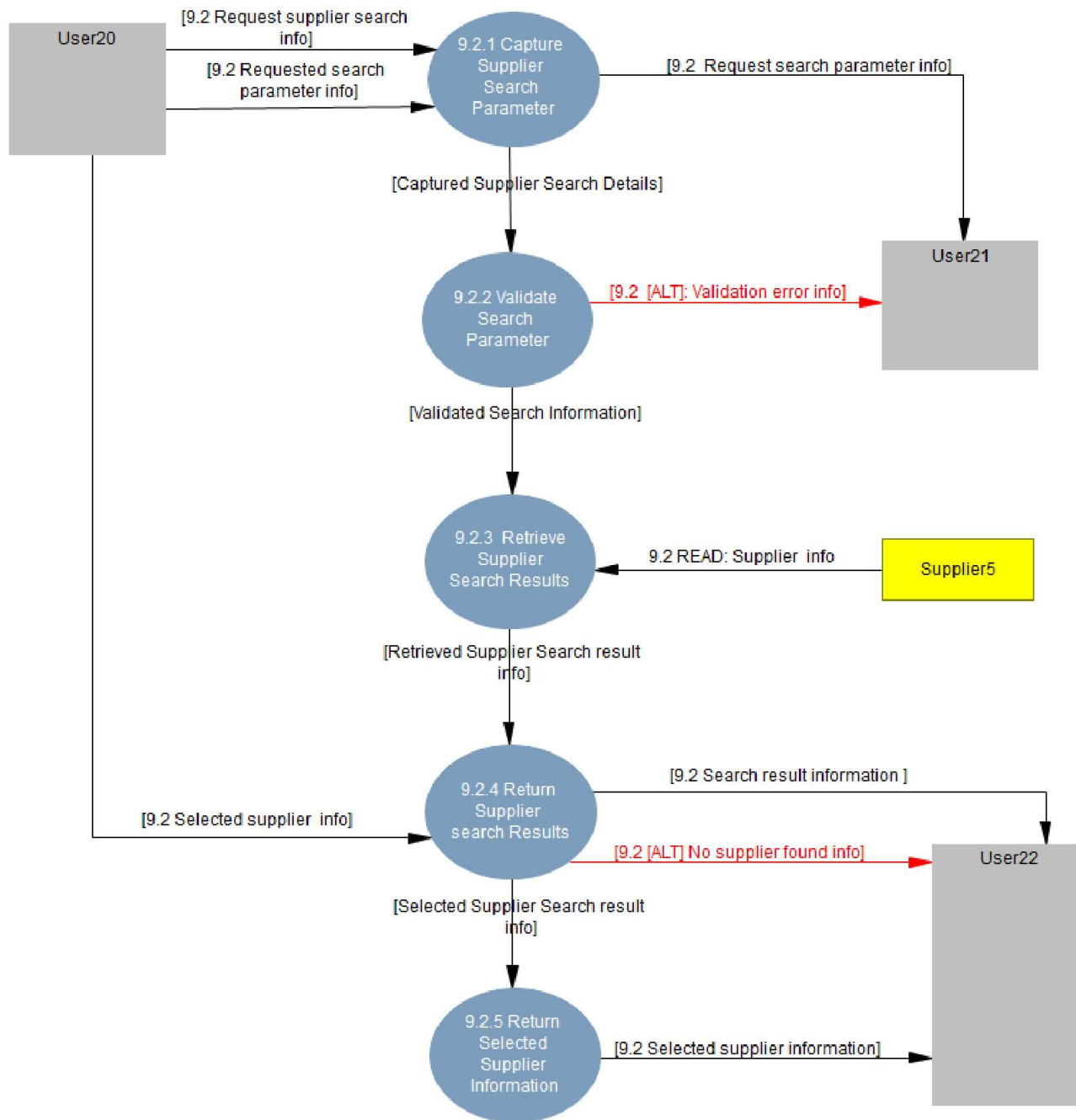


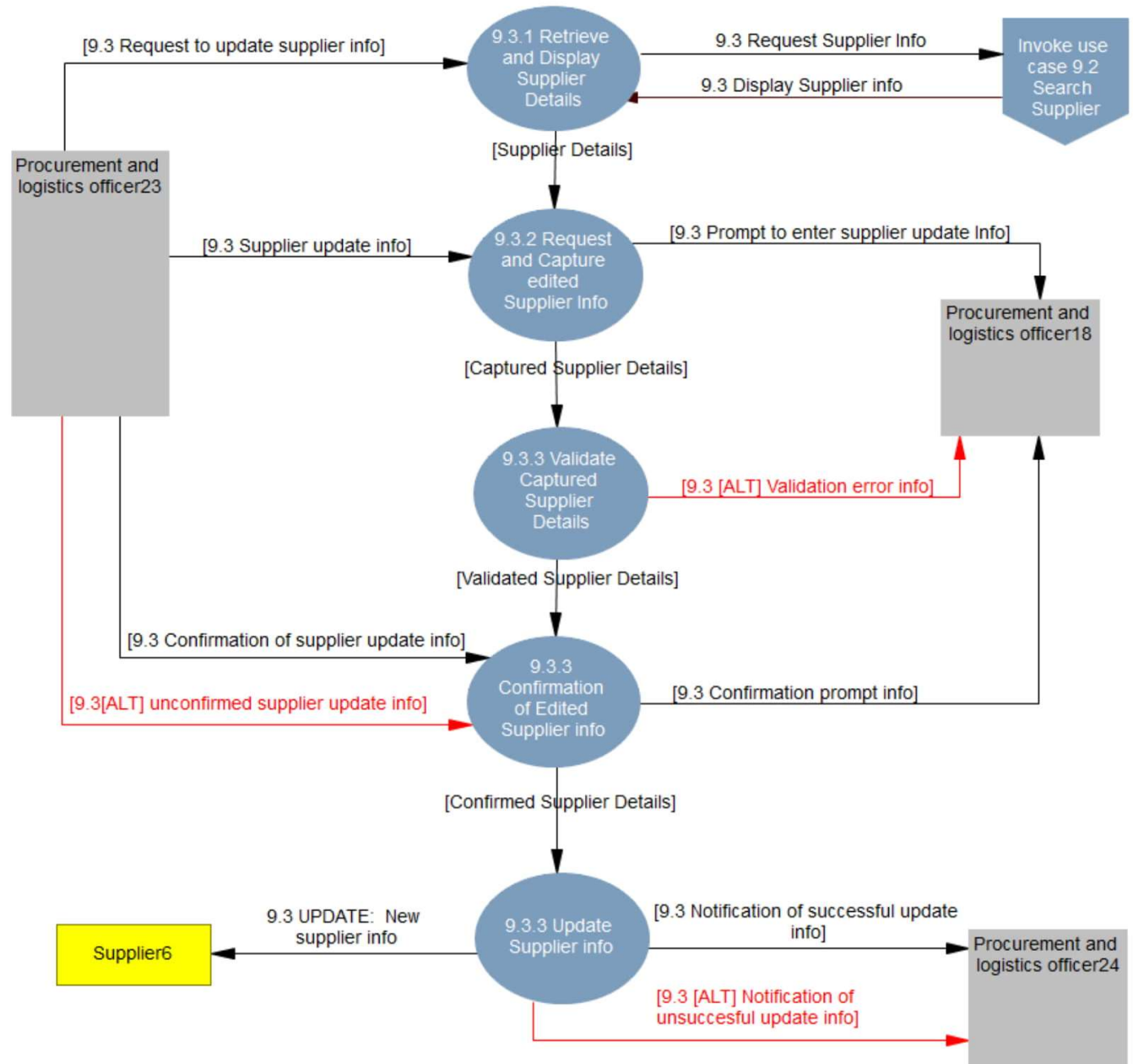


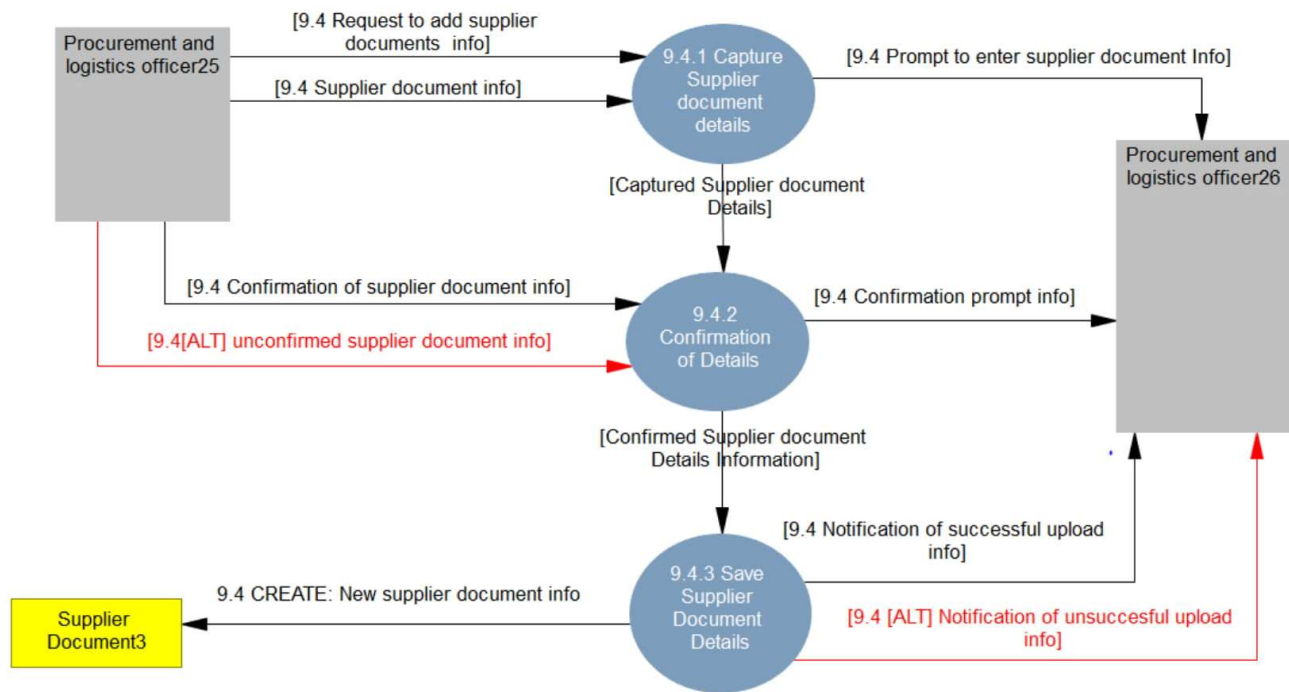


2.5.9 Supplier Subsystem

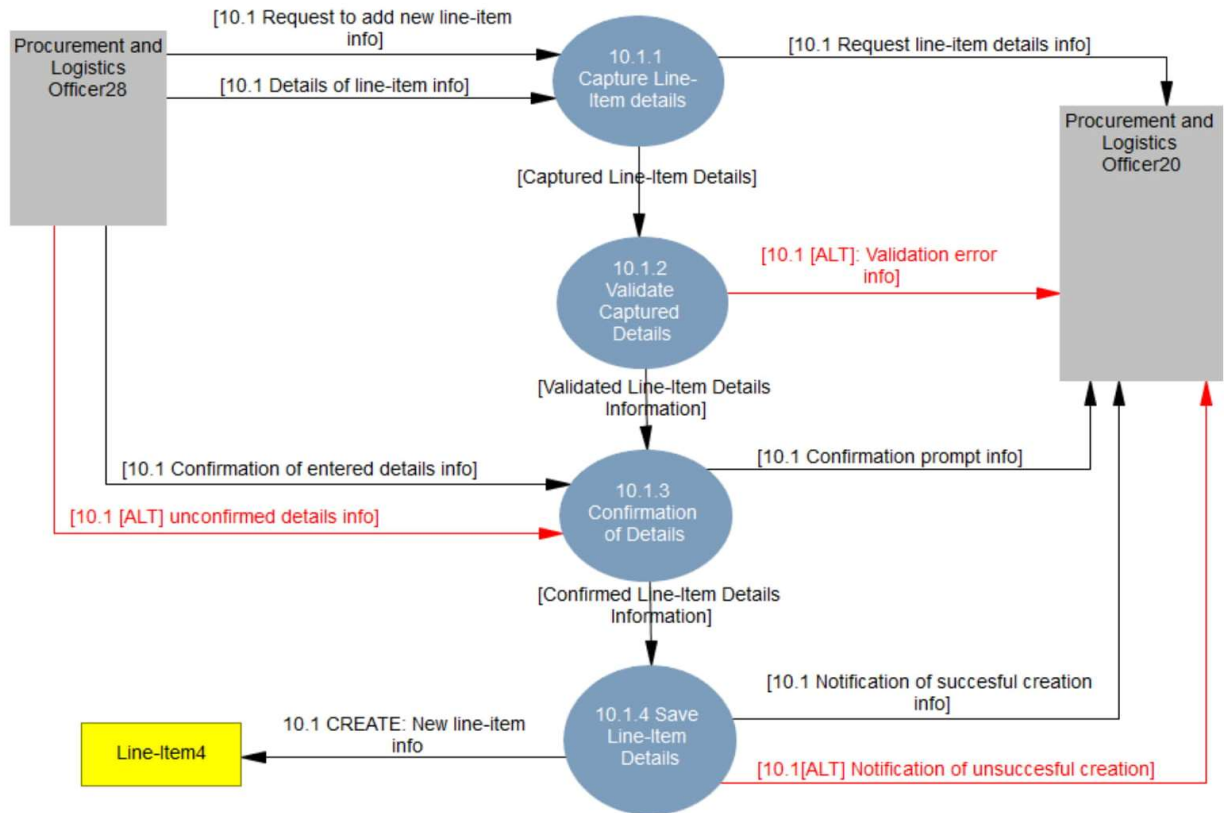


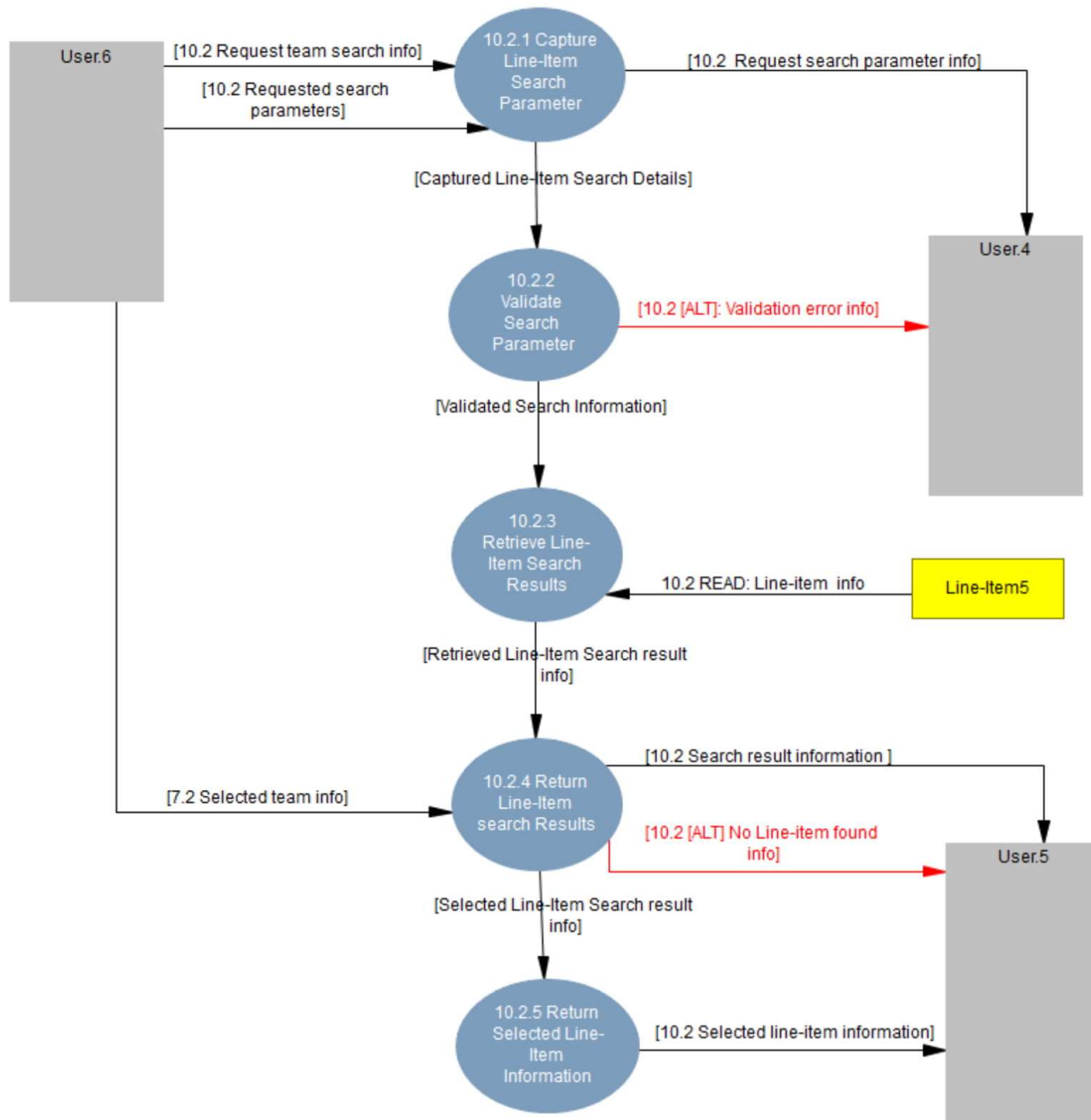


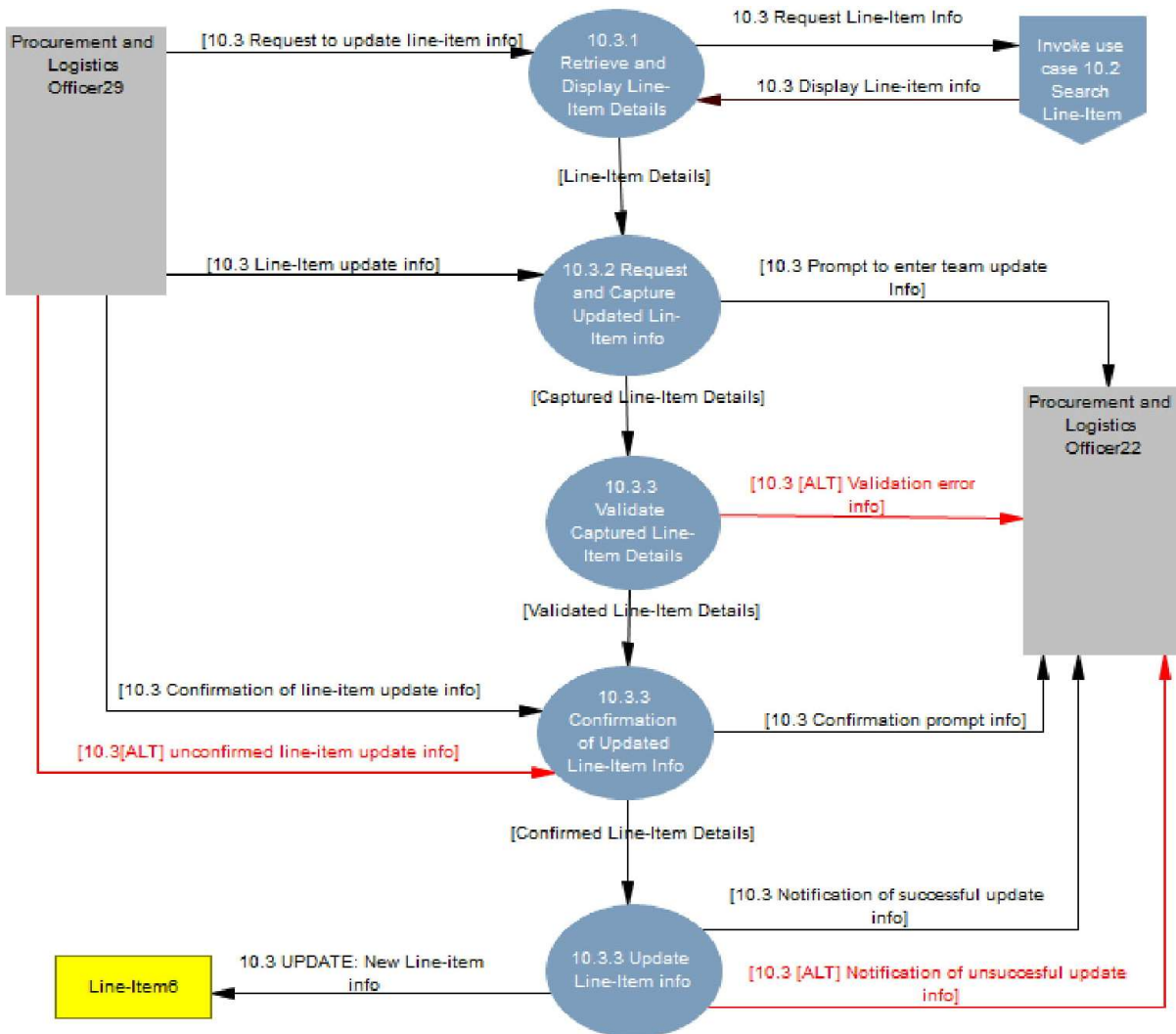




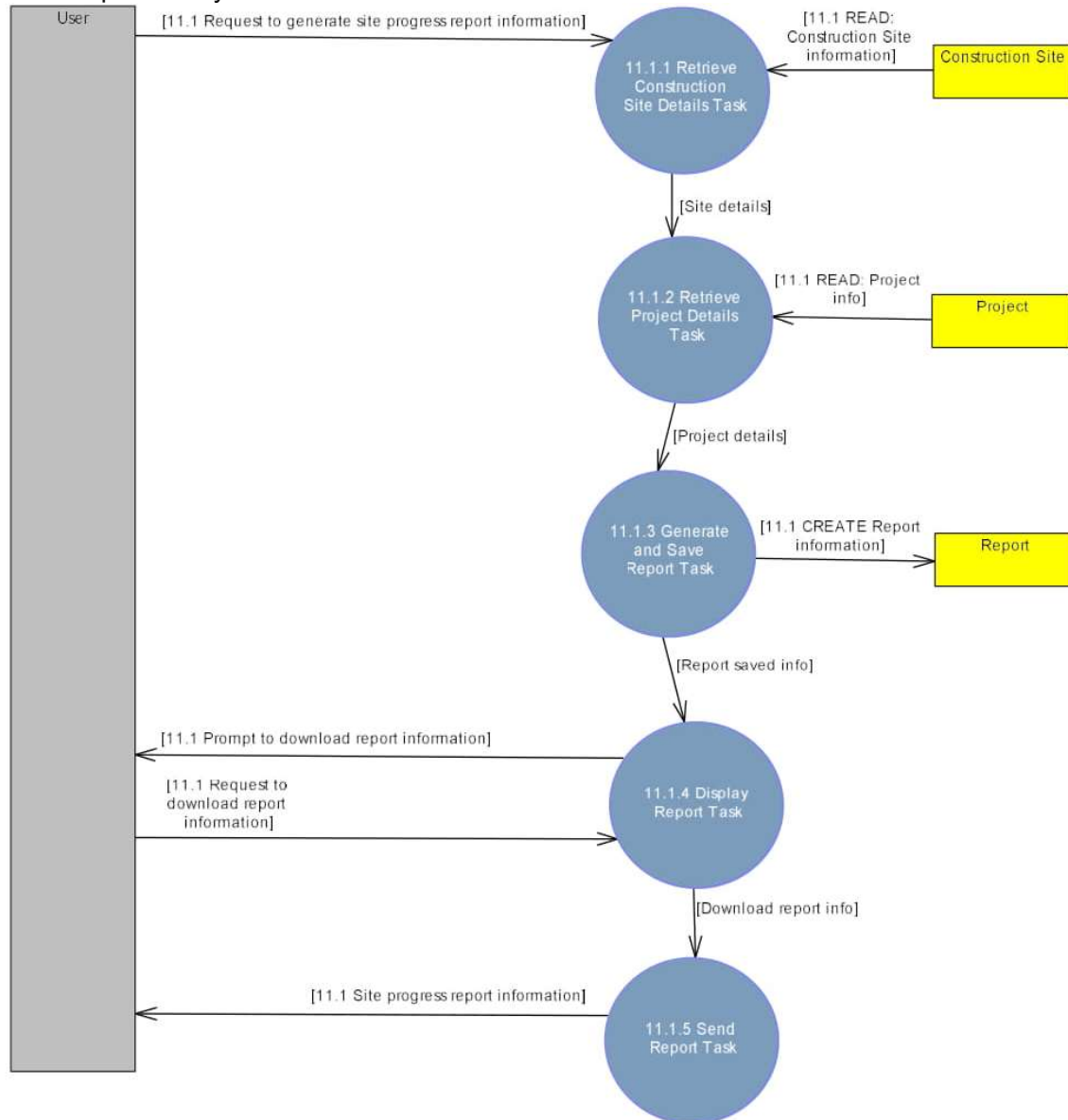
2.5.10 Inventory Management Subsystem

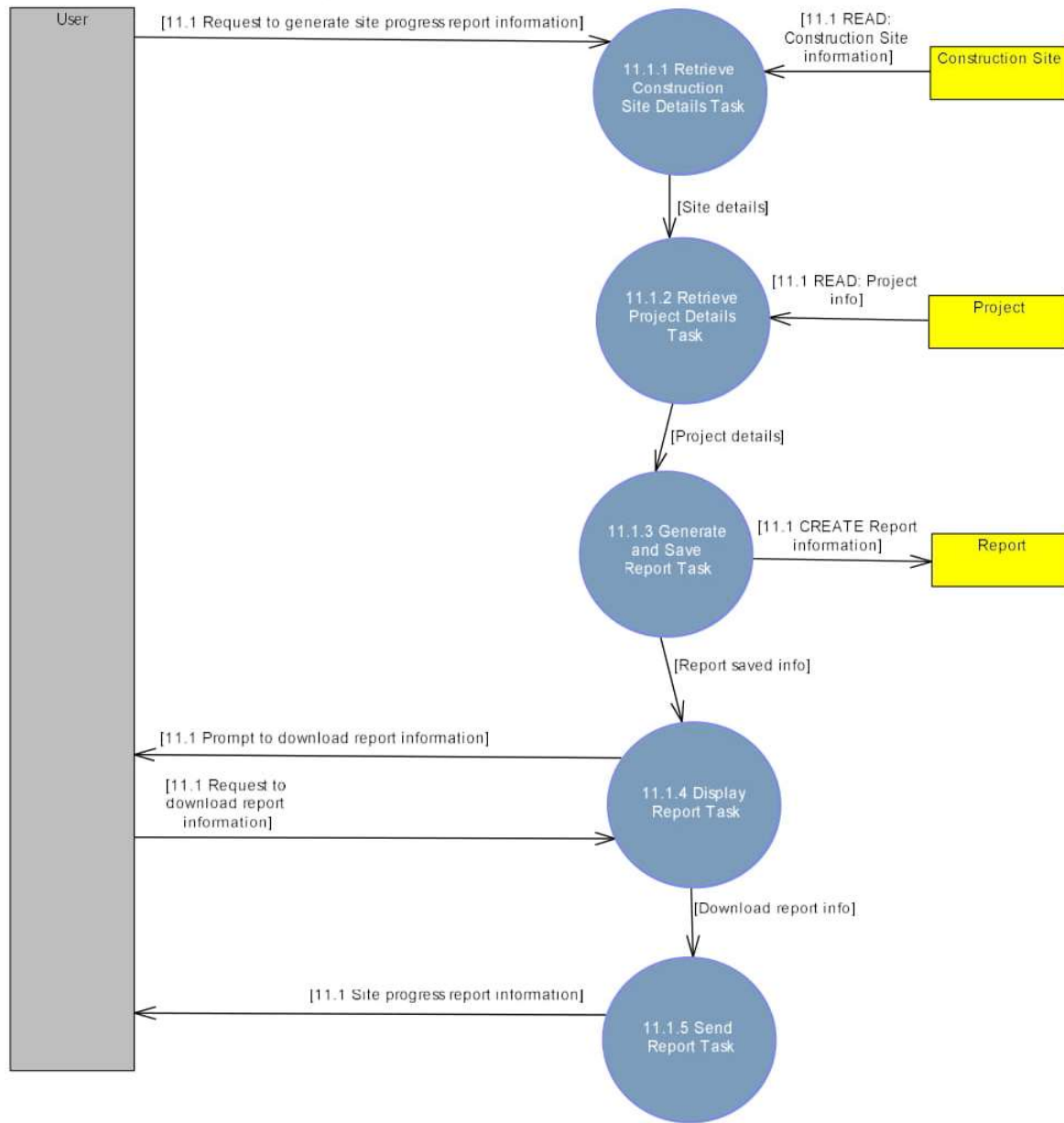


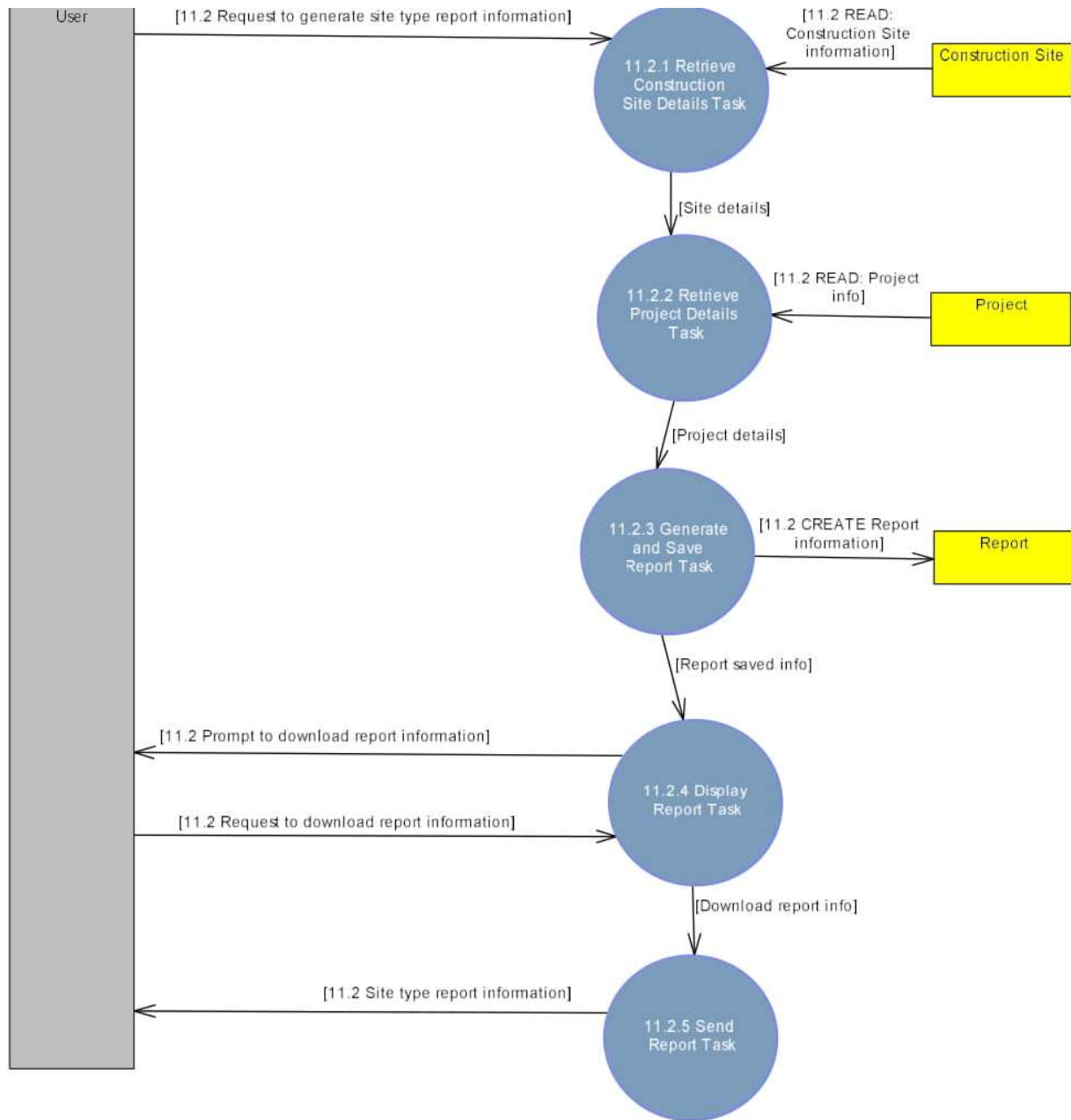


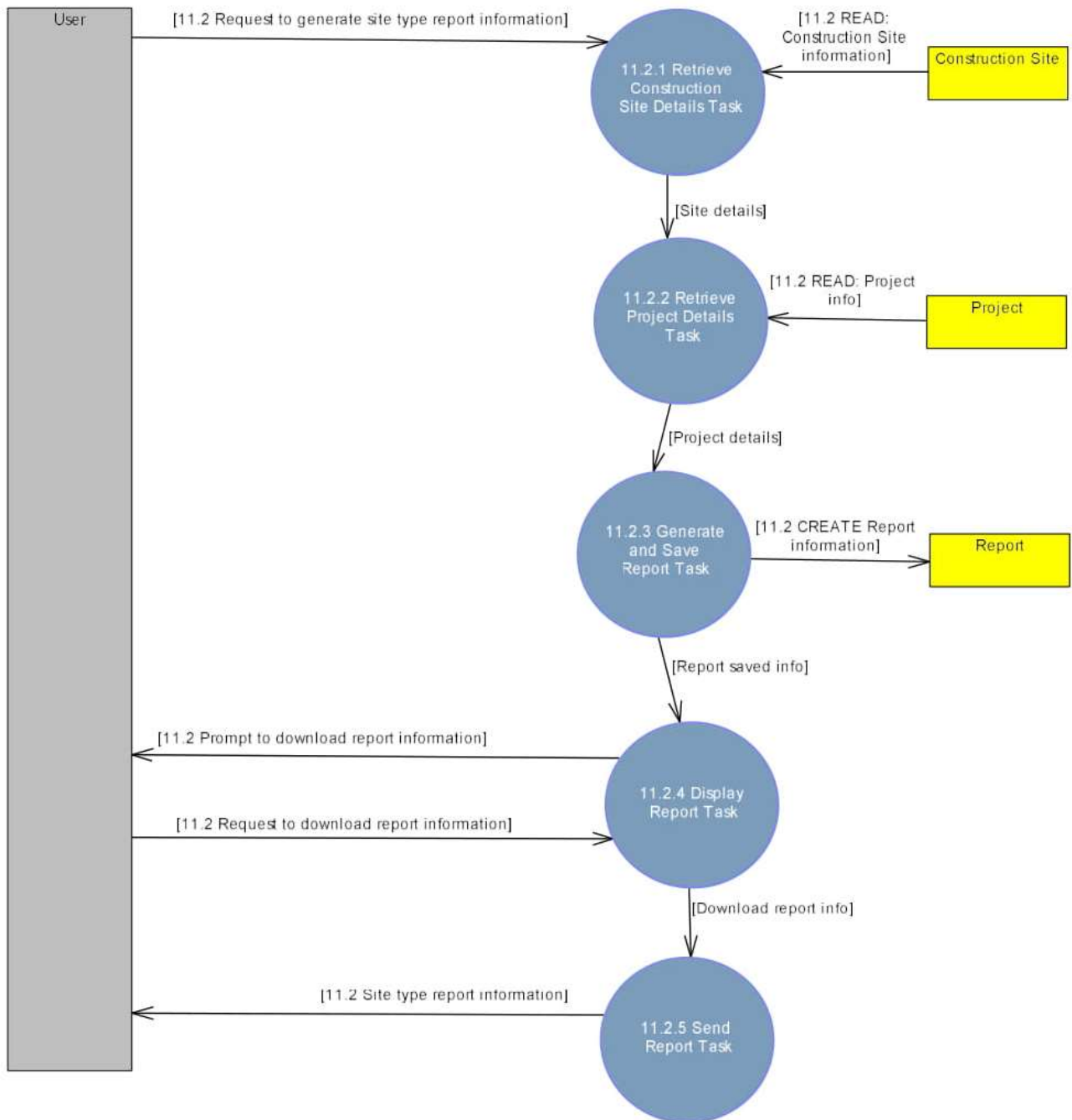


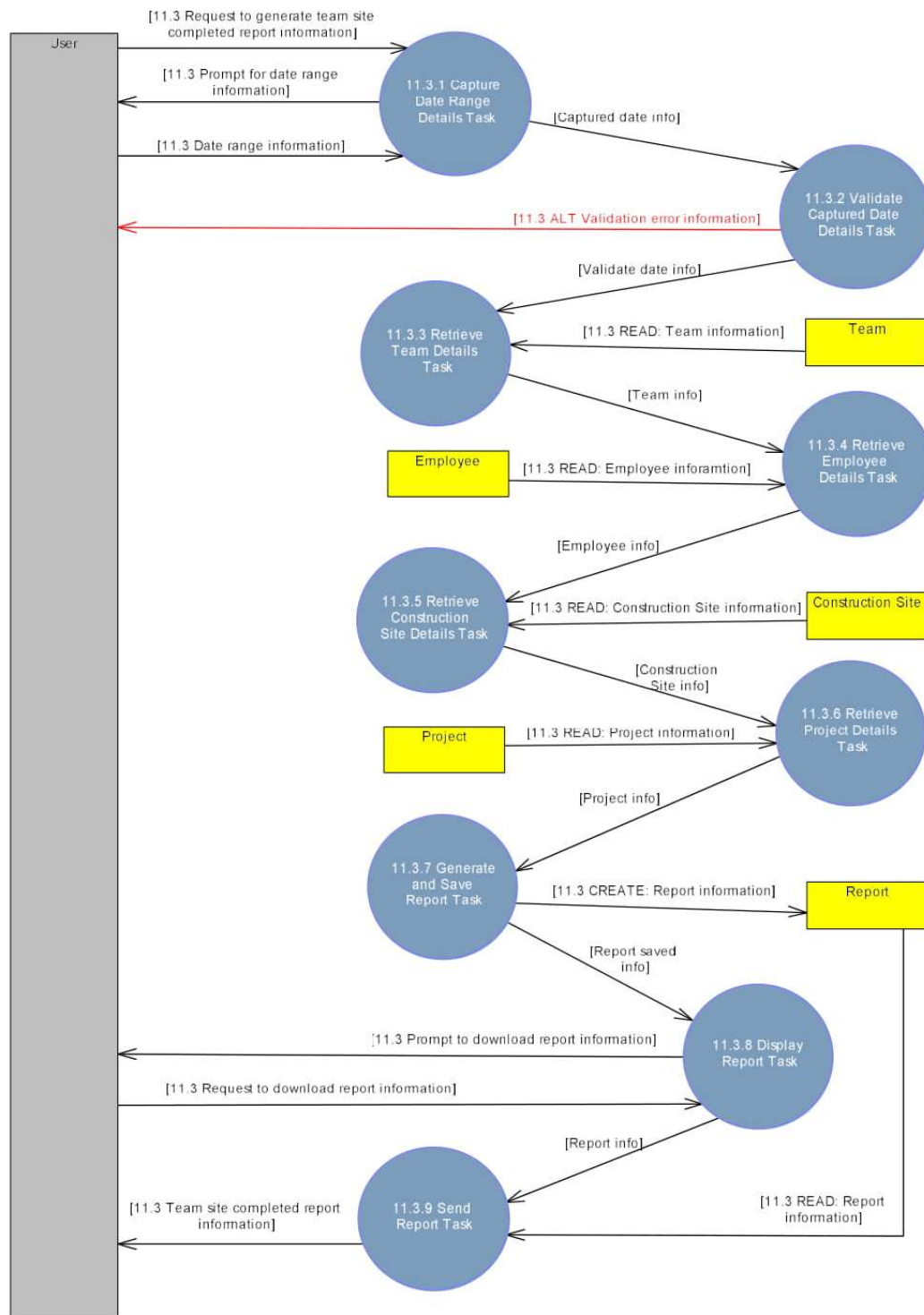
2.5.11 Report Subsystem

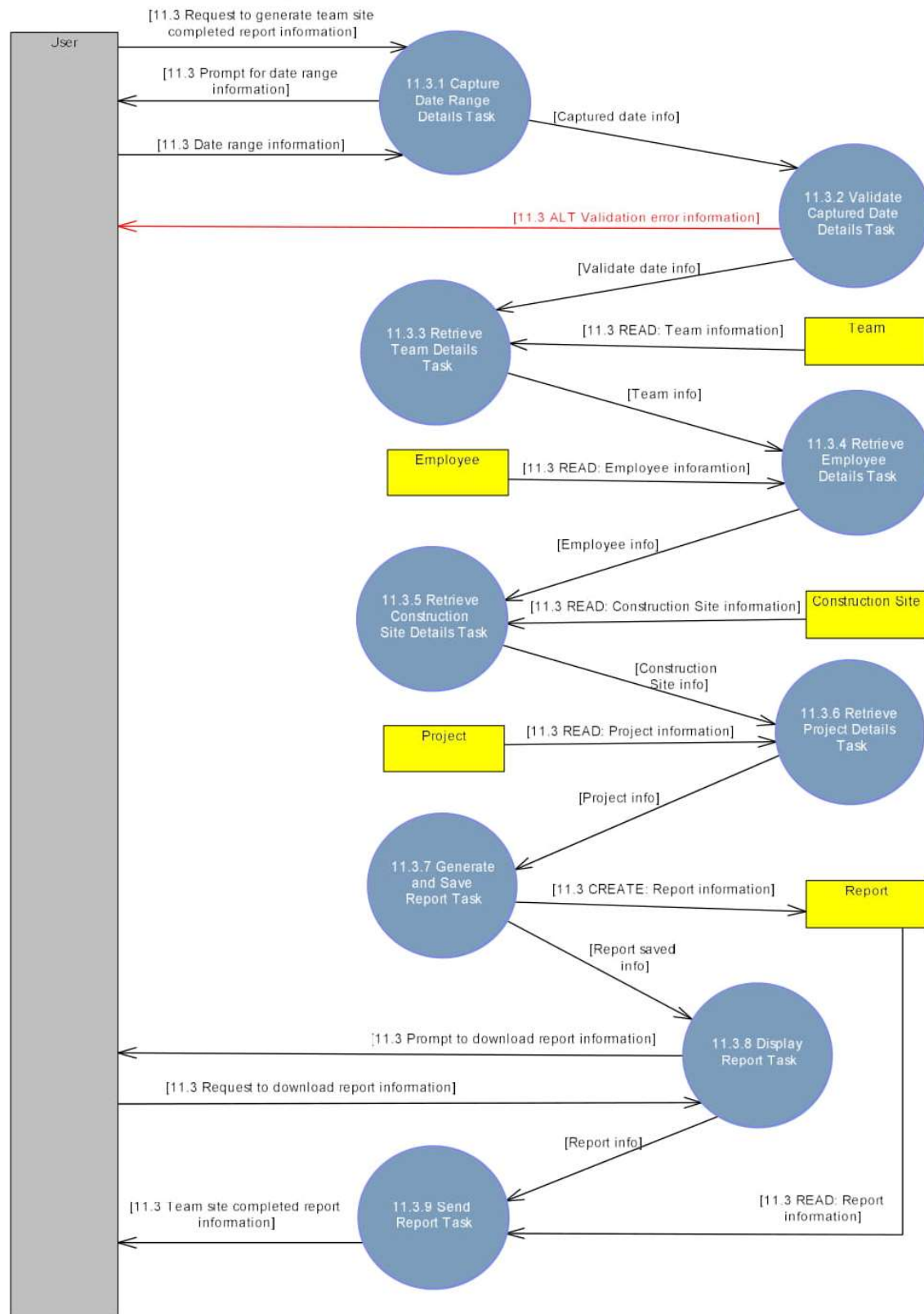


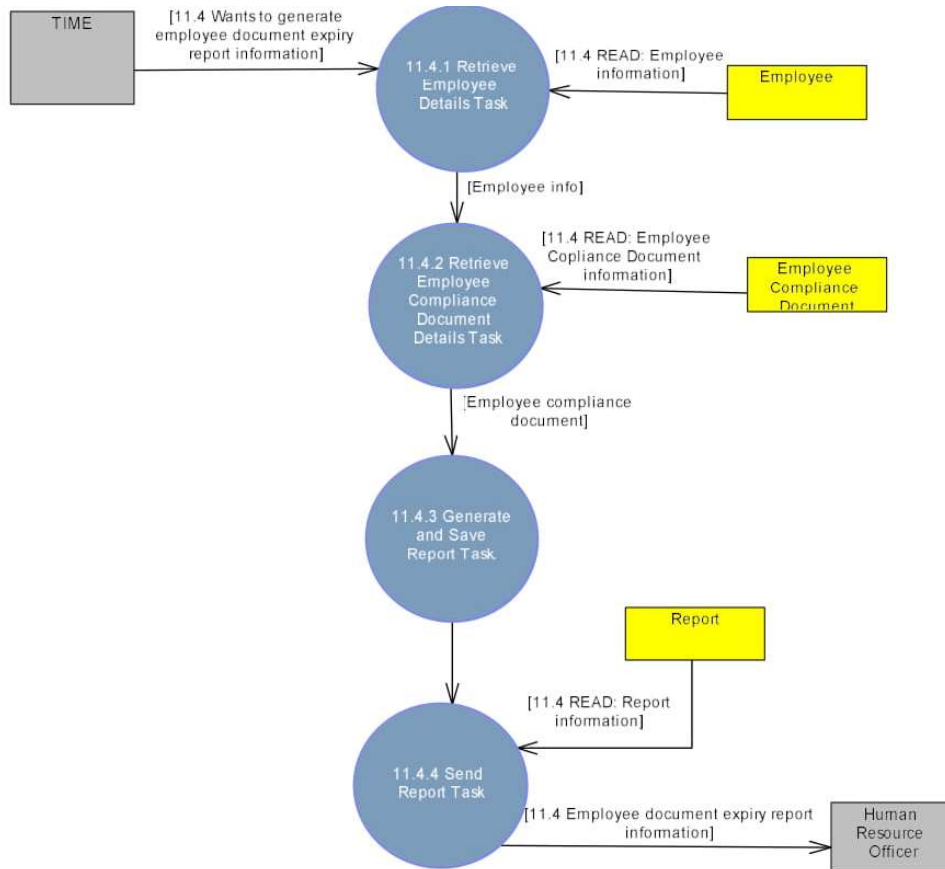


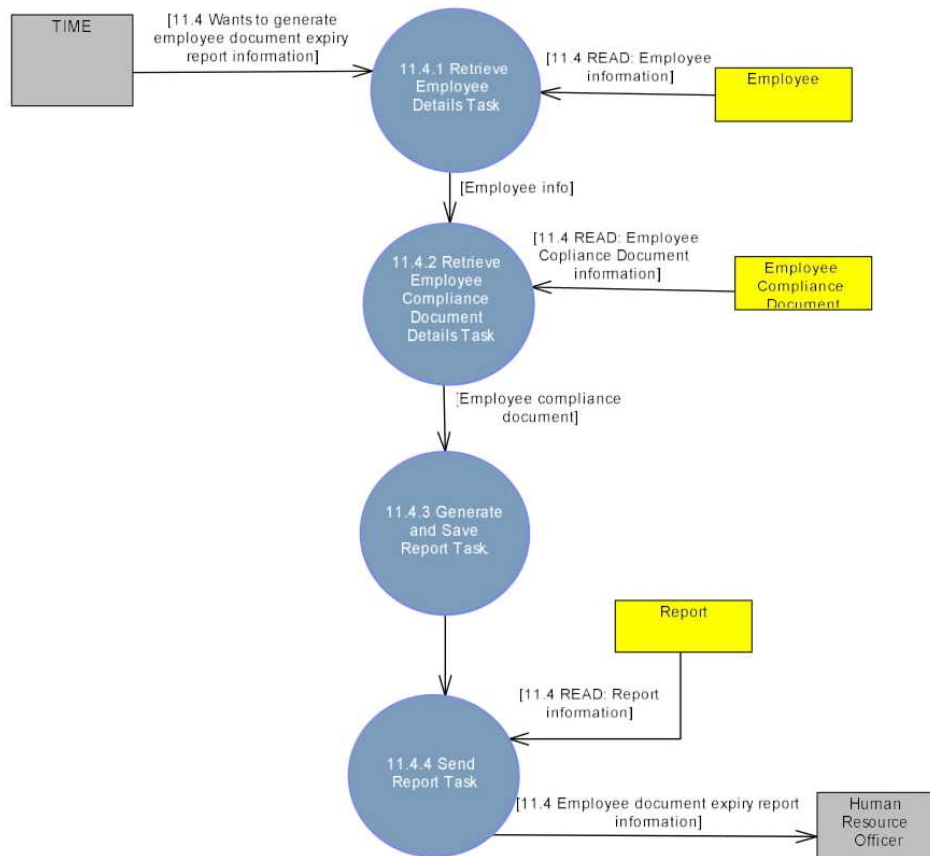




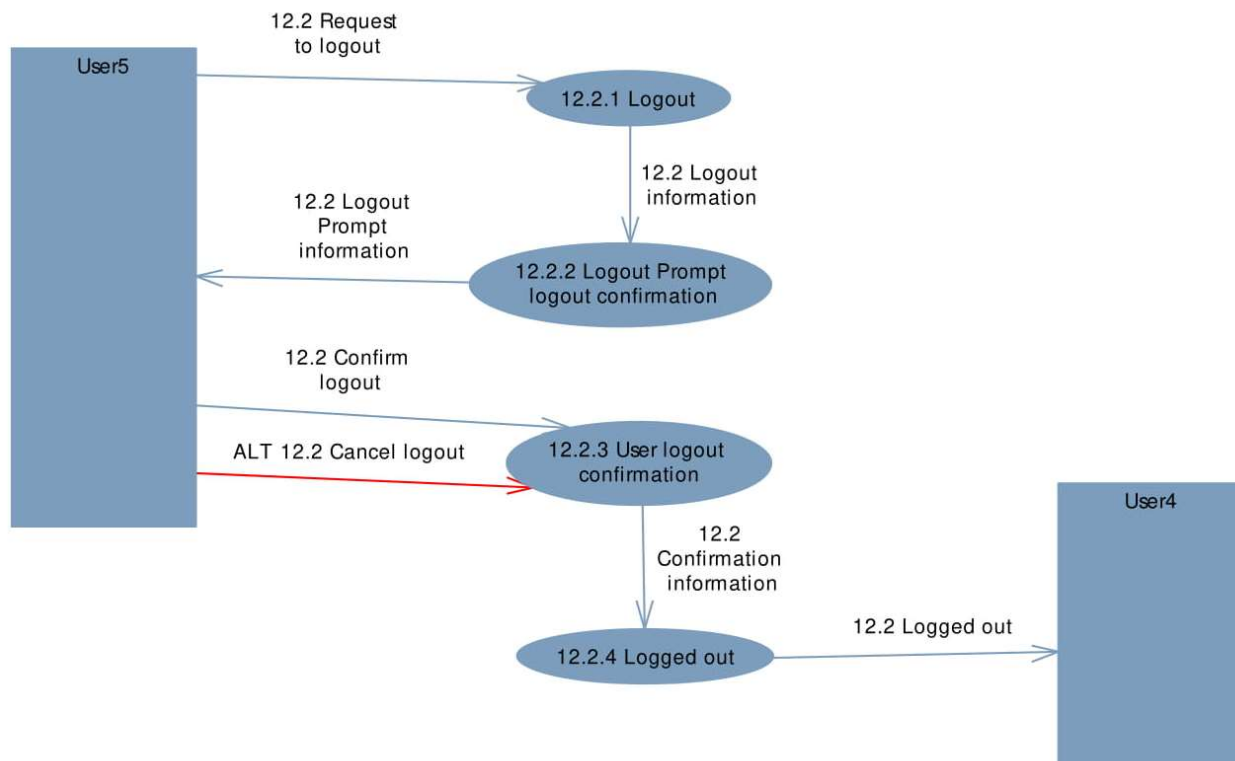
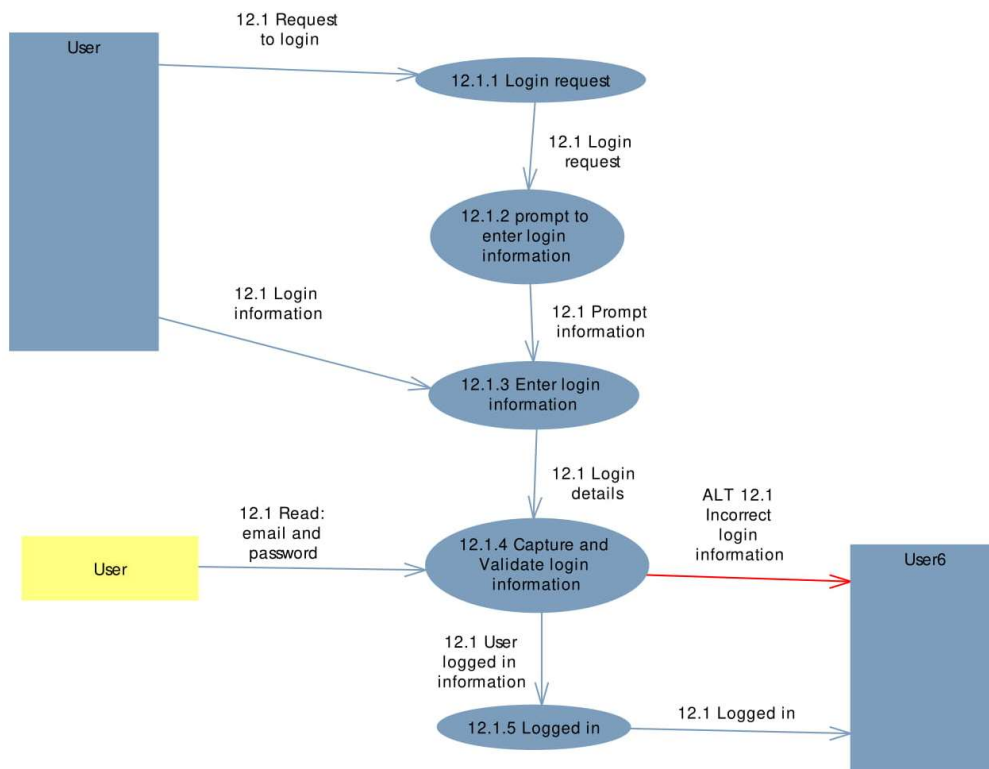


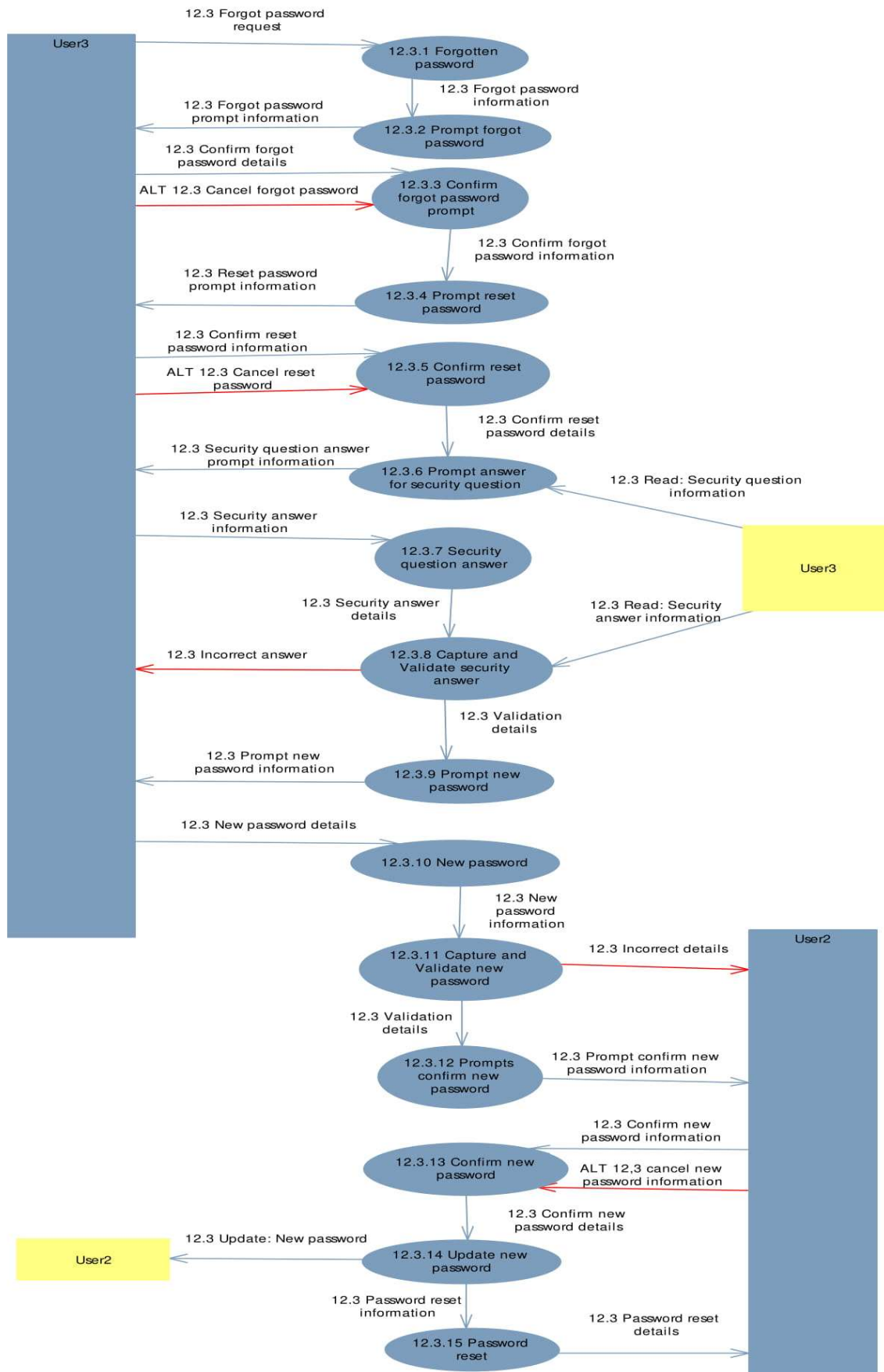






2.5.12 User Management Subsystem





Conclusions

This concludes the Primitive data flow diagrams that displays each use cases process step by step.

3. Data Dictionary

The data dictionary was done within the narratives. Our narratives have gone into more details on the entities being interacted with and as well as describing the attributes that are being used within the entities.

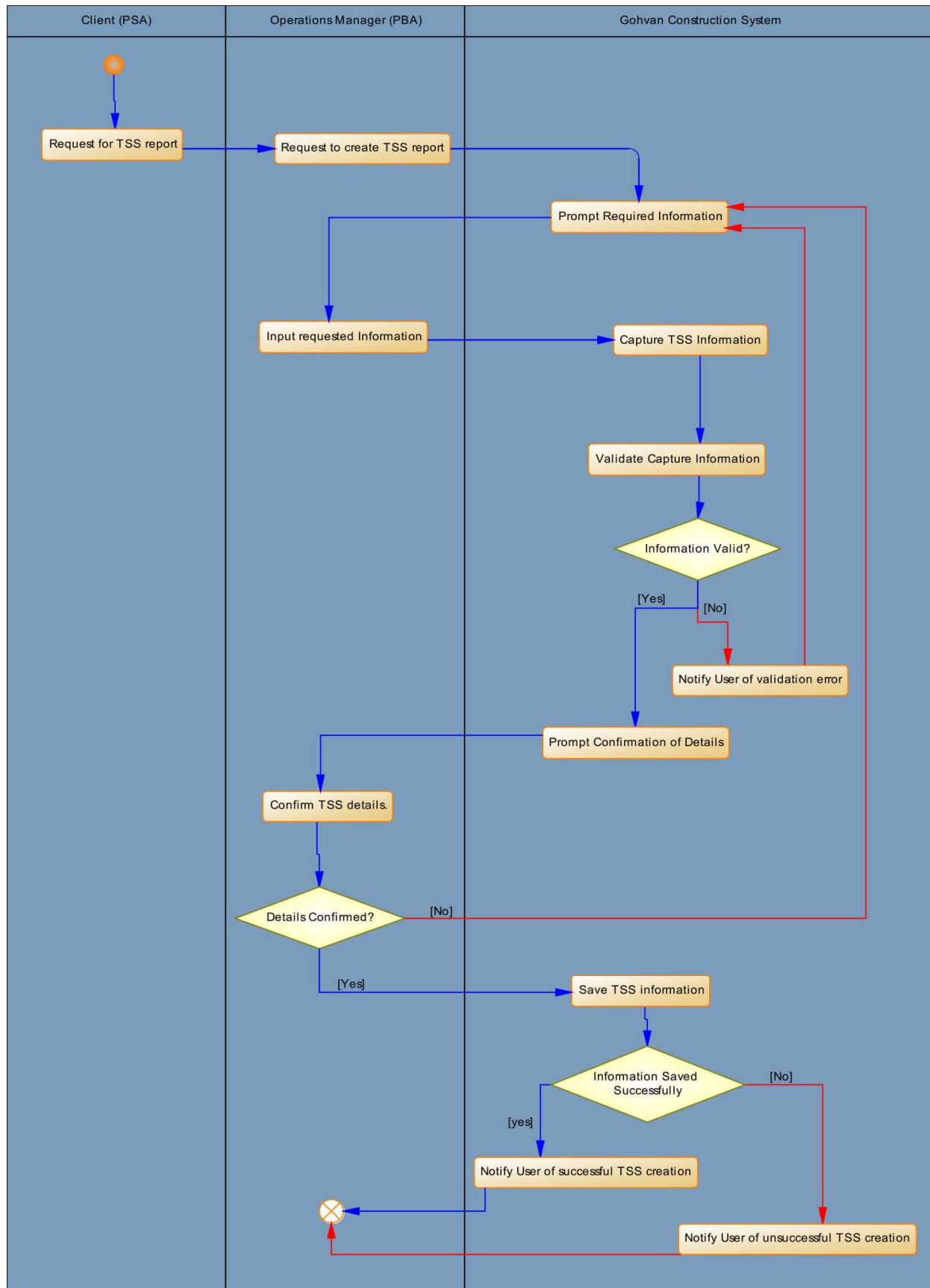
4. UML Modelling

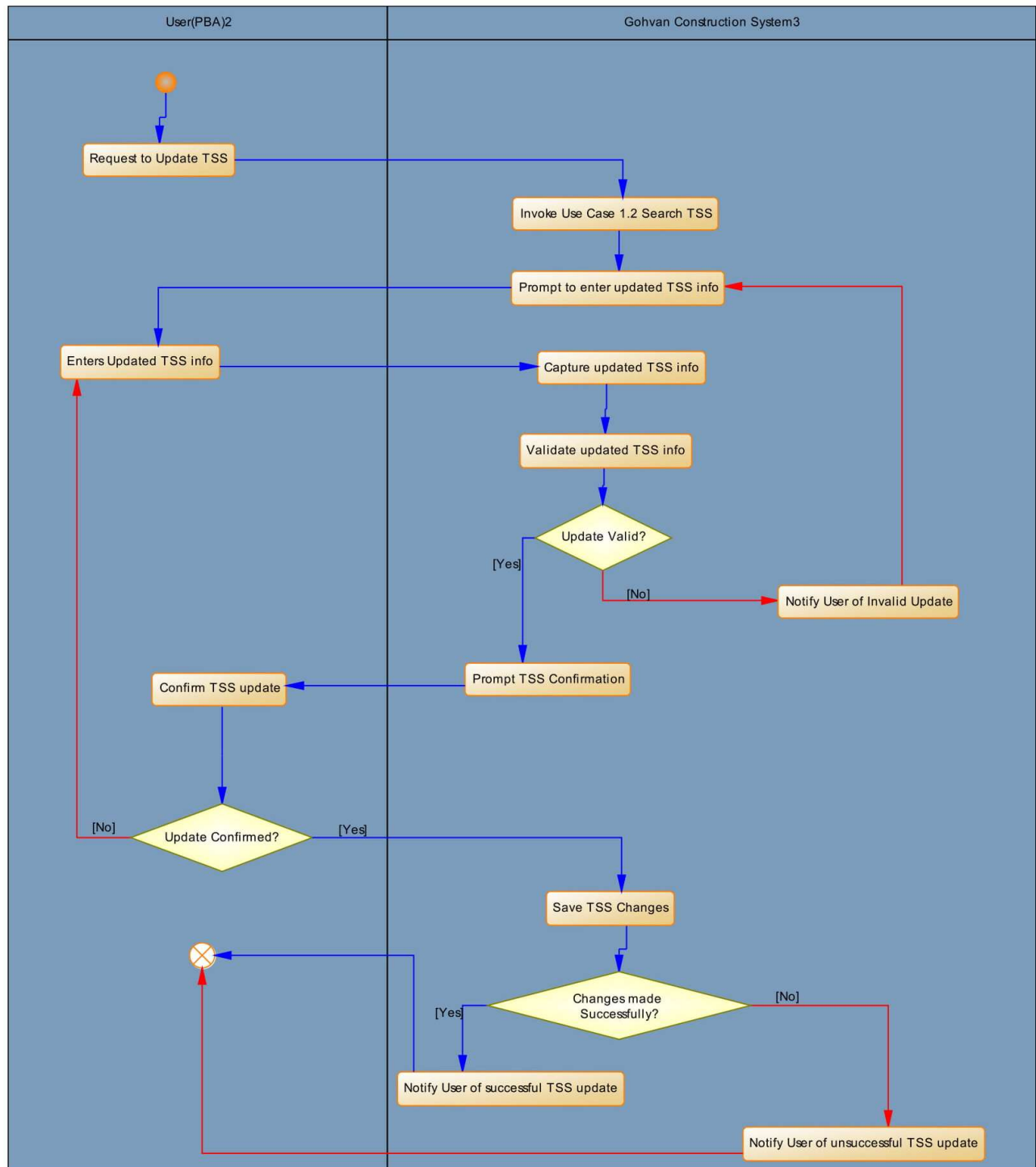
Introduction

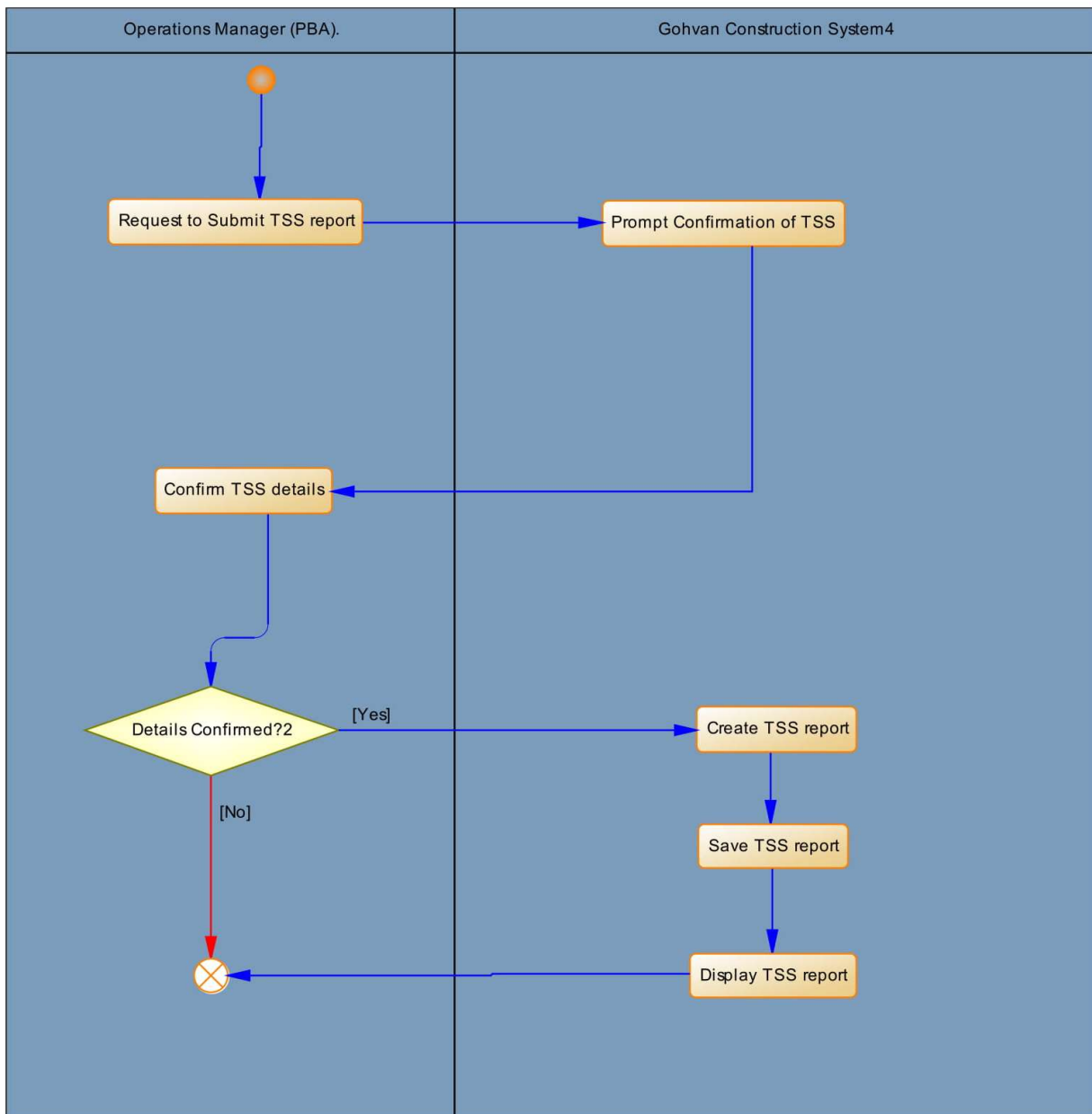
This section includes the UML Modelling which displays a set of activity diagrams for each use case.

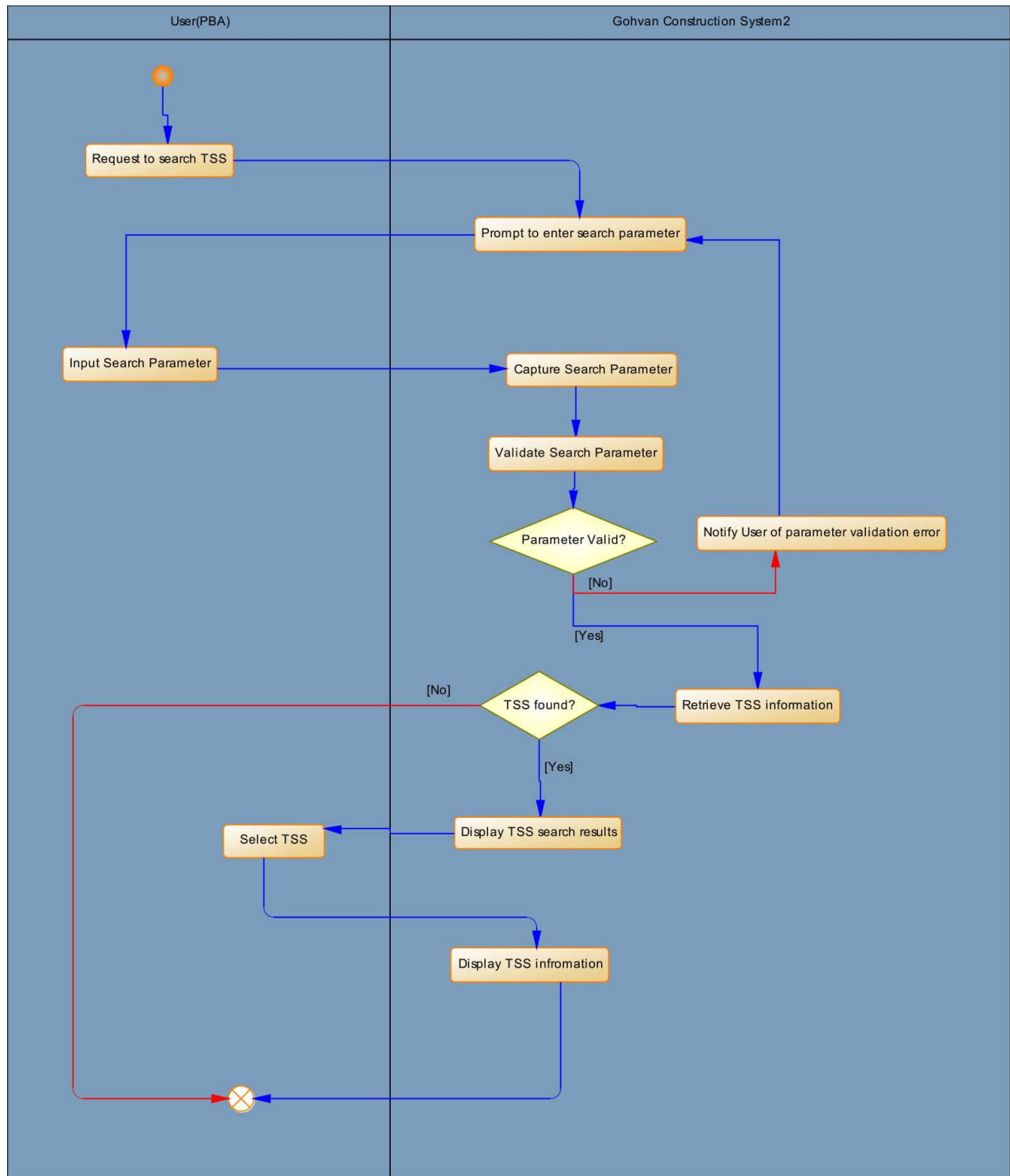
4.1 Activity Diagram

4.1.1 Establishment Subsystem

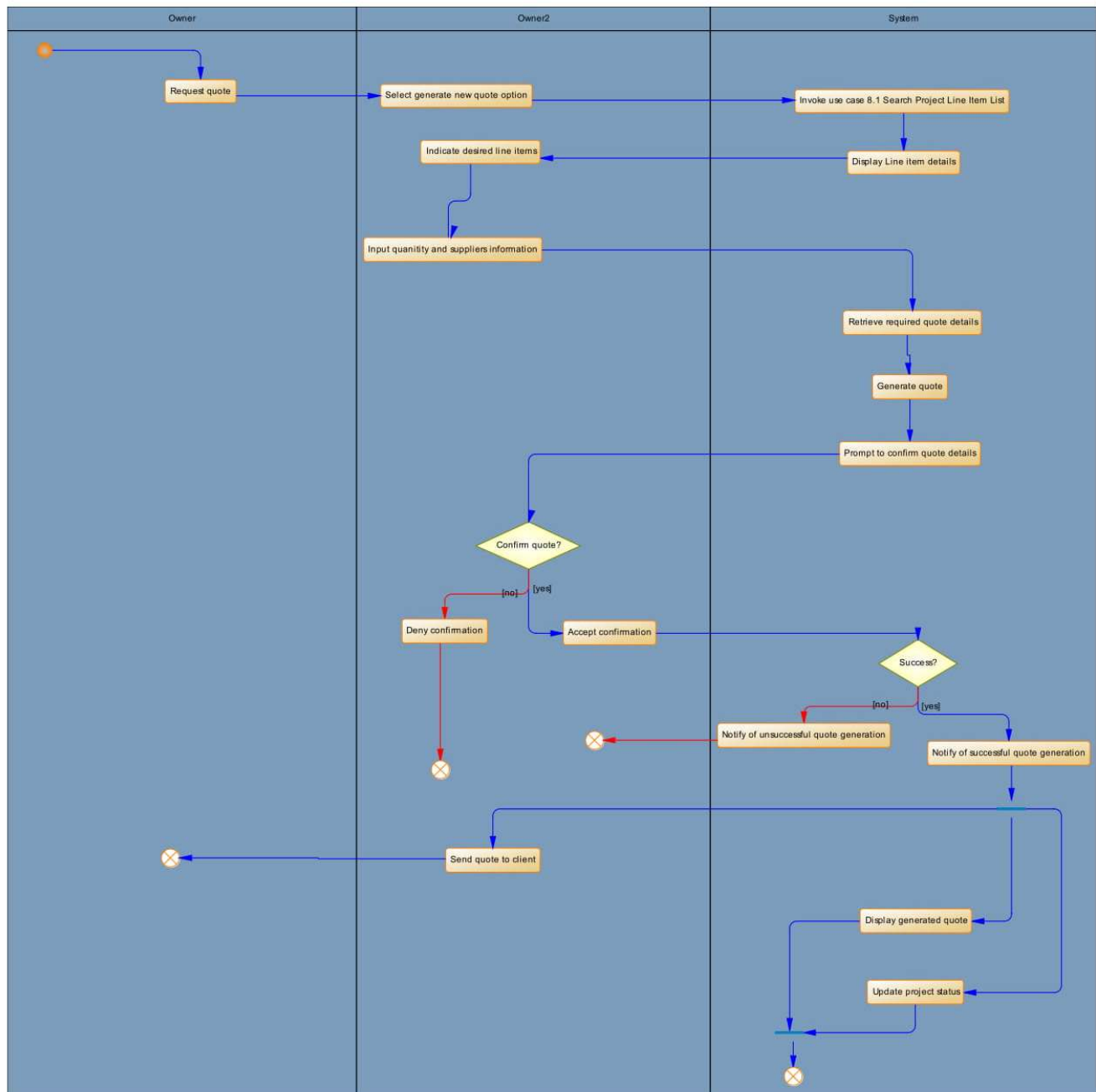


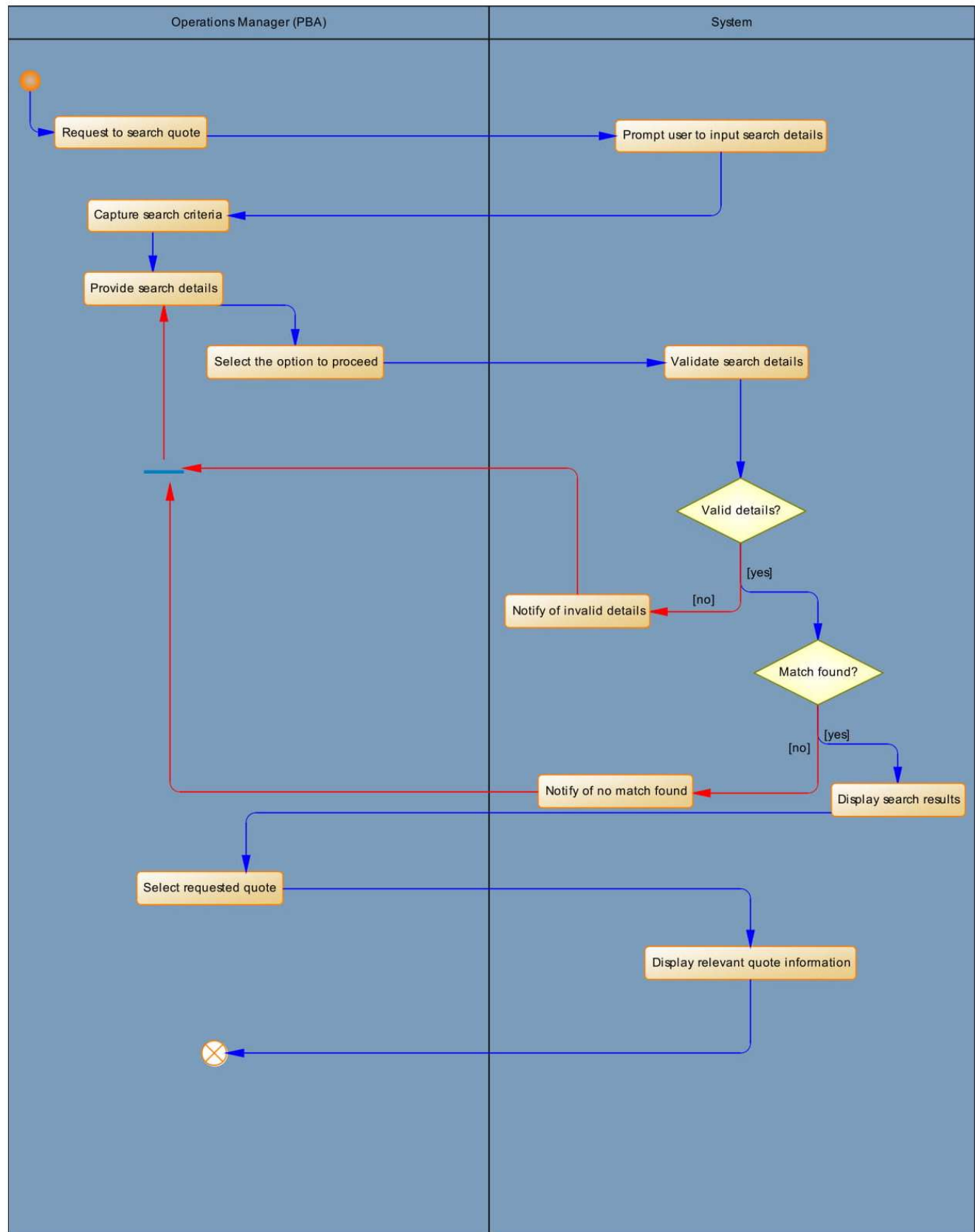


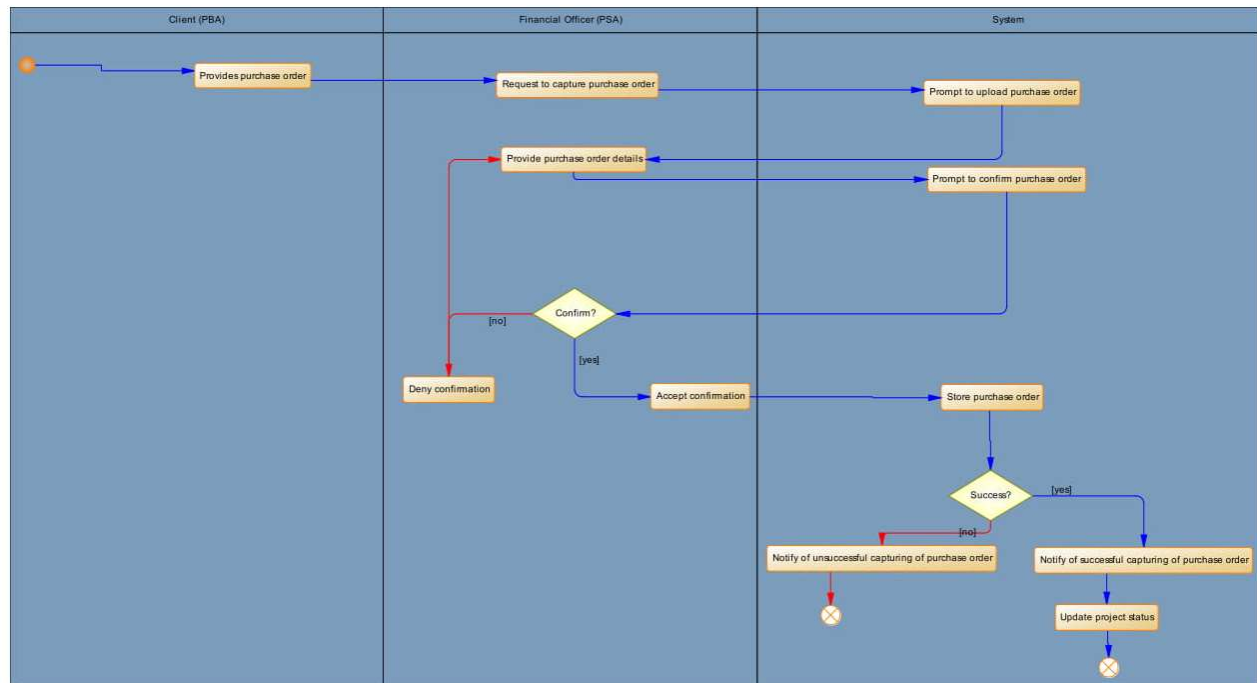




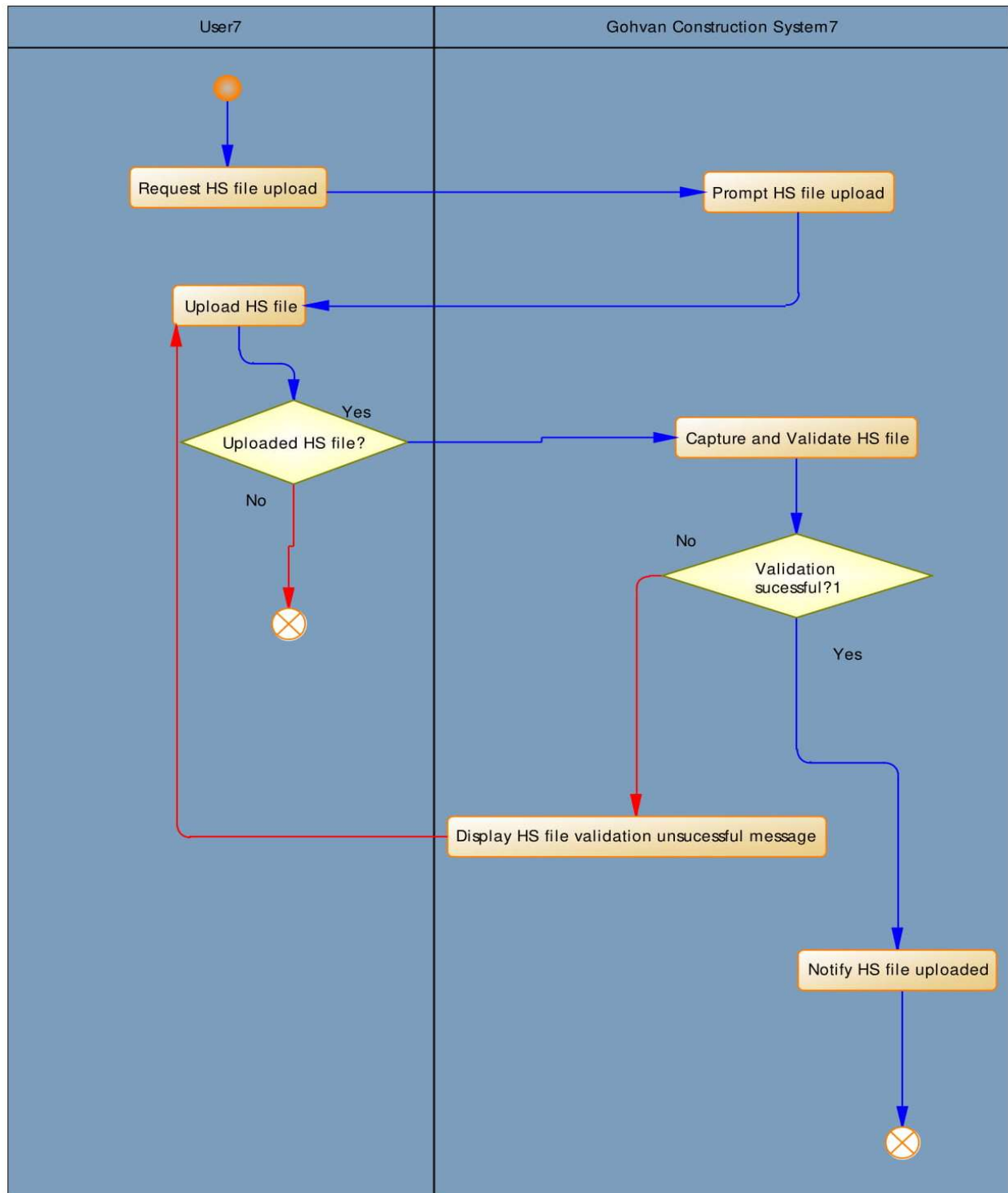
4.1.2 Quotation Subsystem

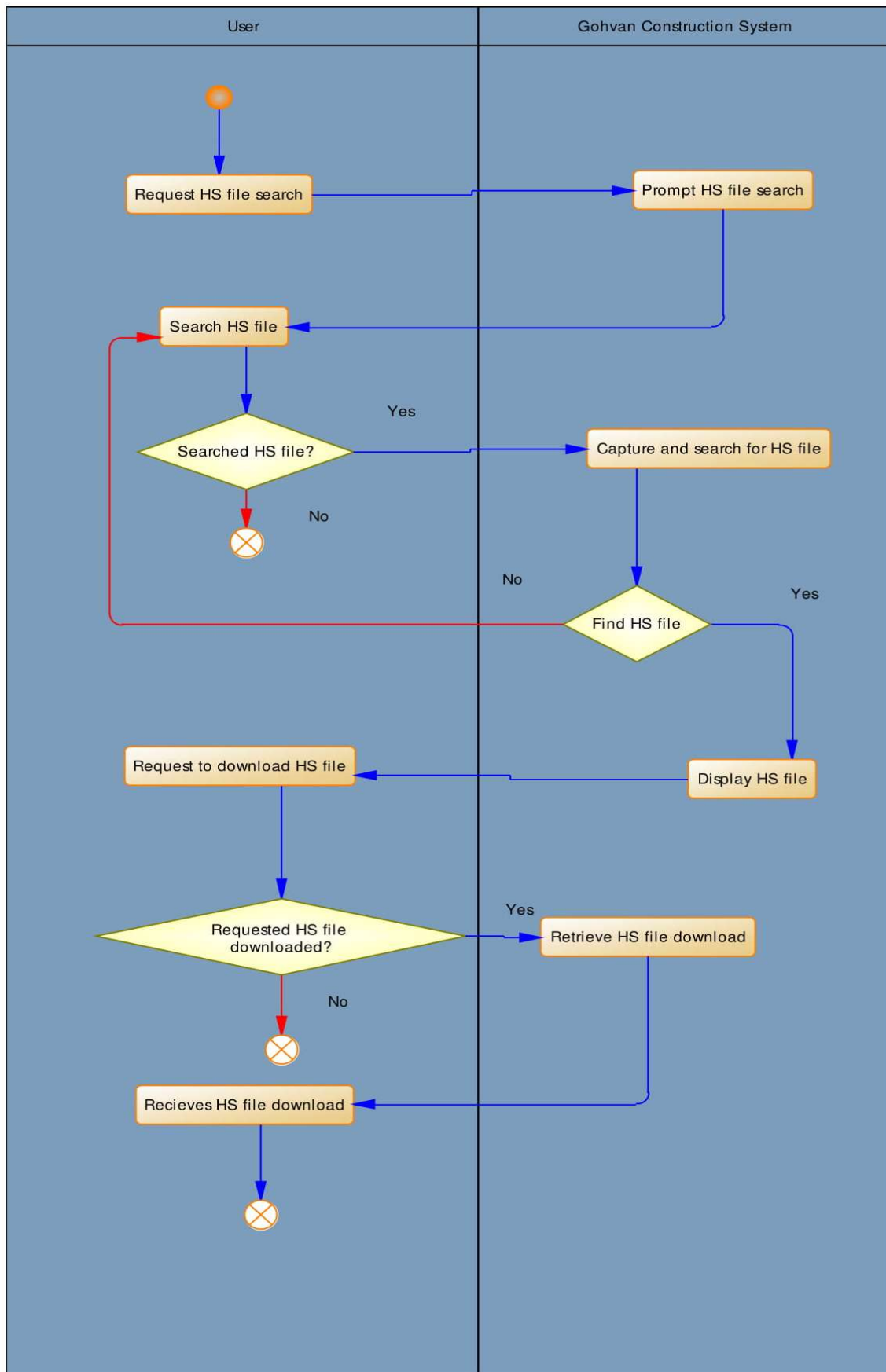


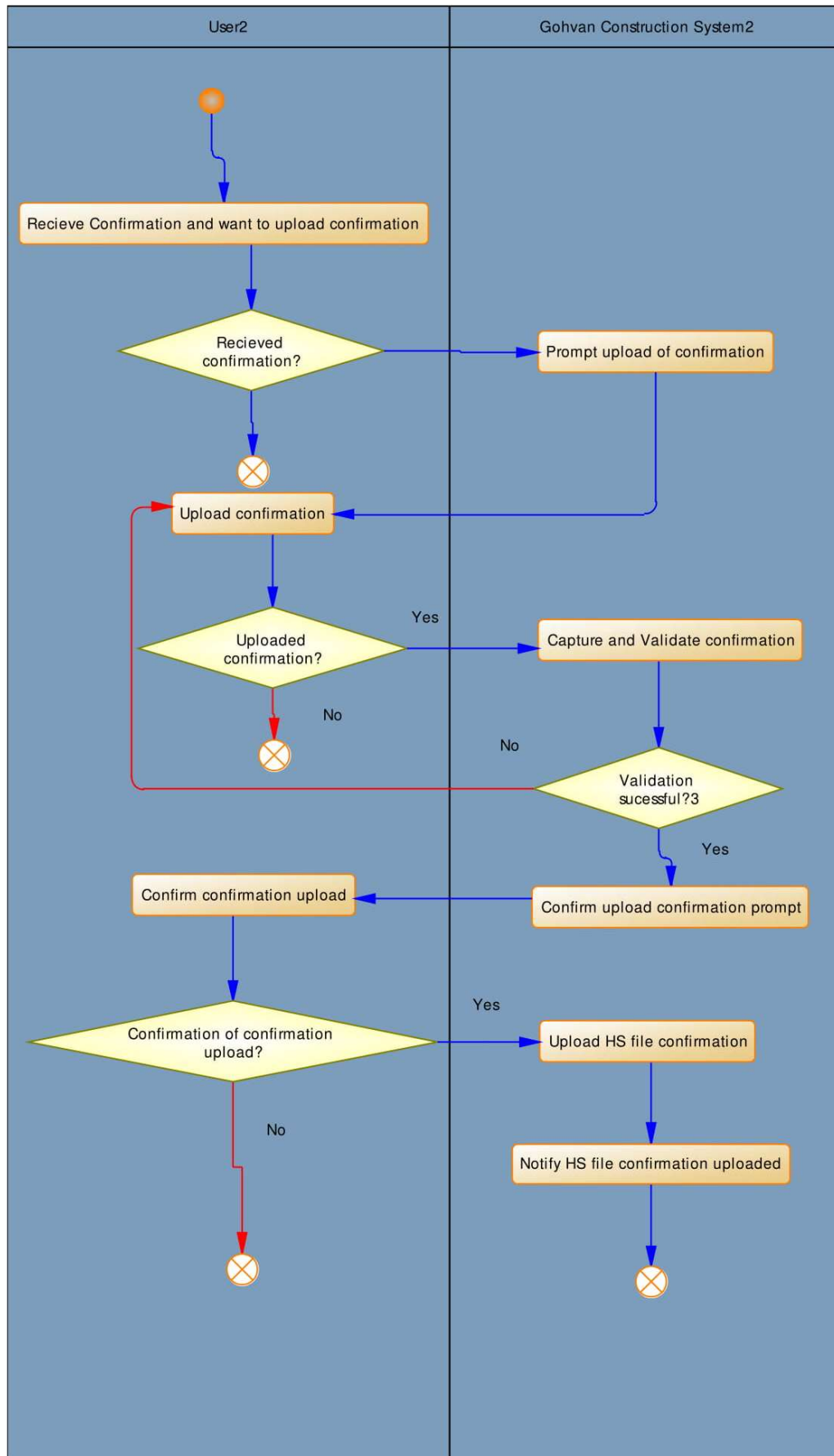


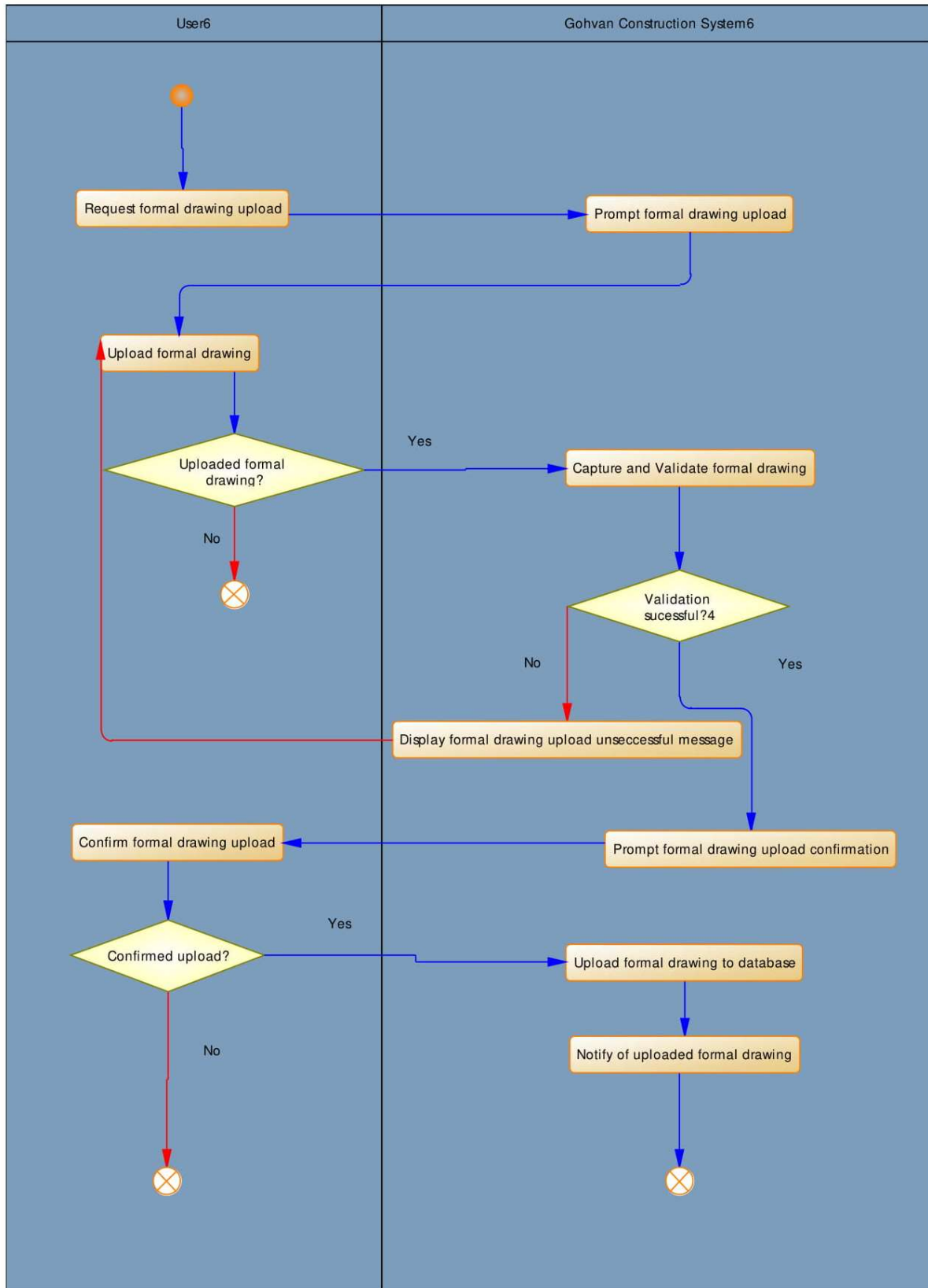


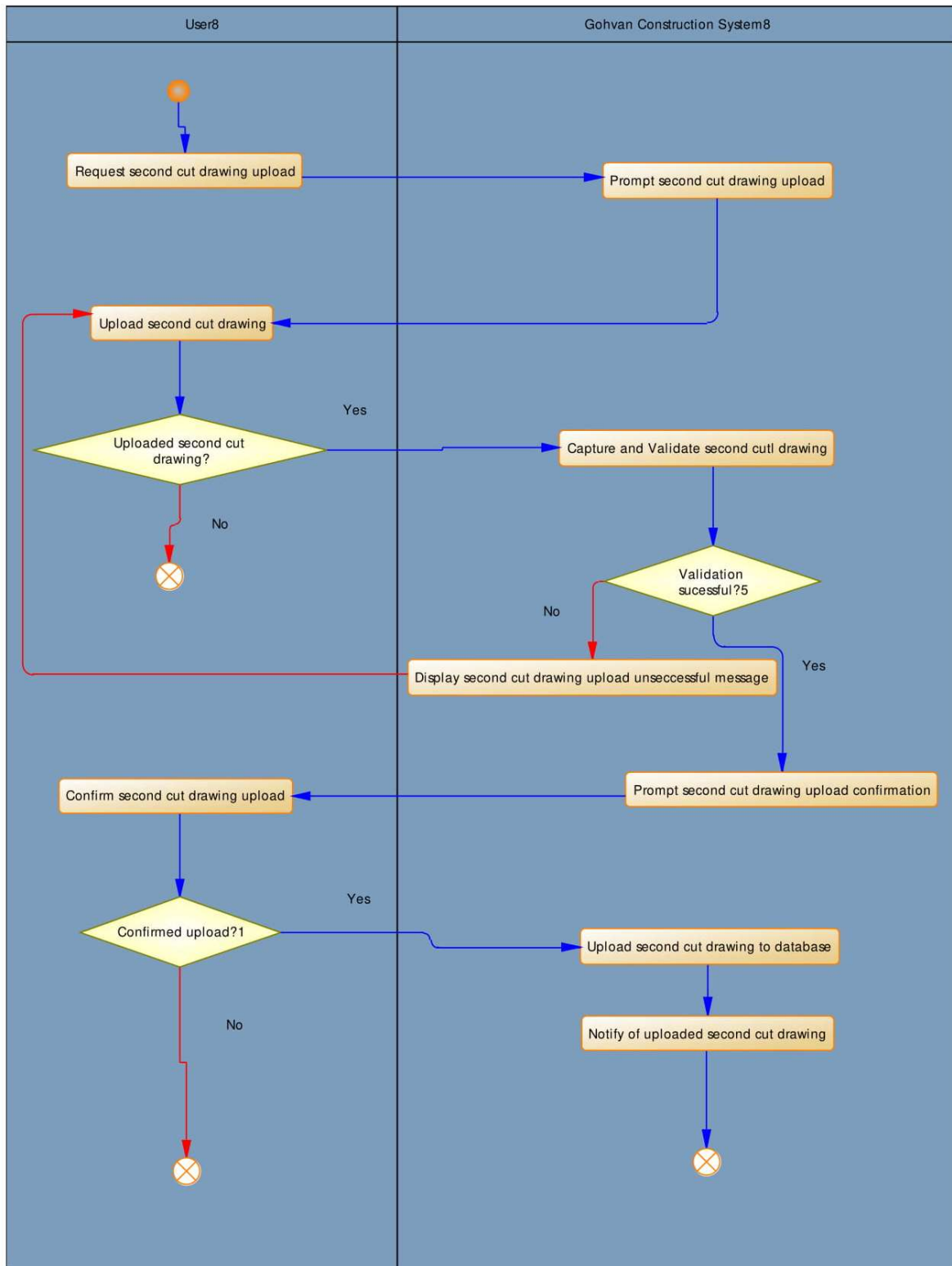
4.1.3 Administration Subsystem

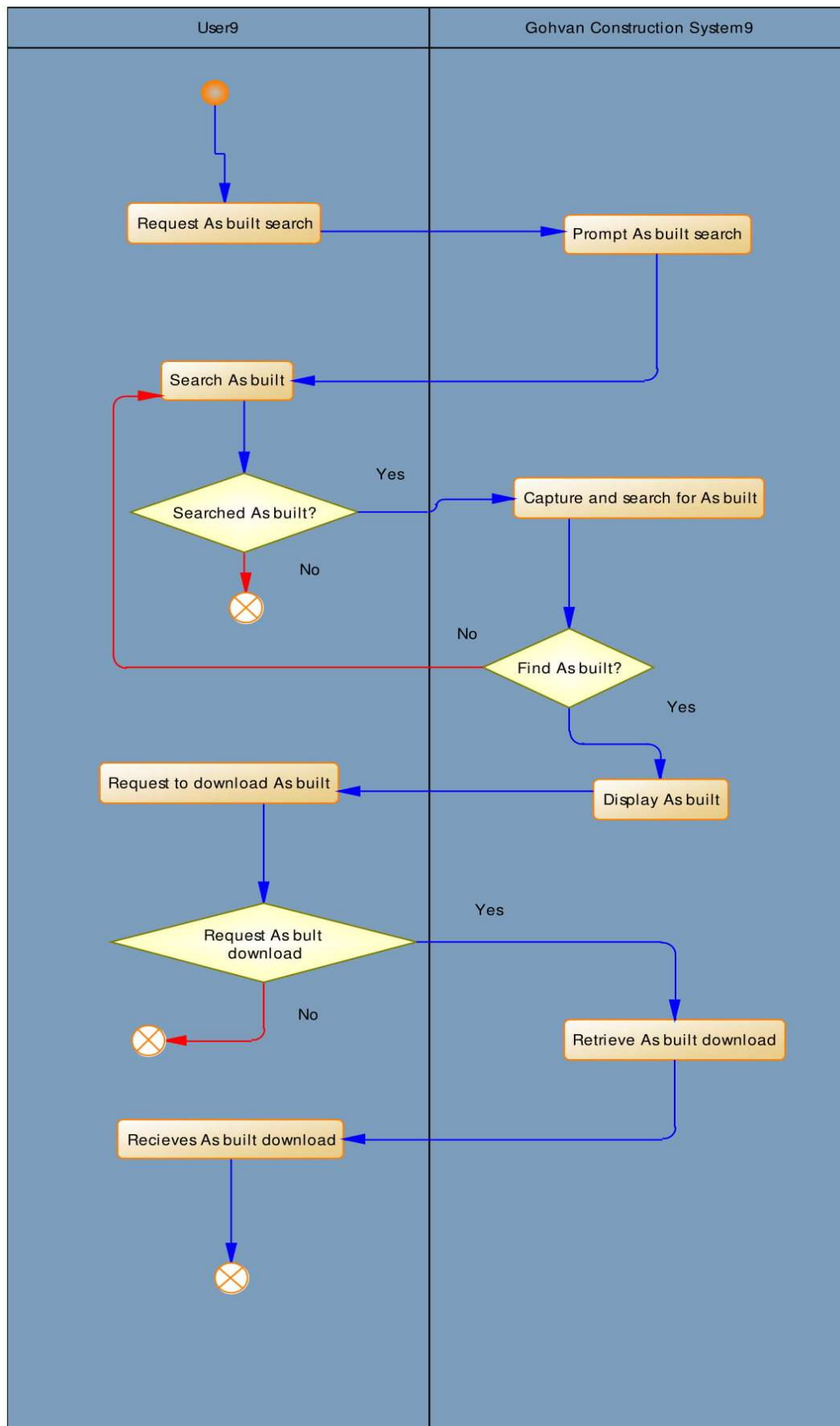


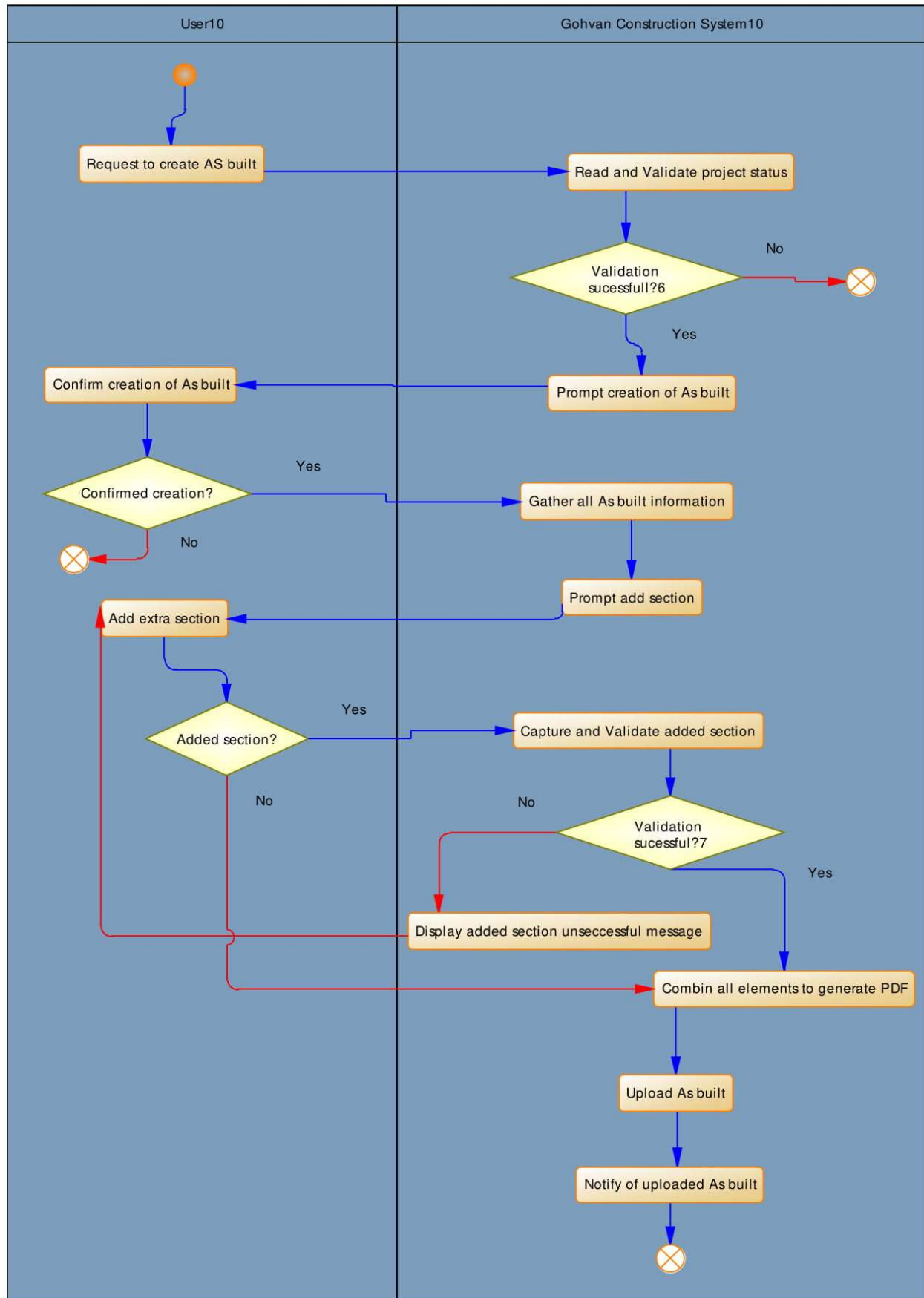




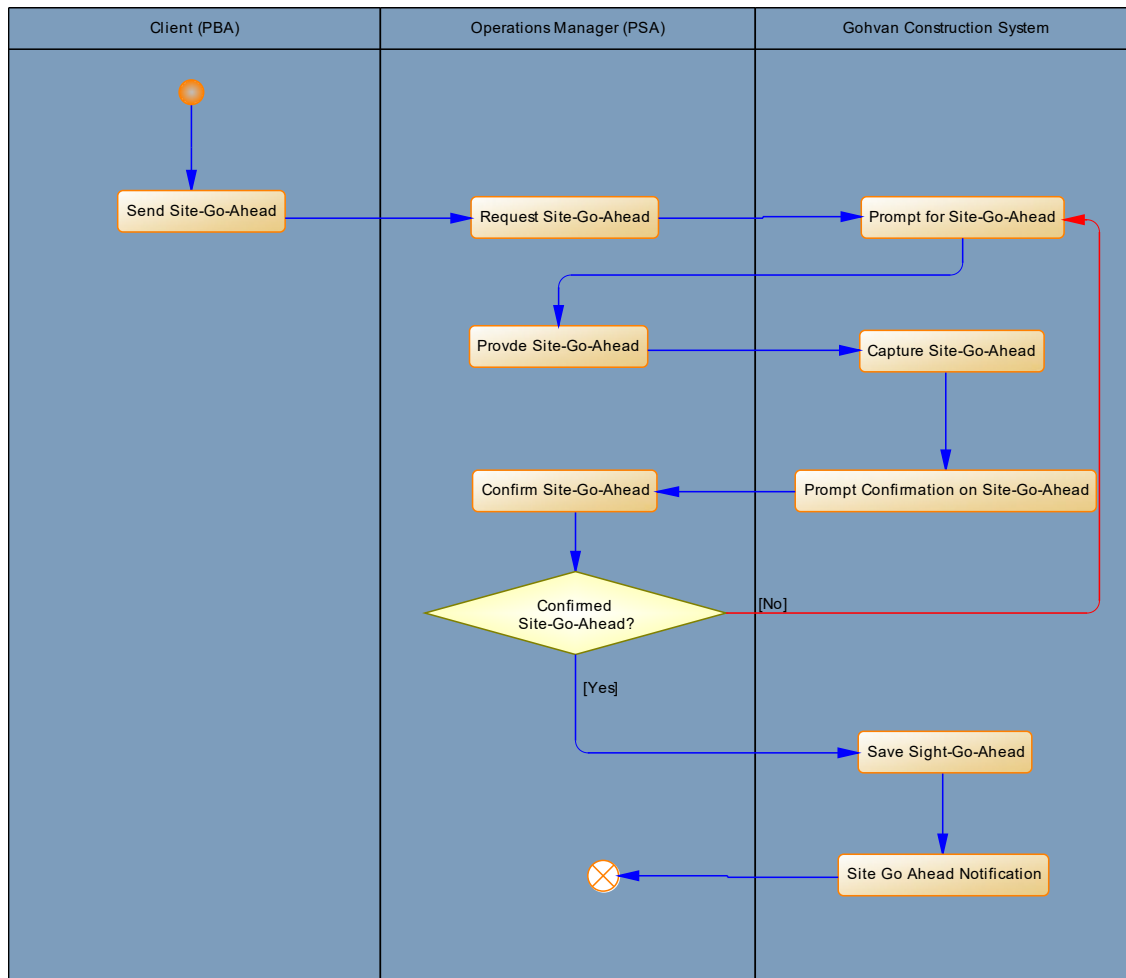


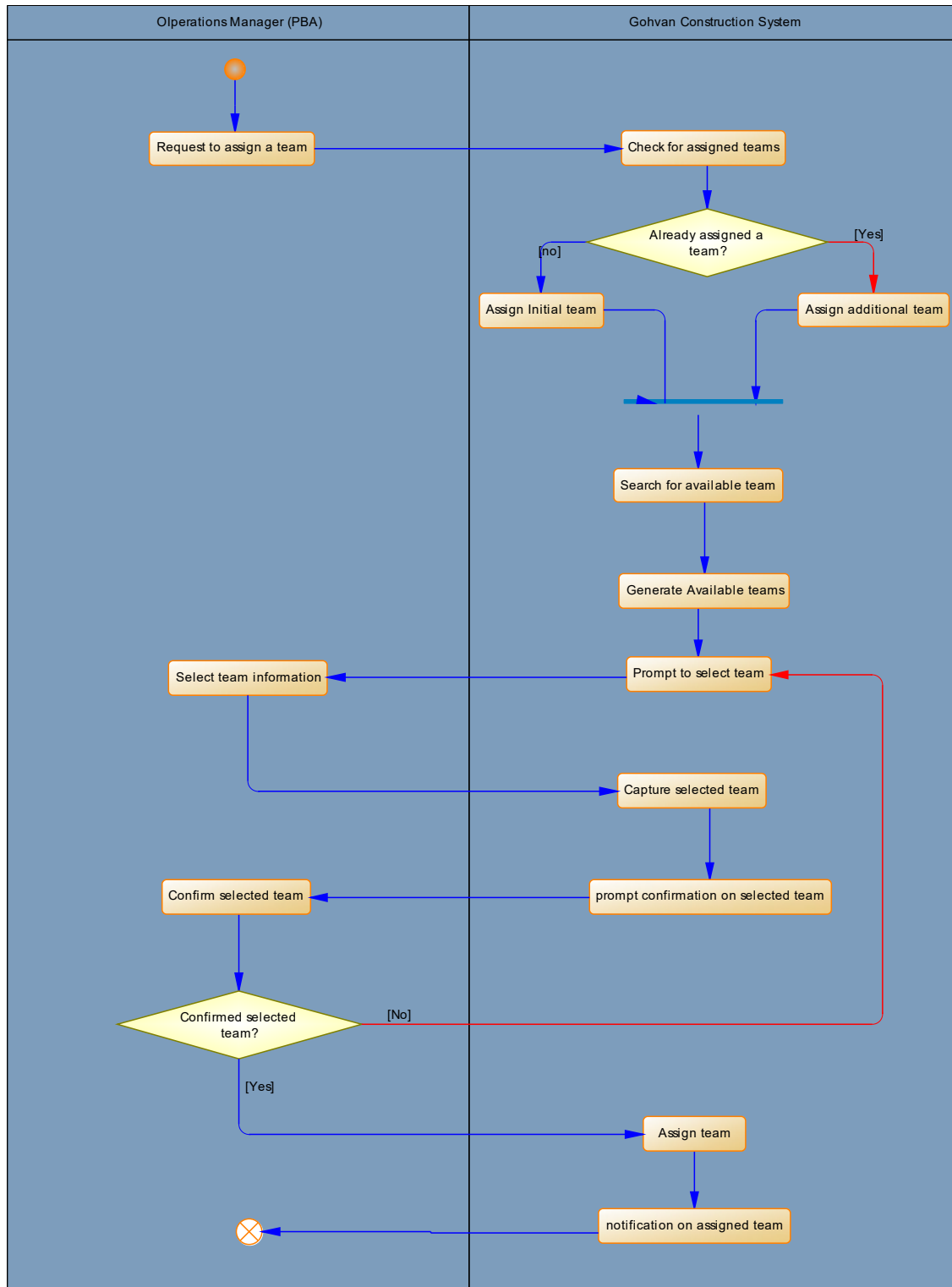


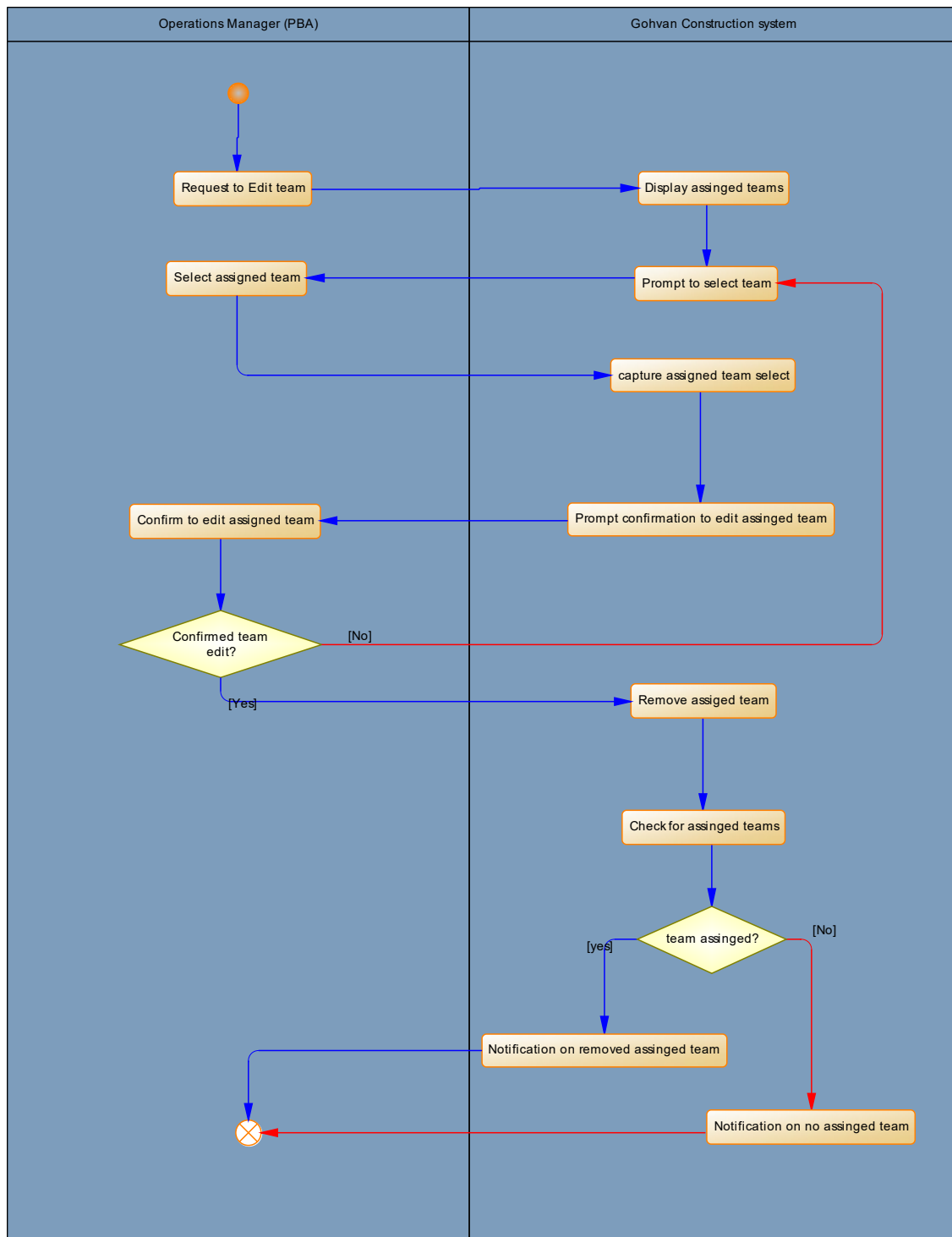


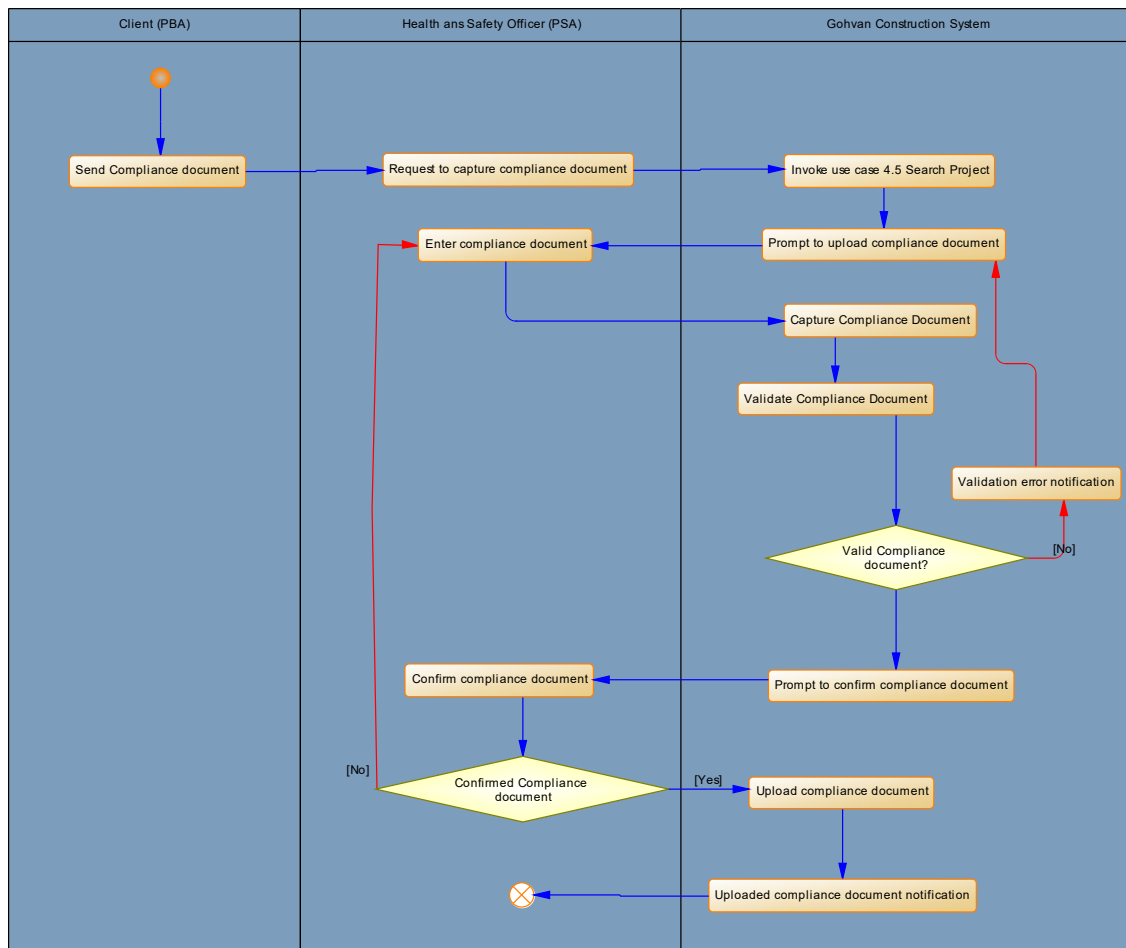


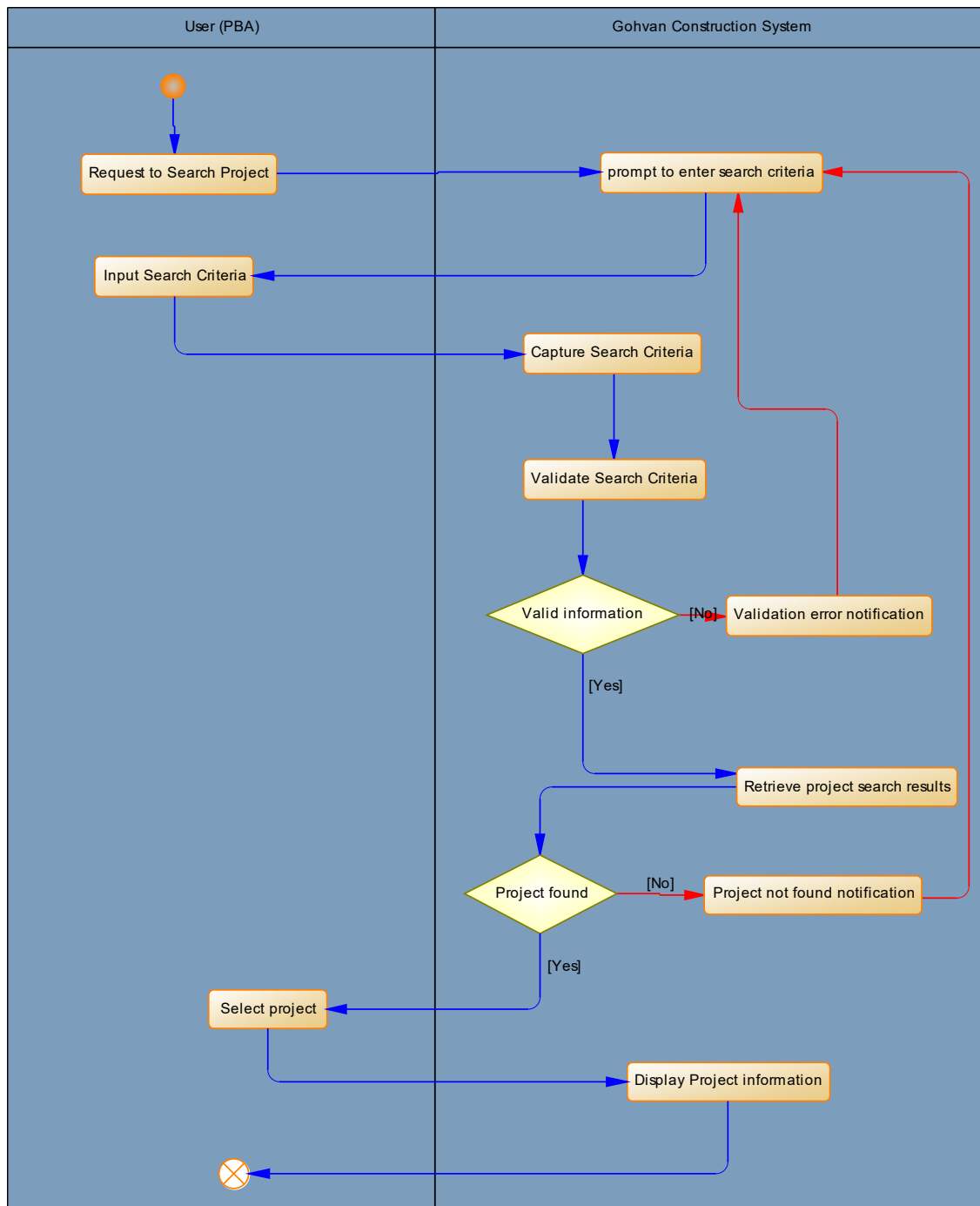
4.1.4 Construction Subsystem

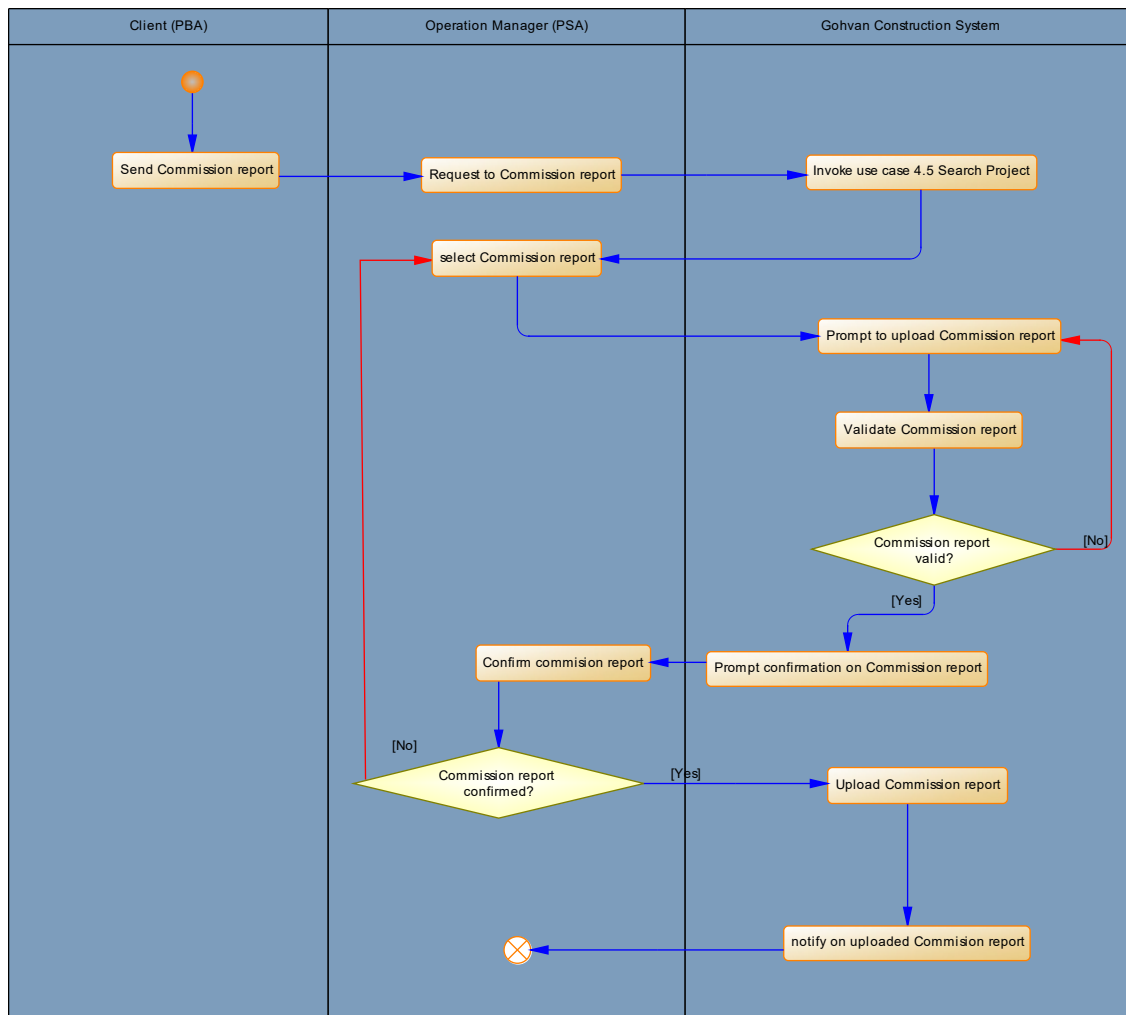


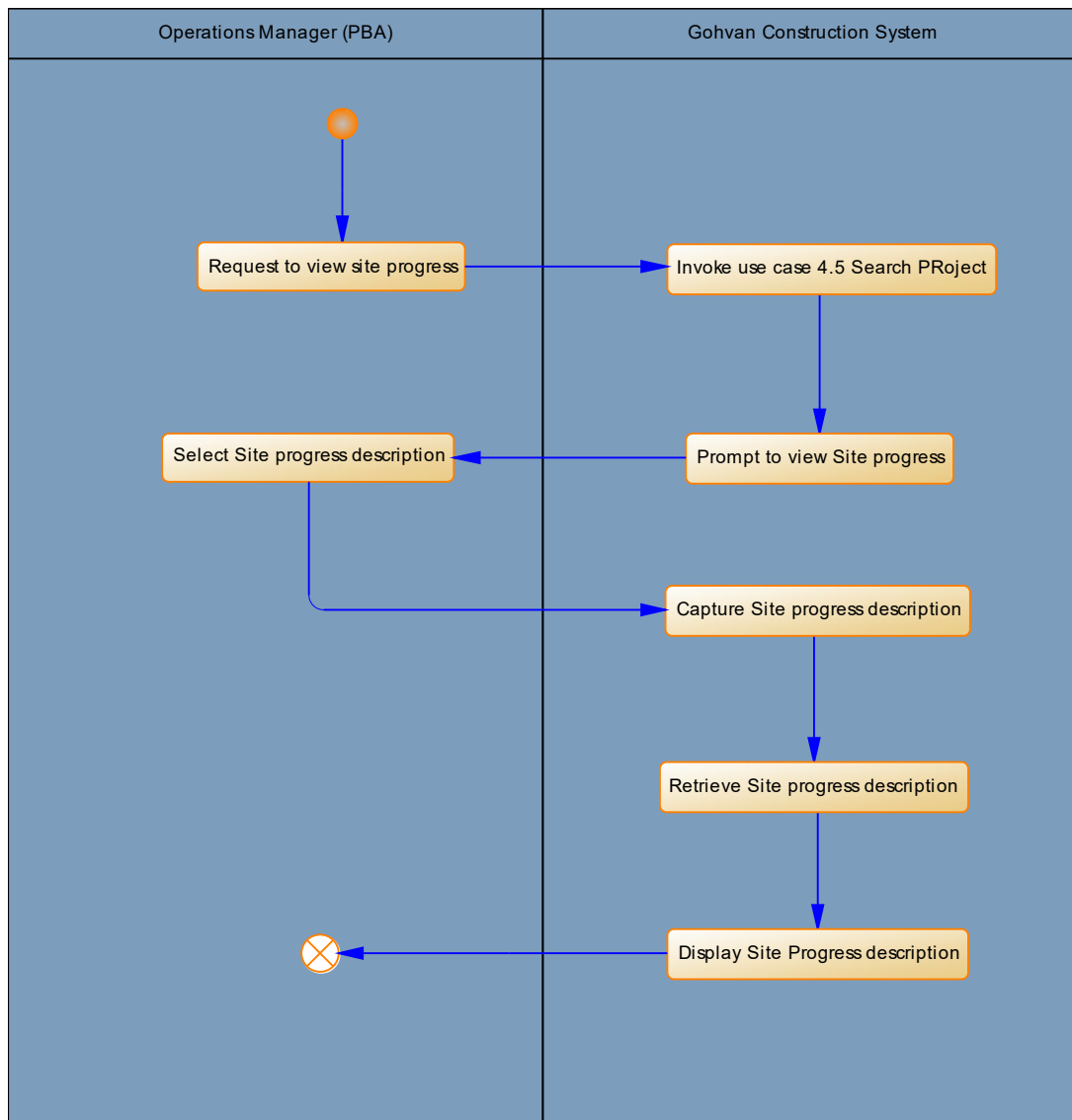


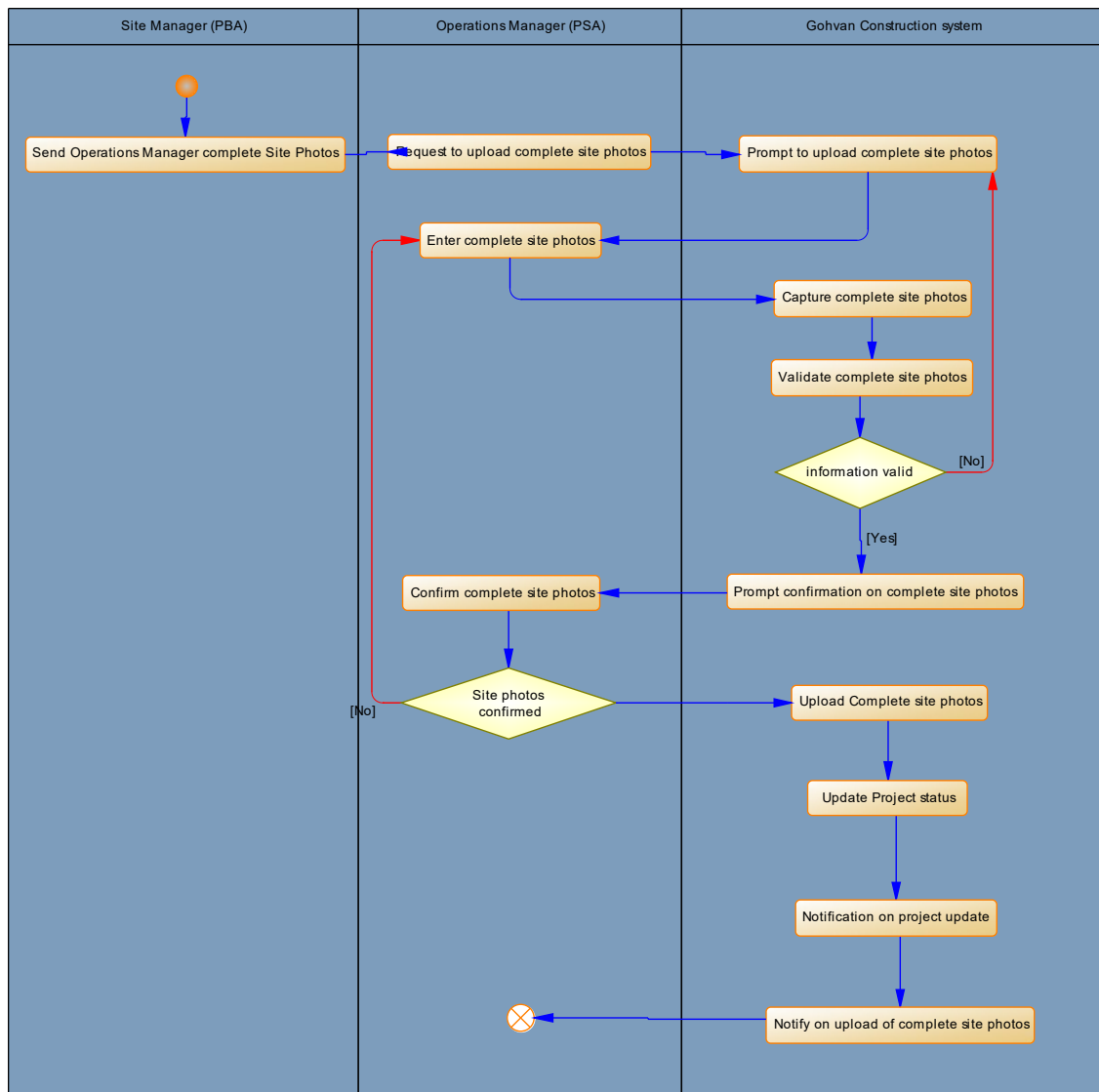


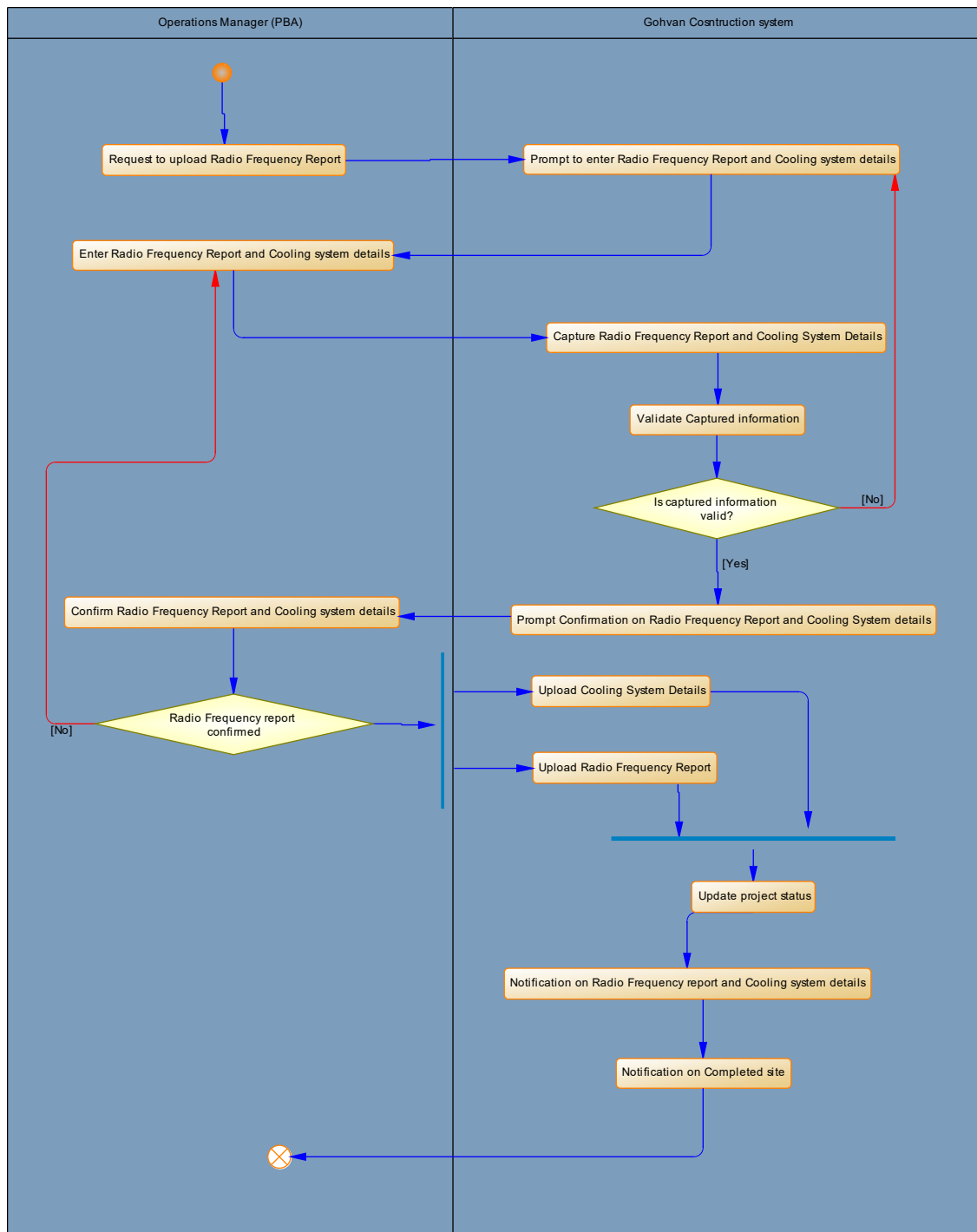


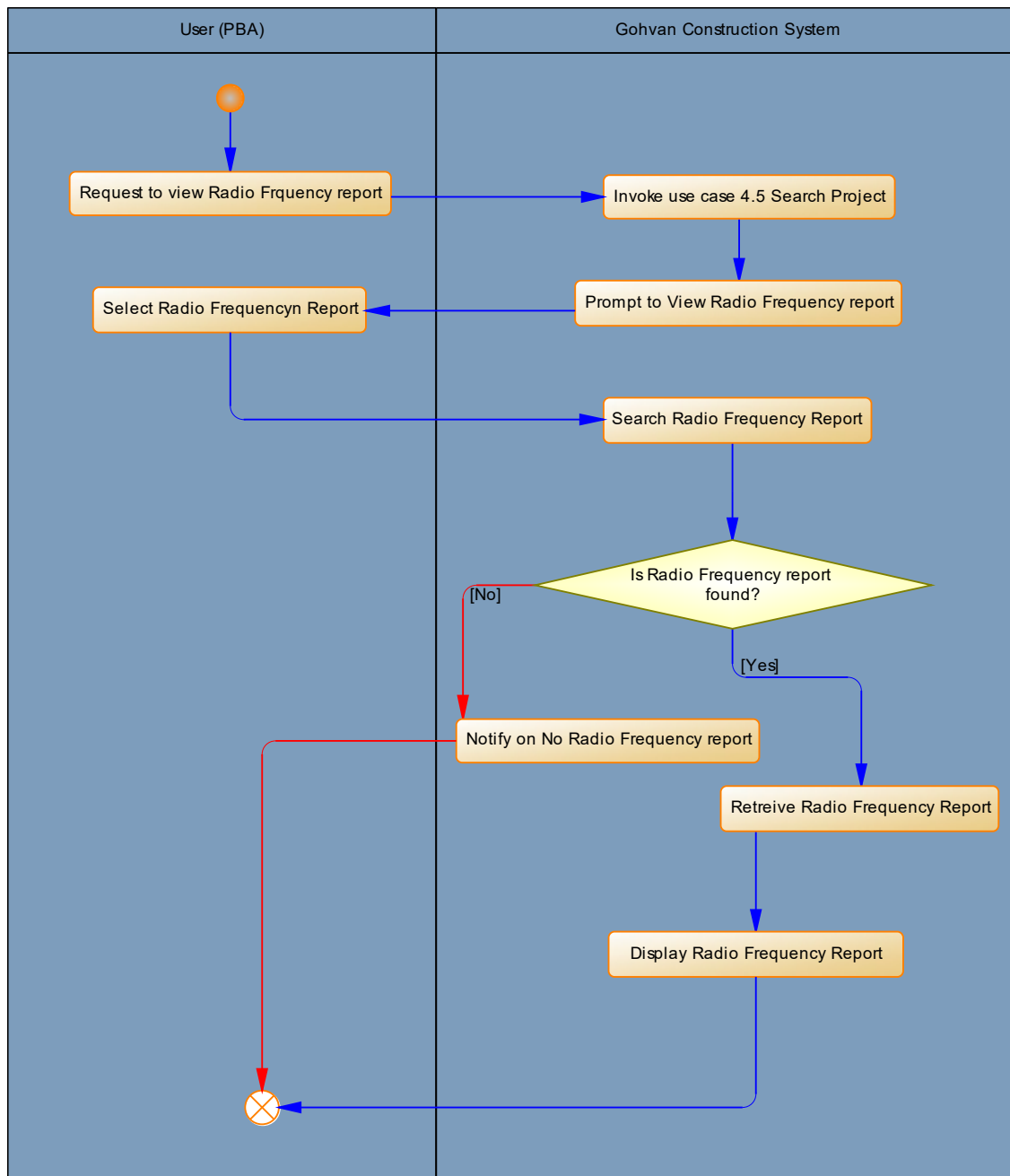


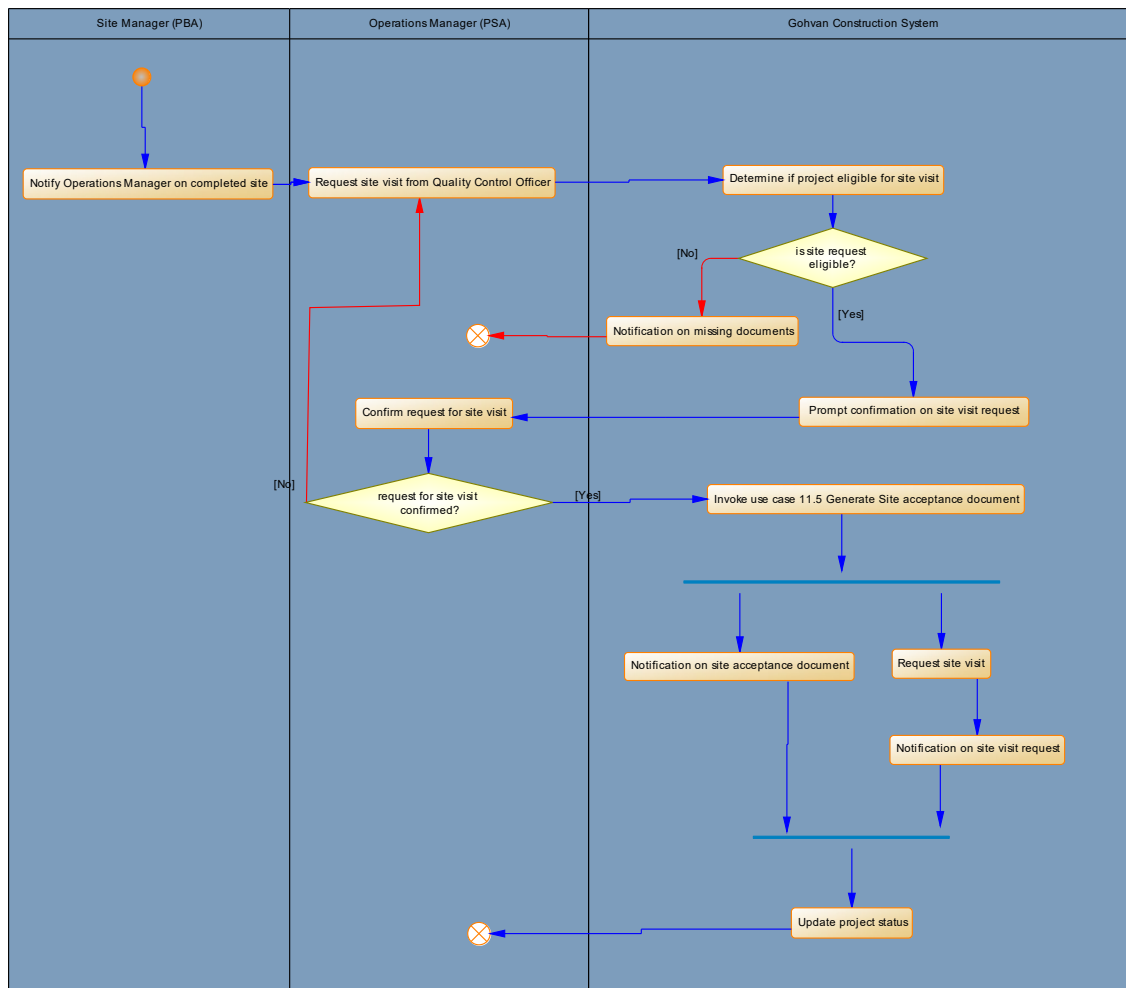


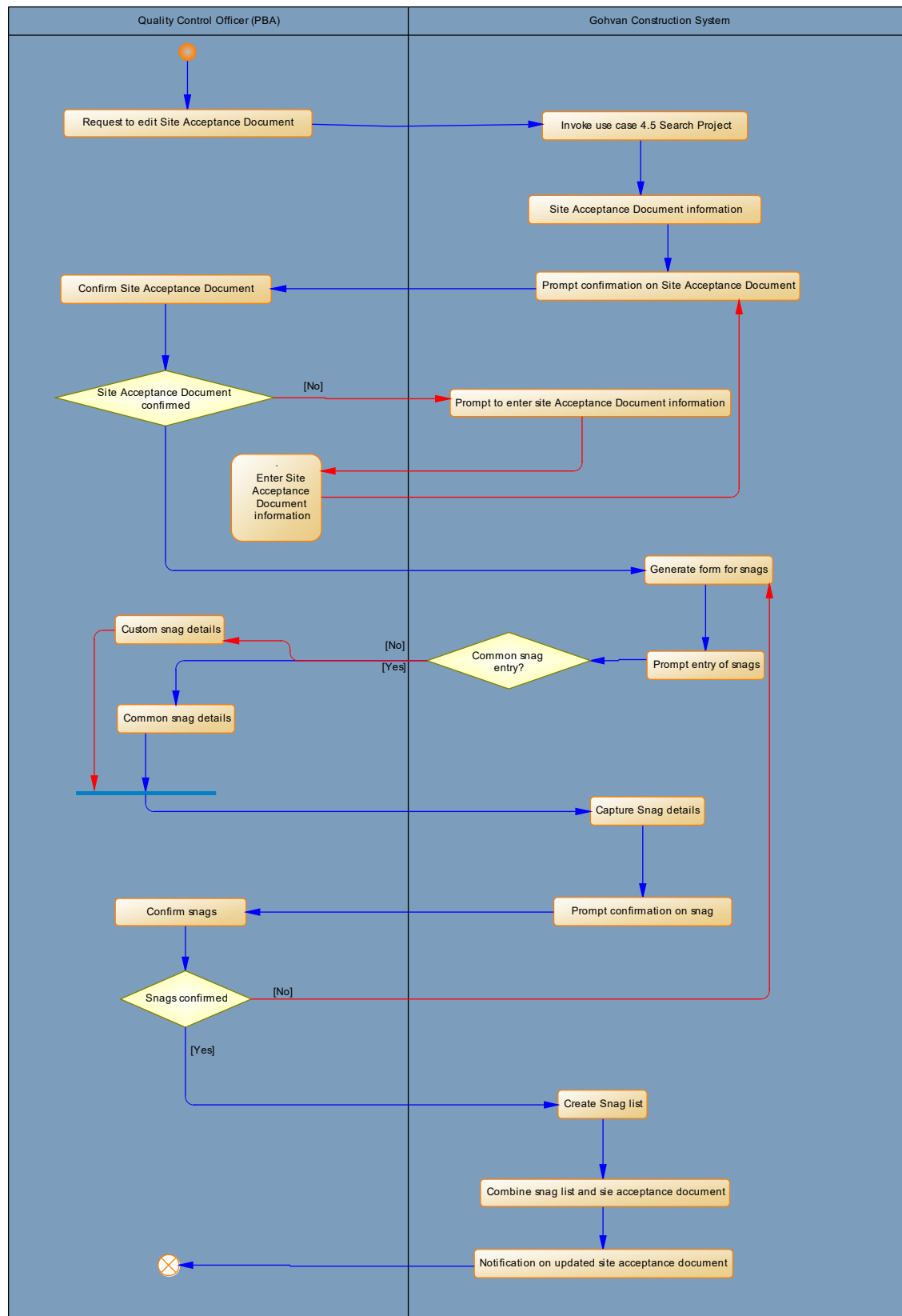


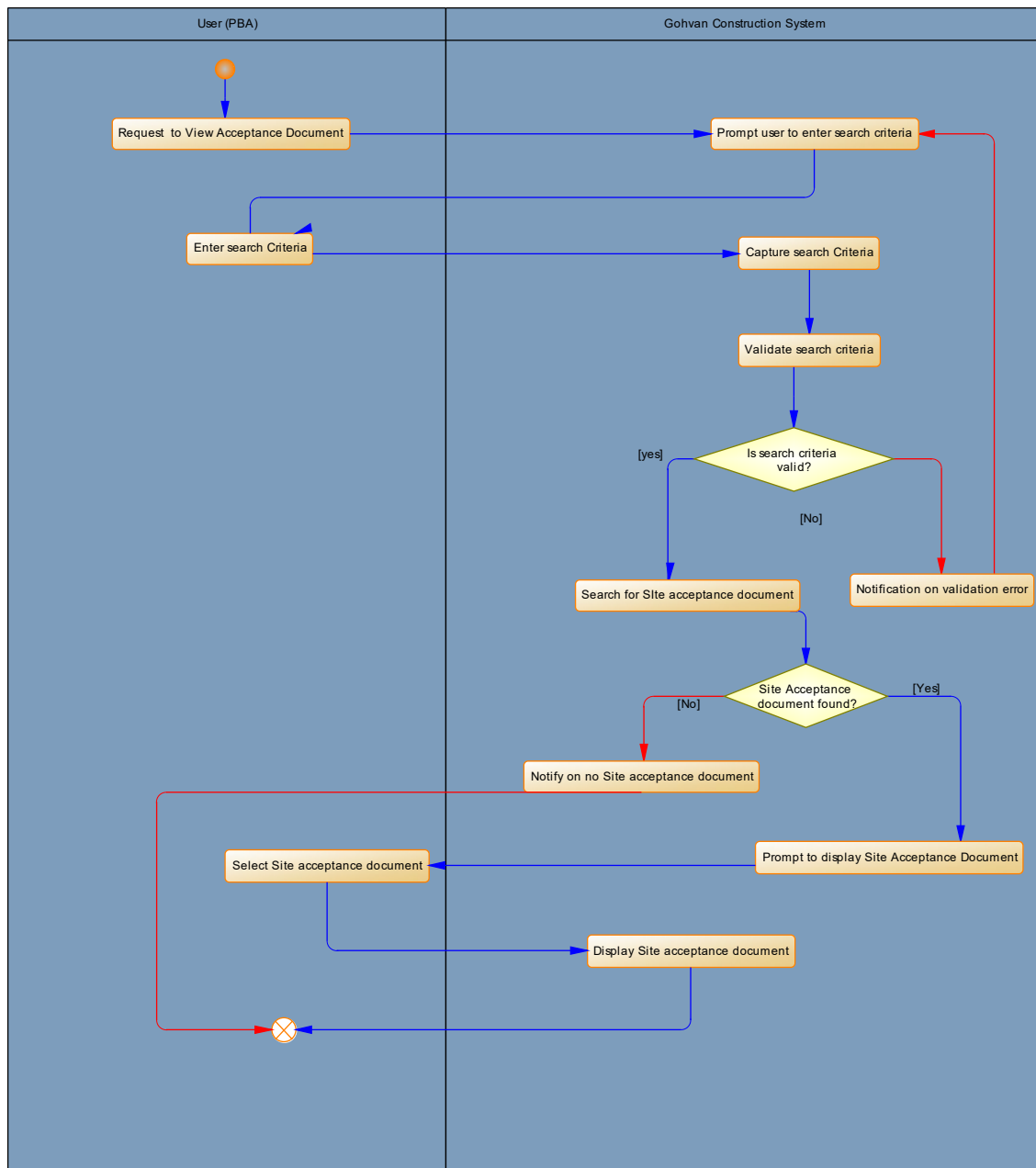


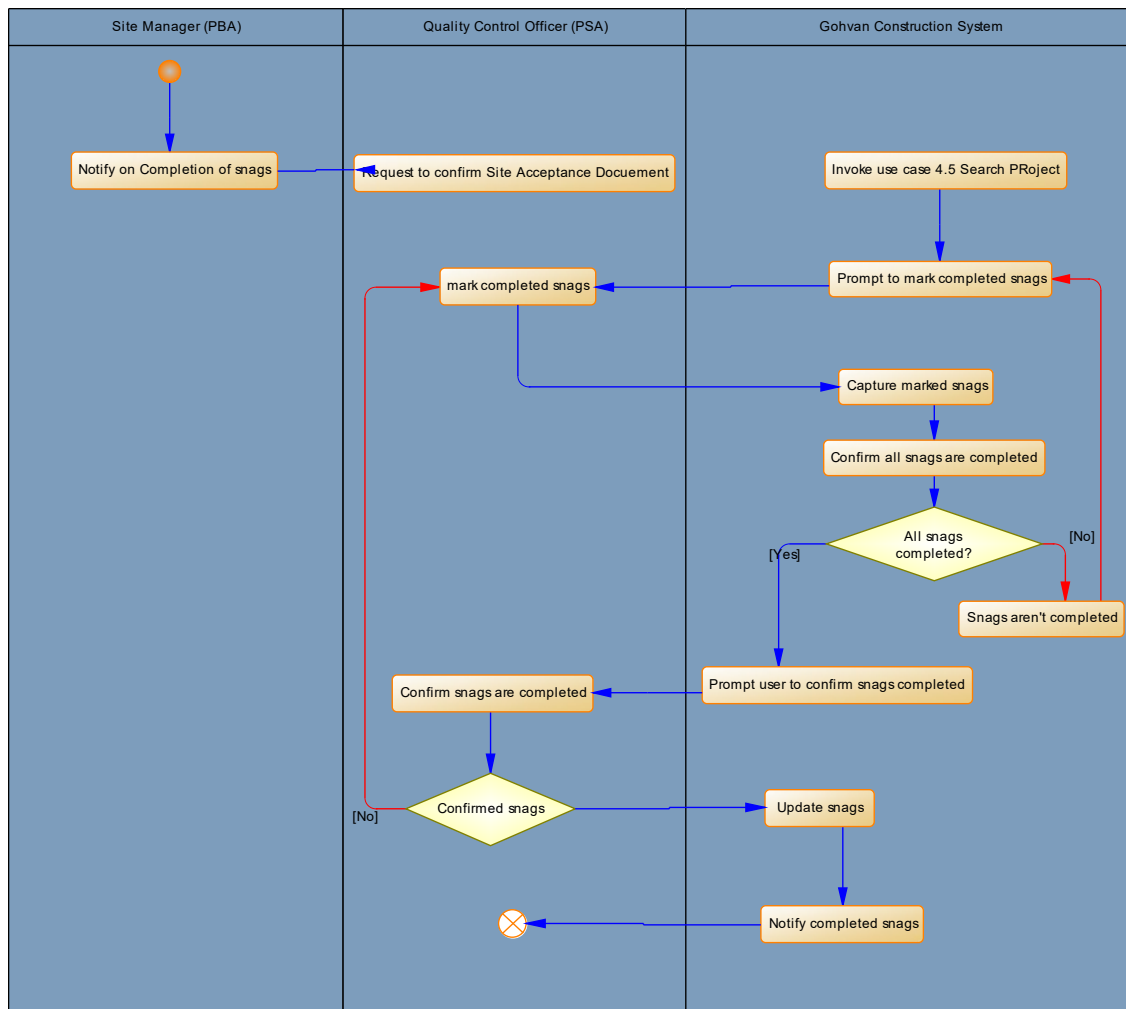


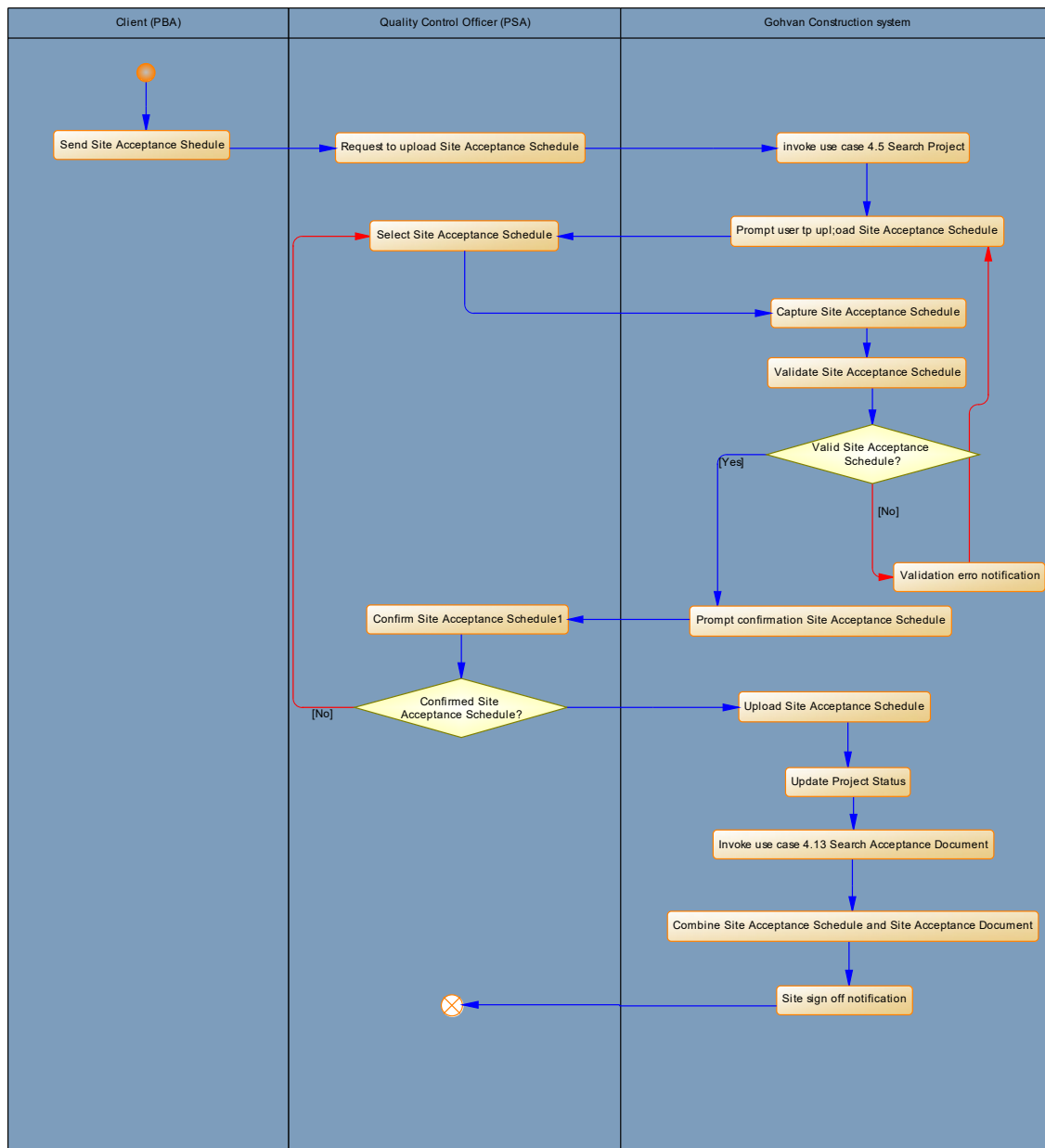


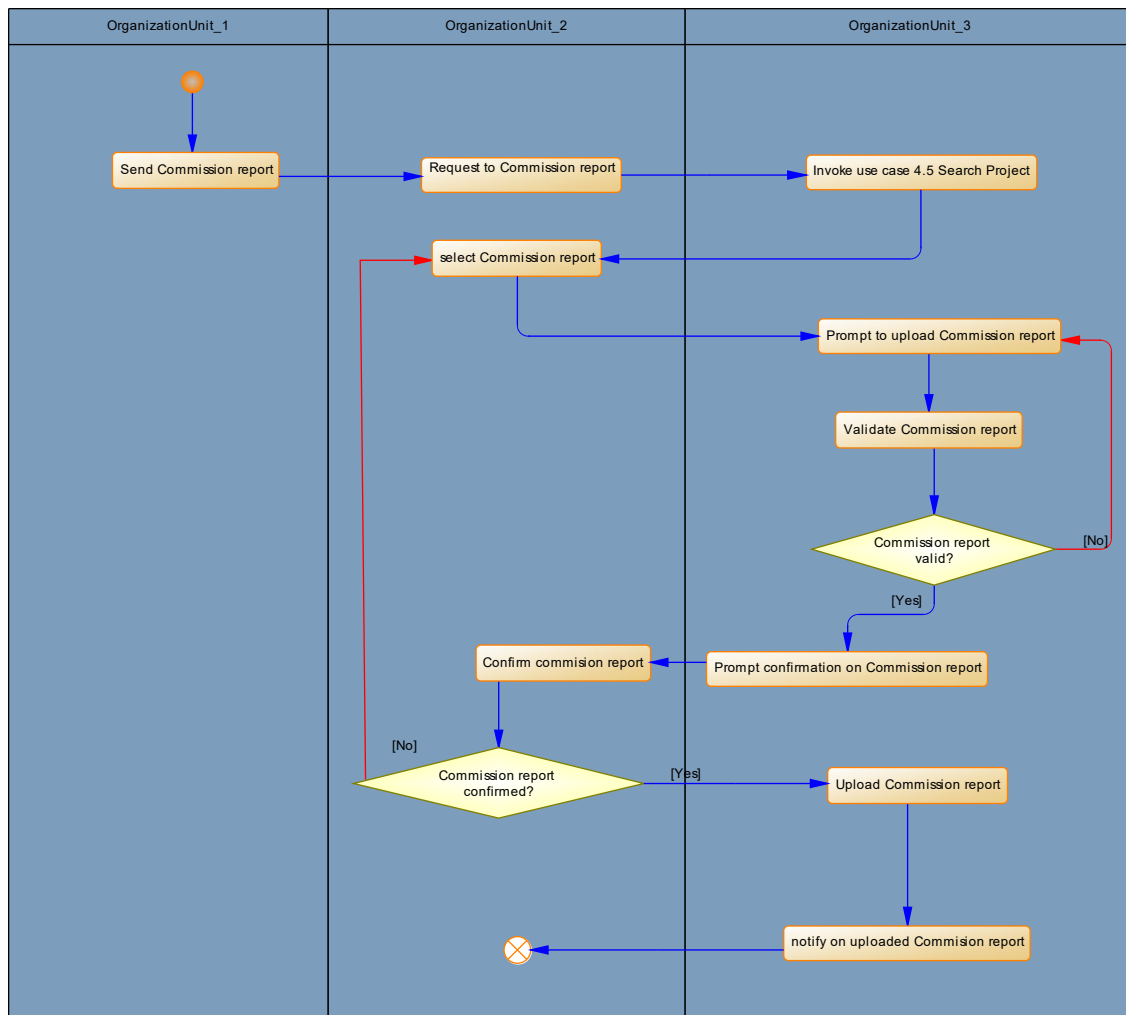




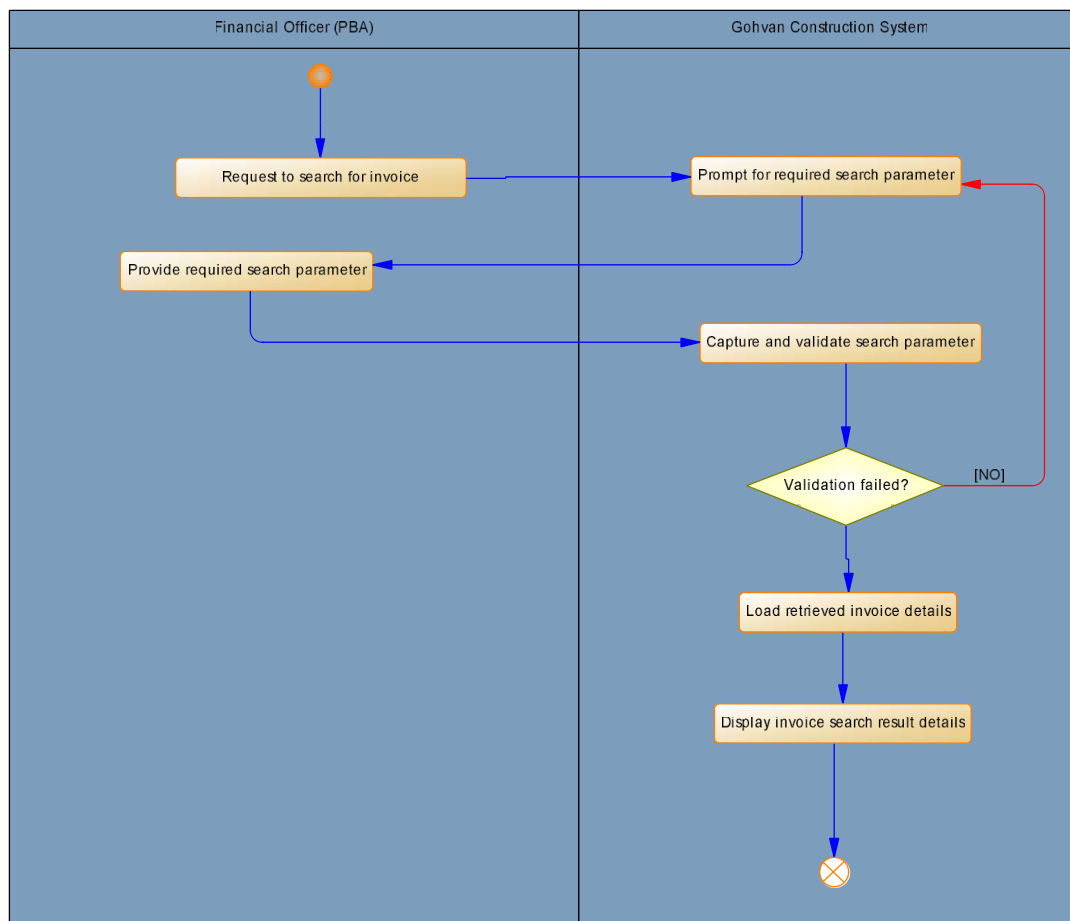


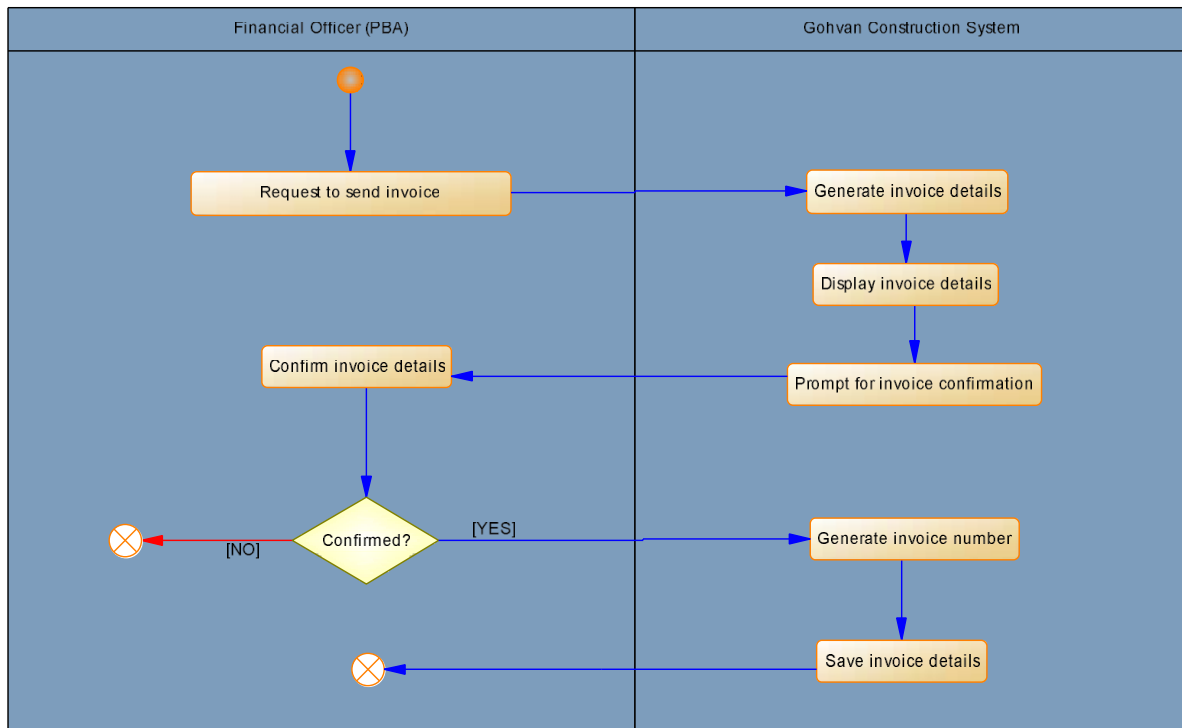


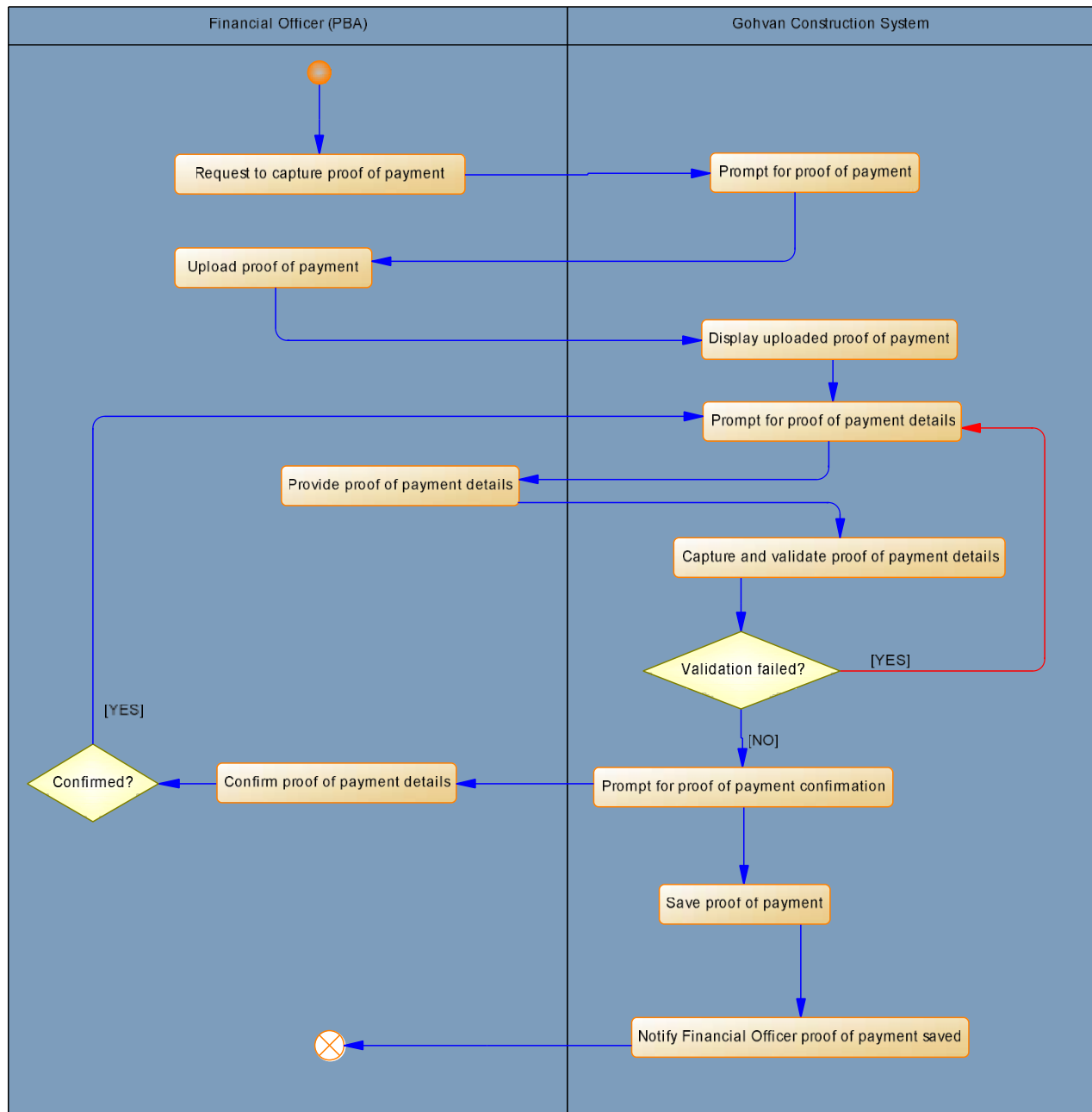


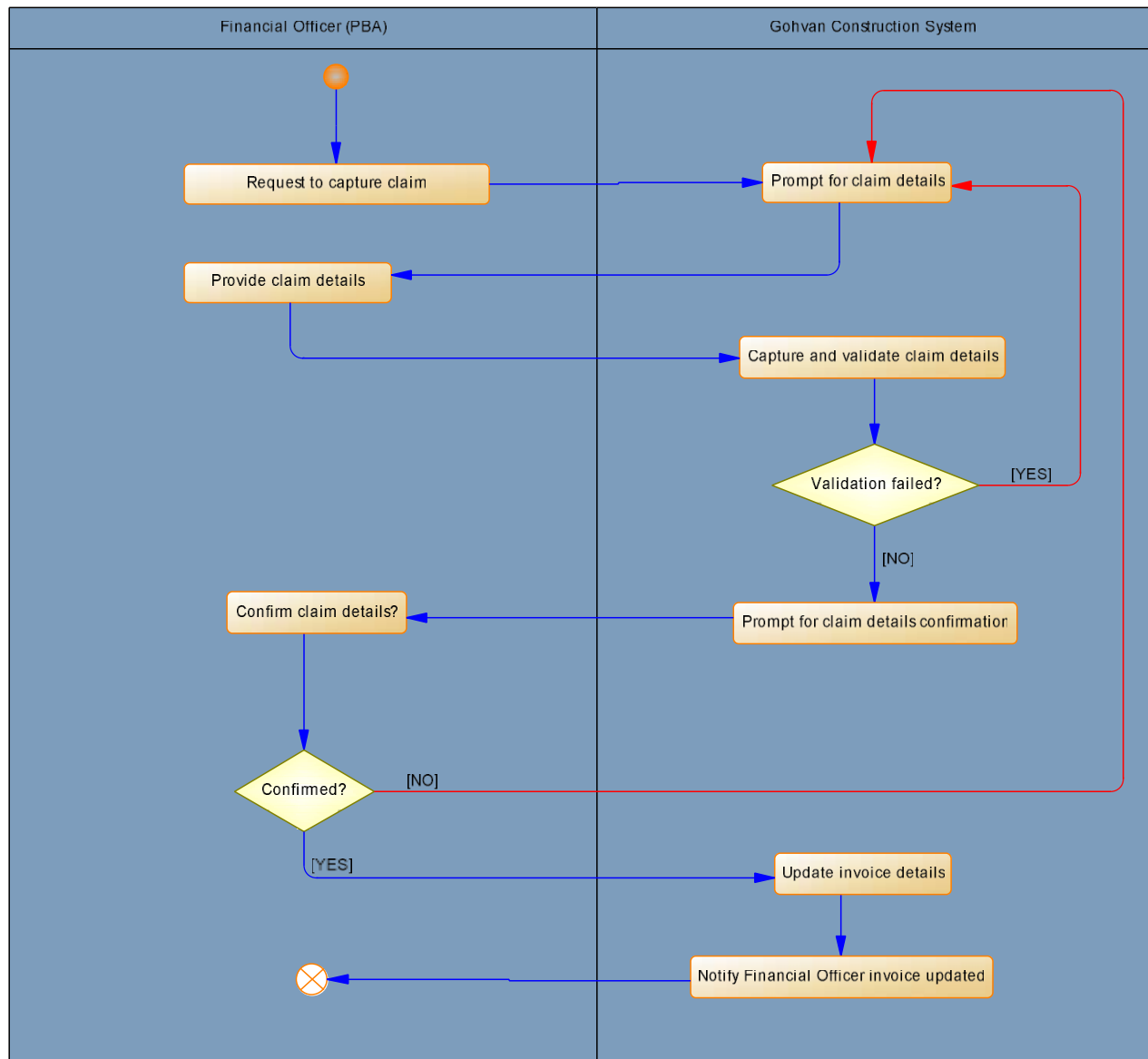


4.1.5 Invoicing Subsystem

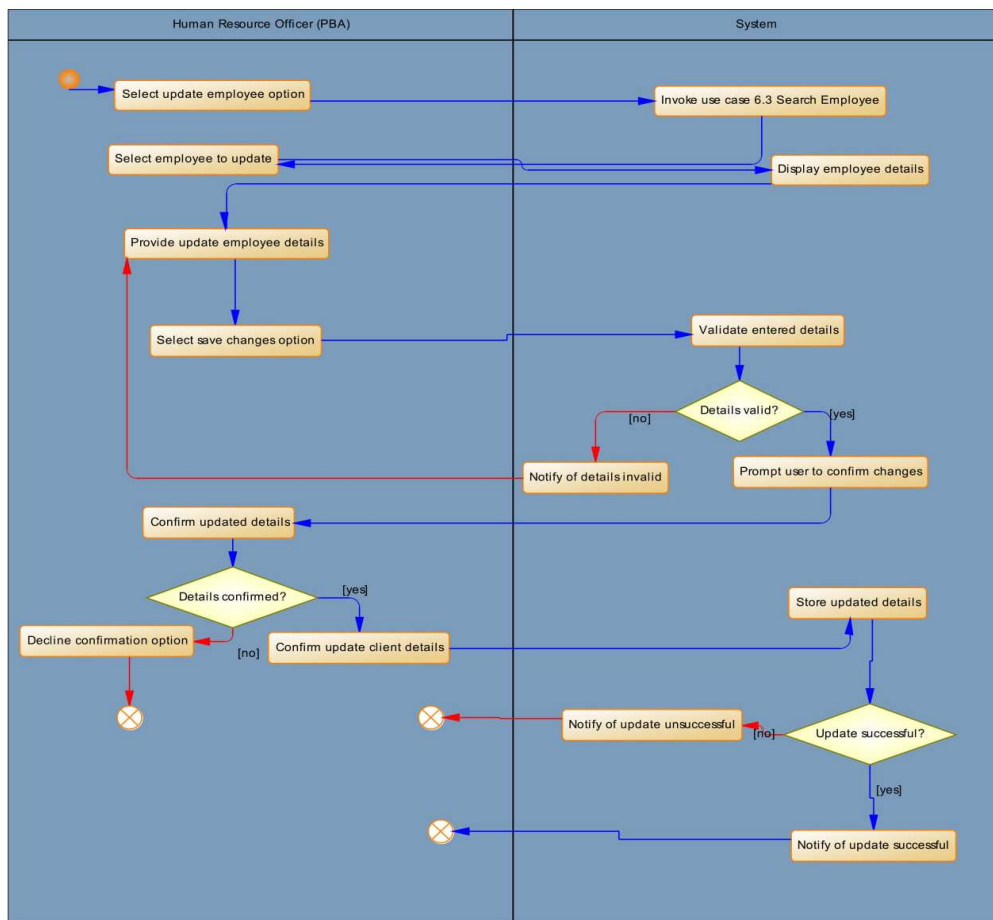
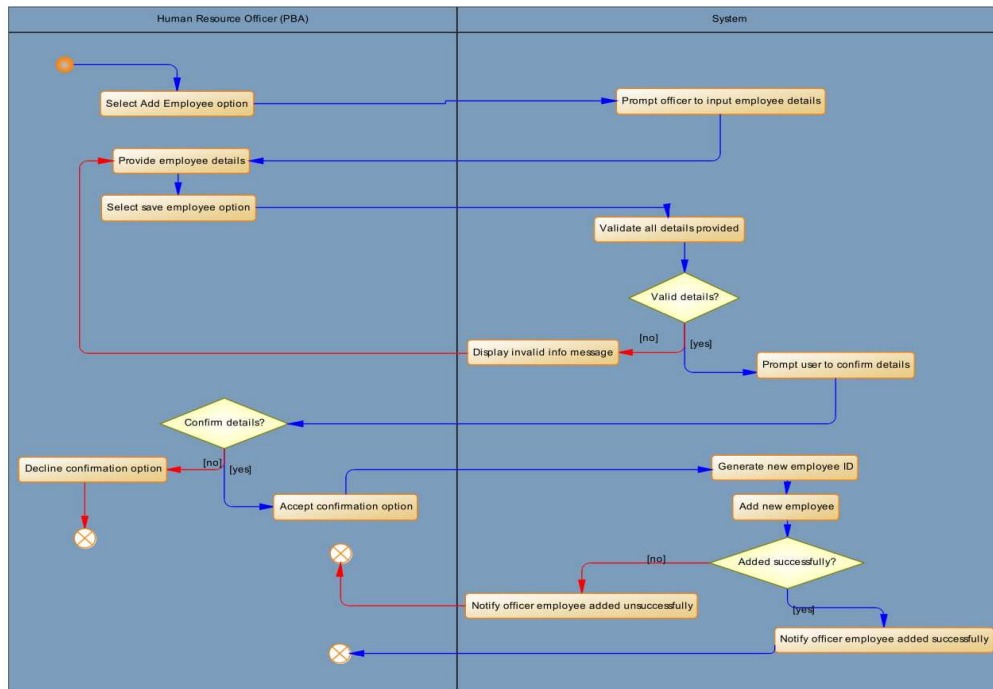


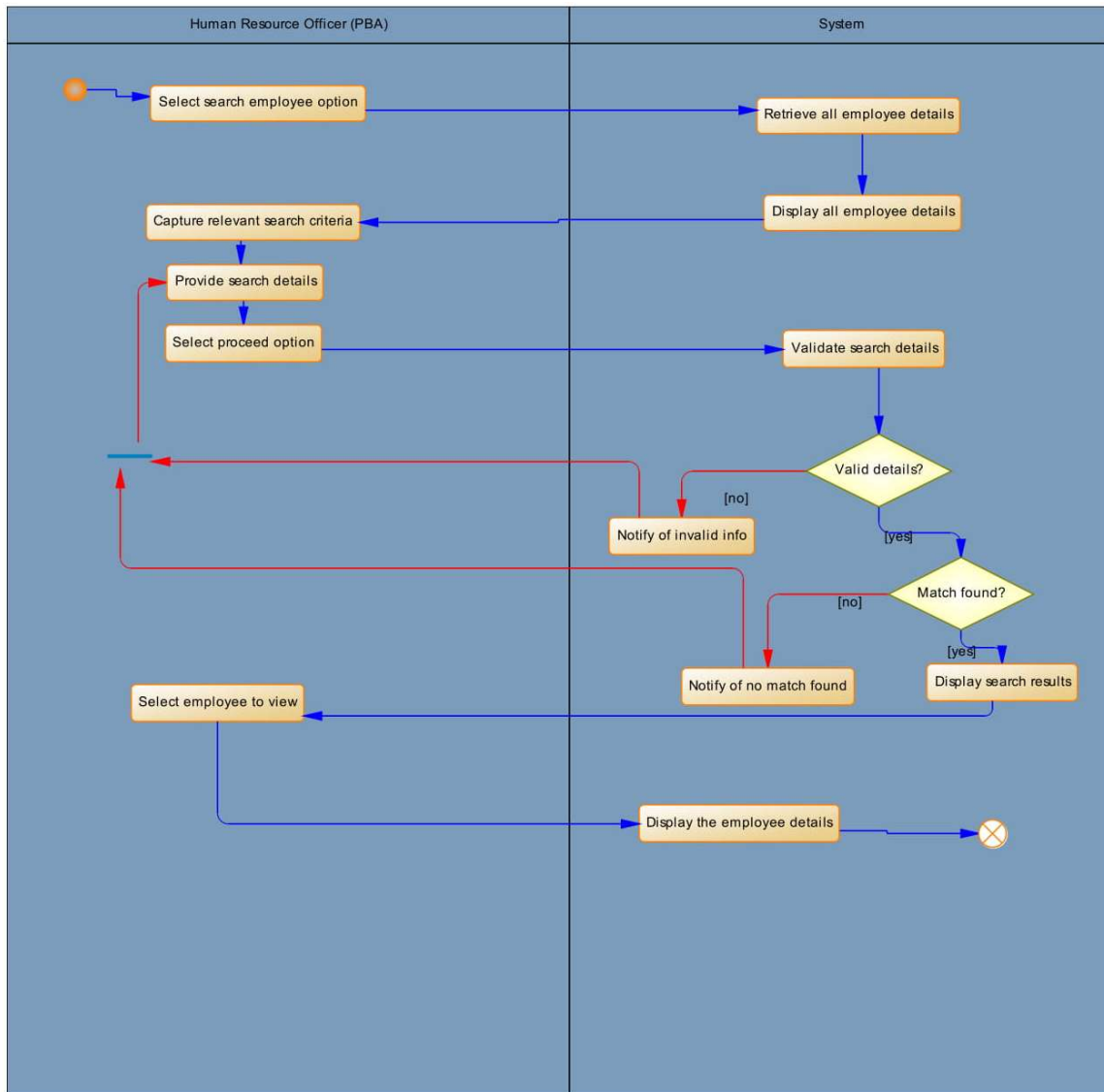


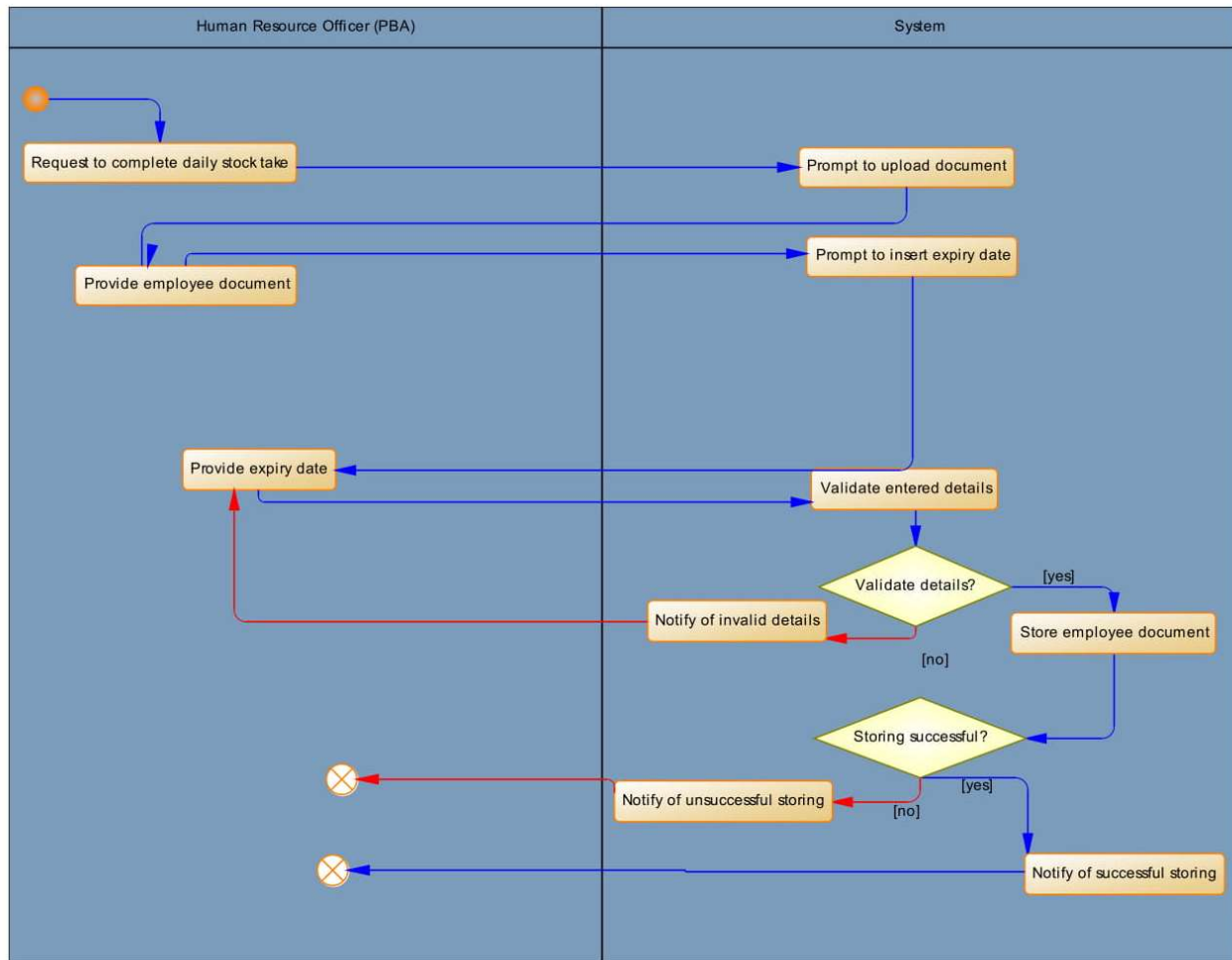


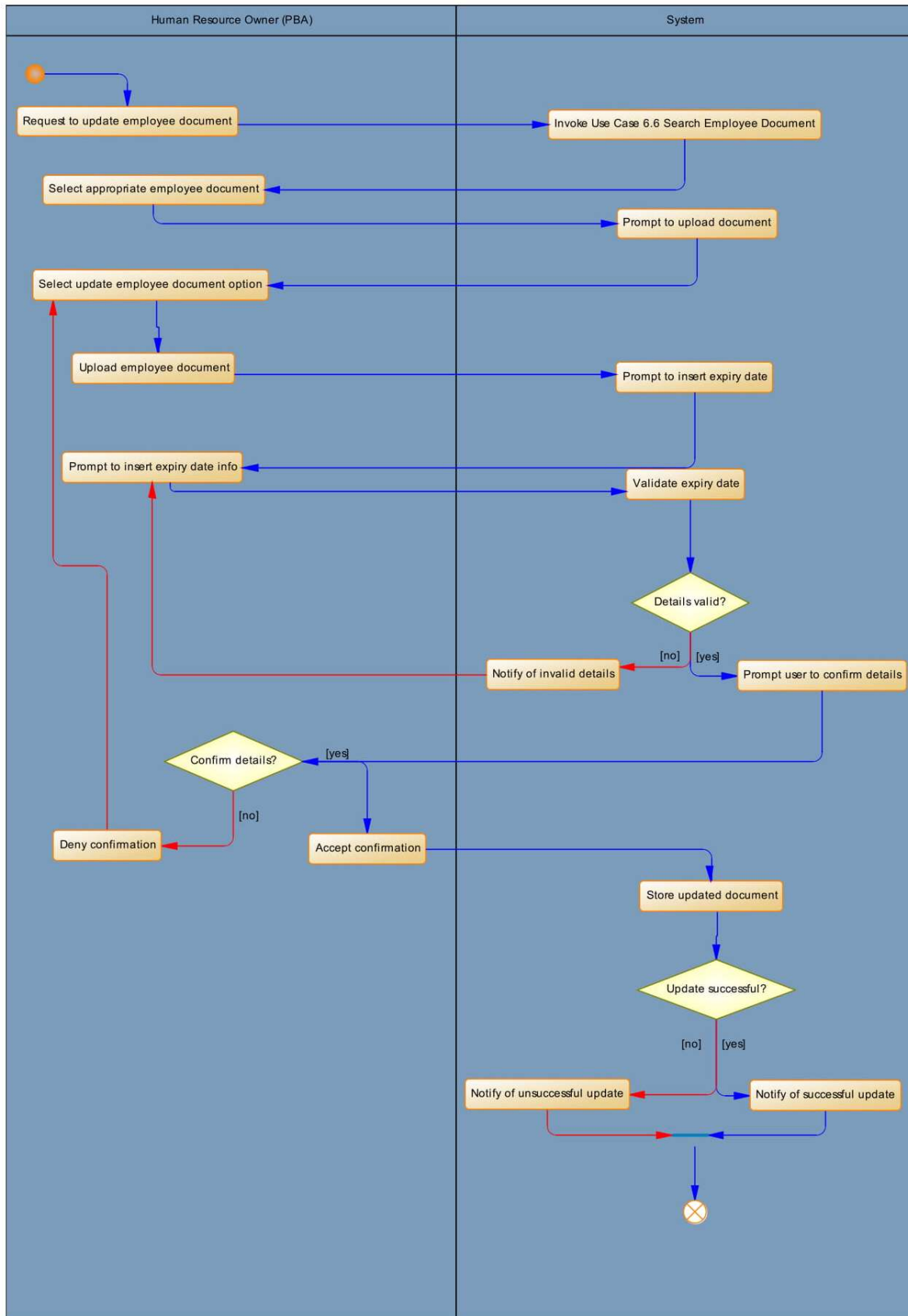


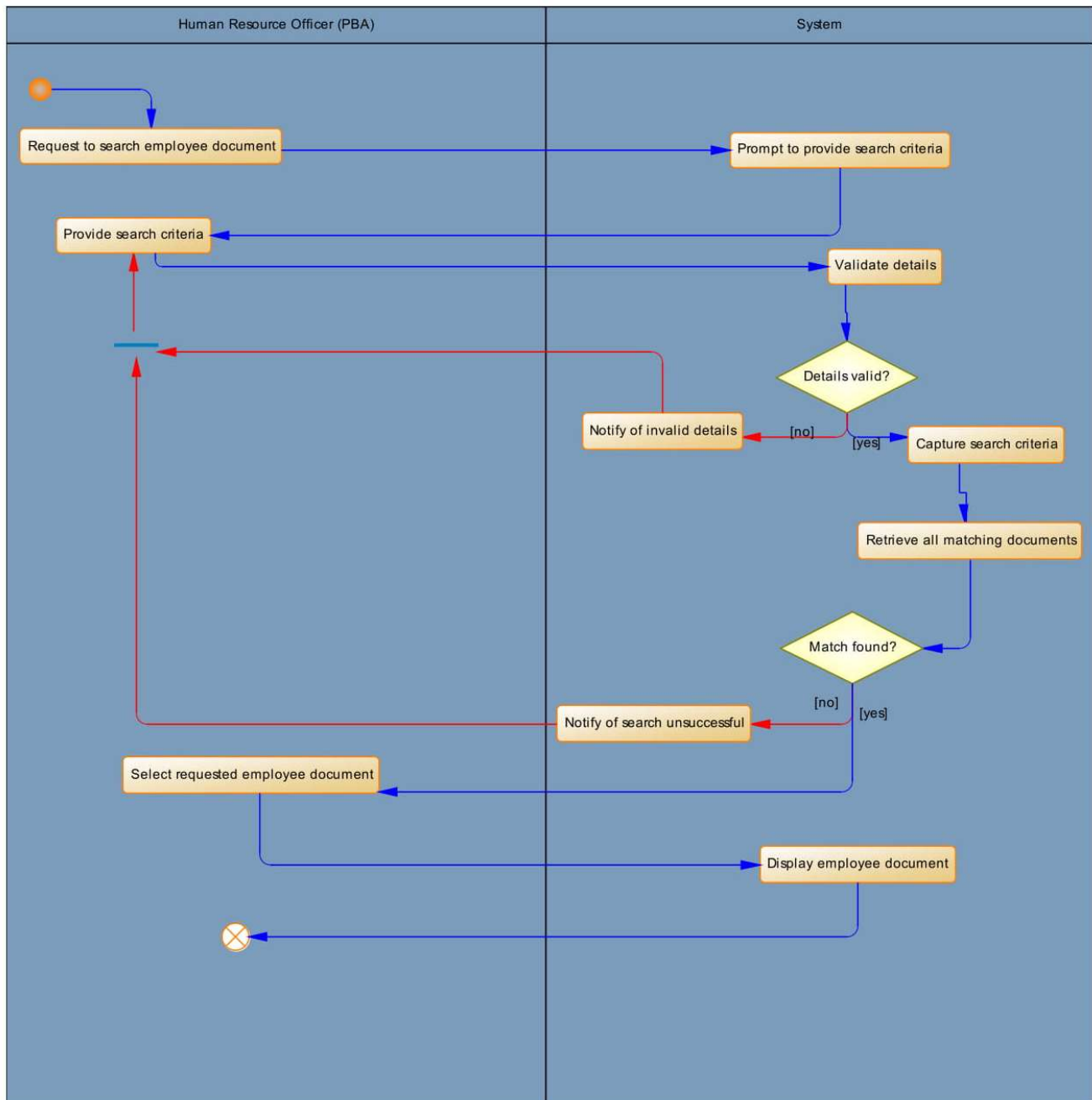
4.1.6 Human Resource Subsystem

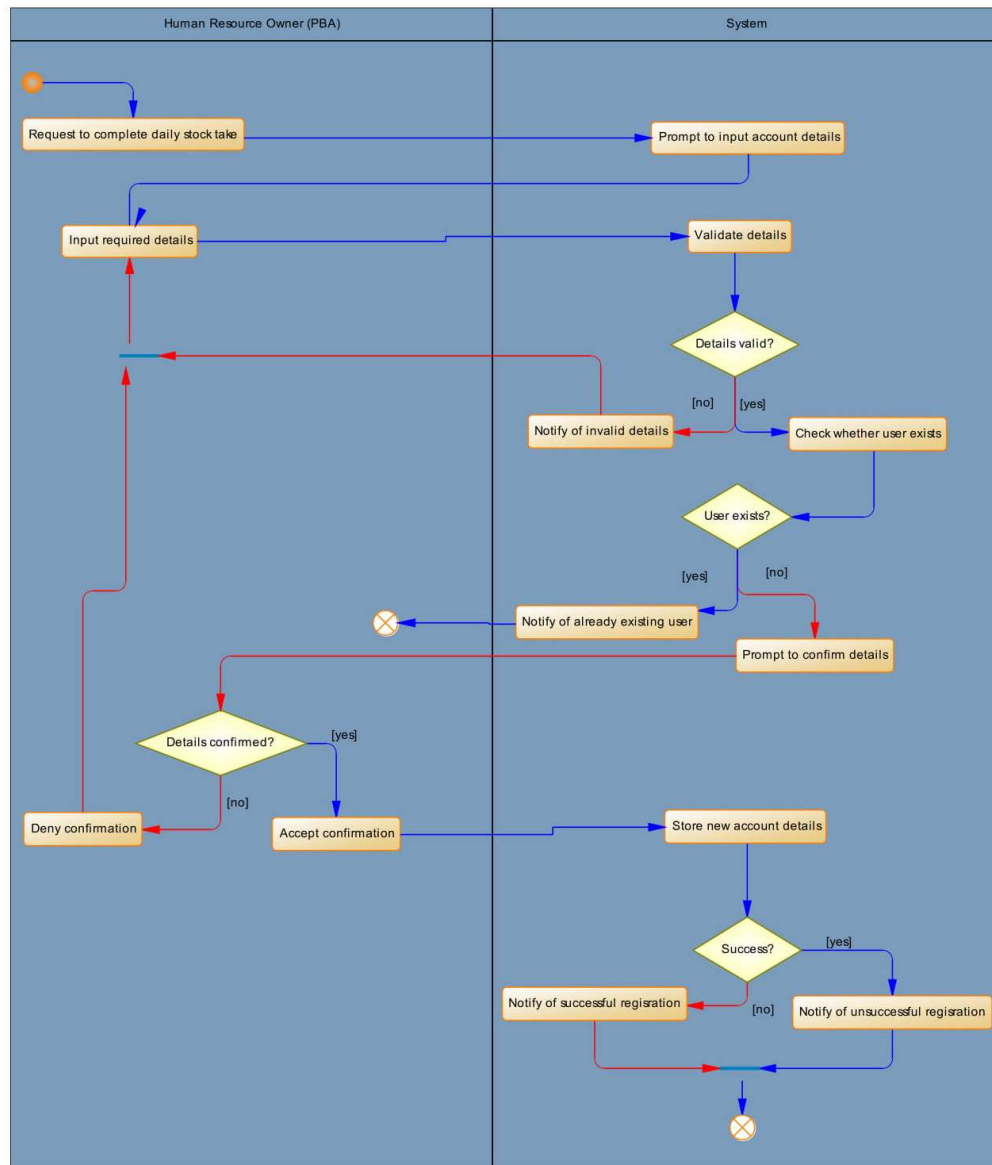


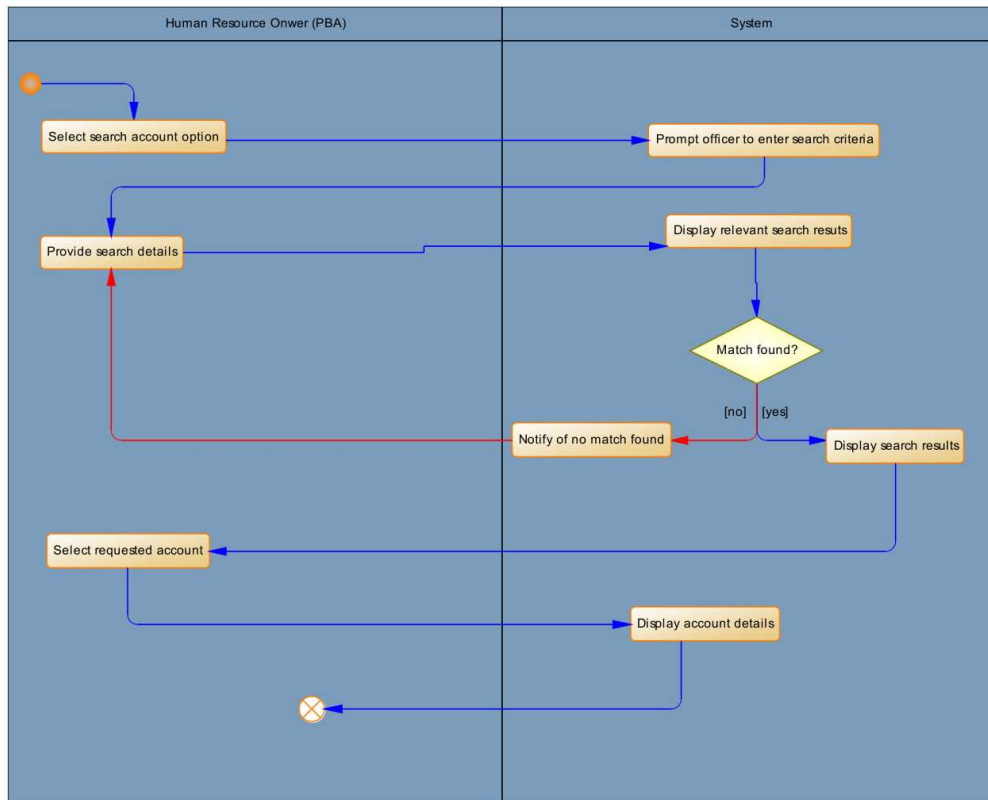


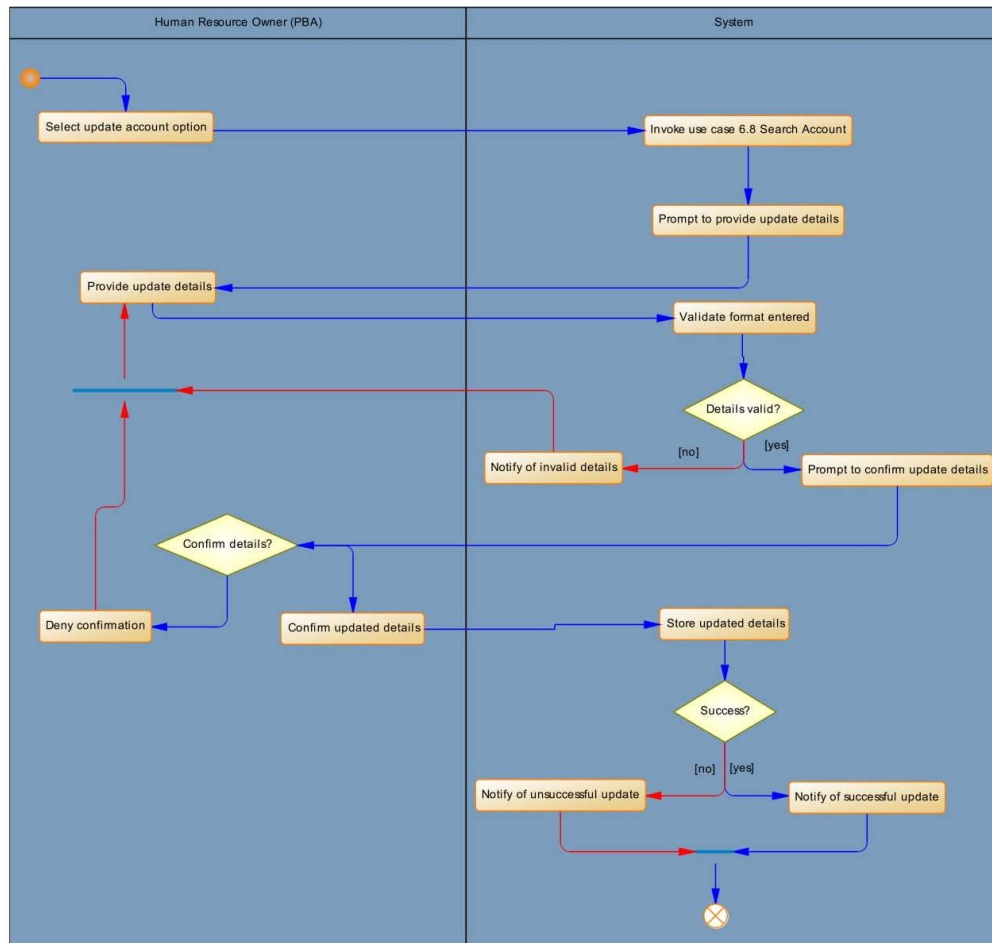




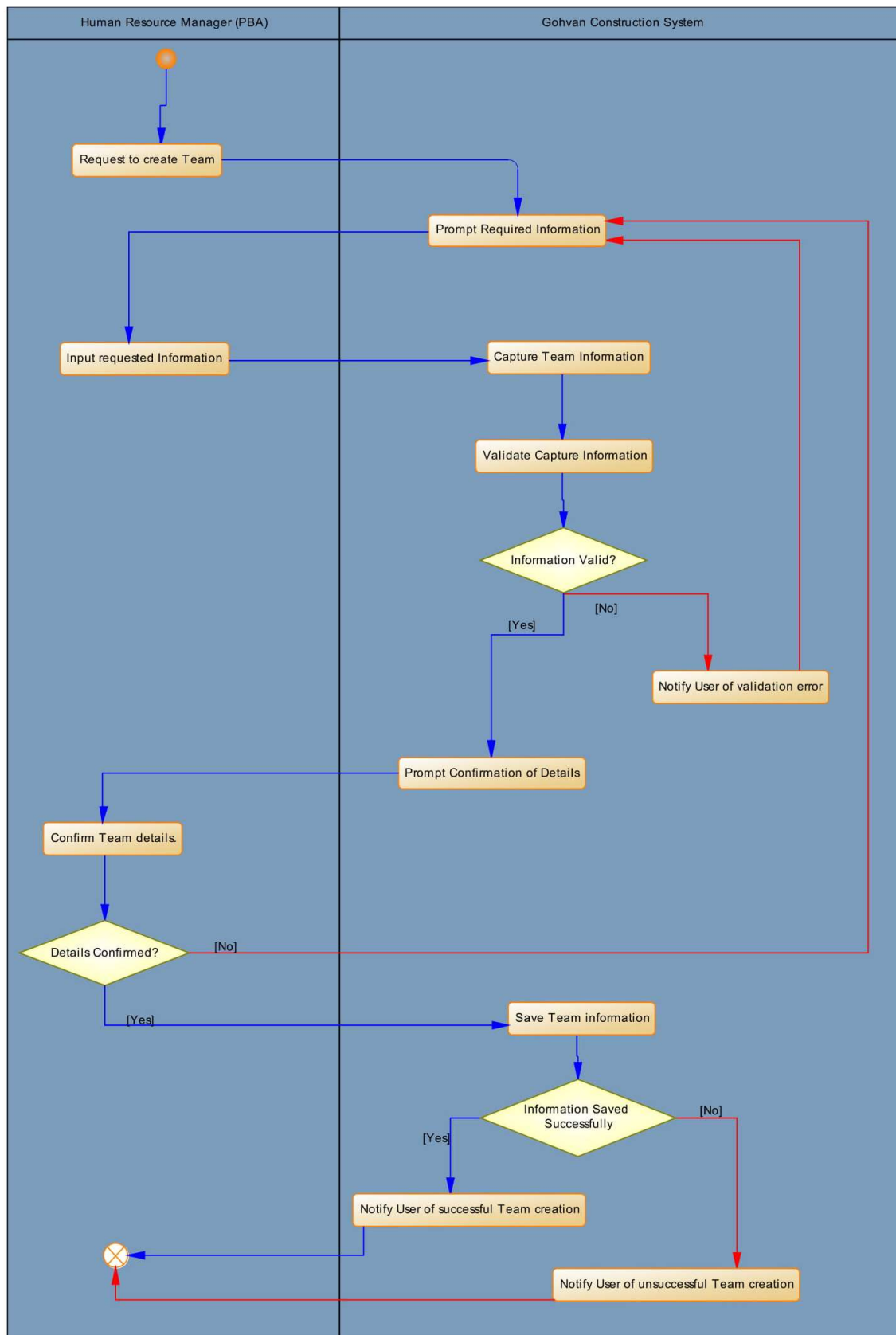


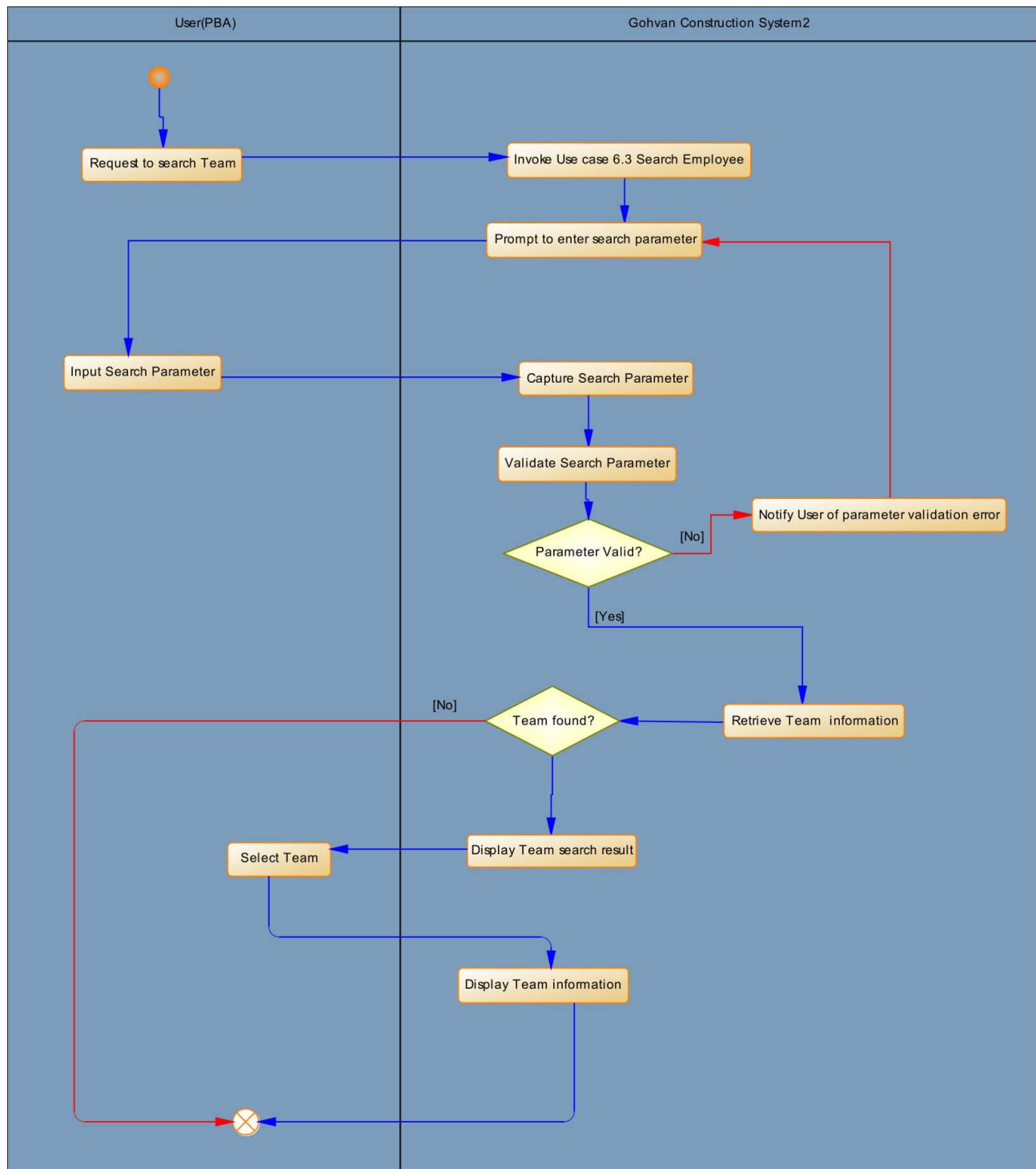


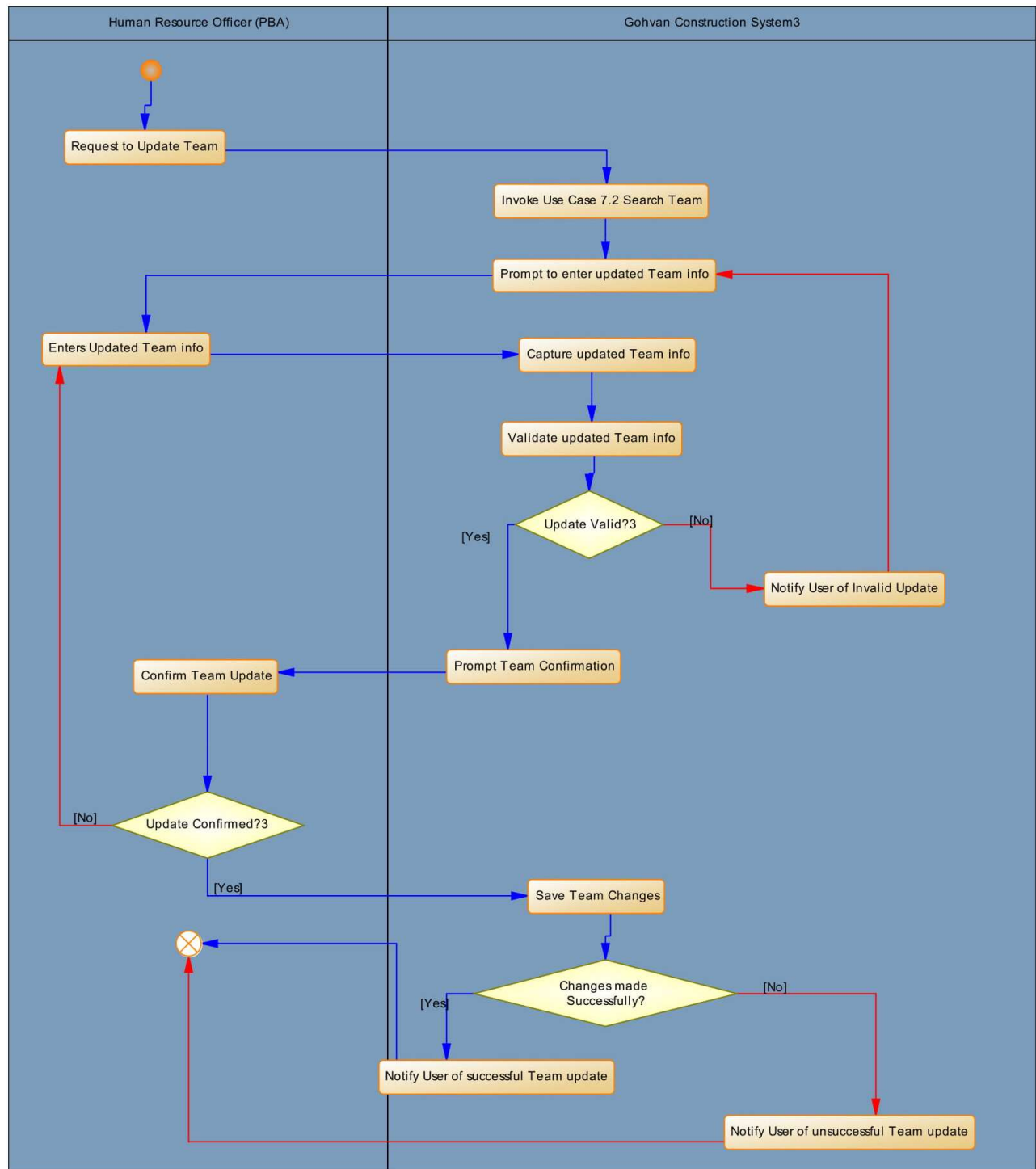




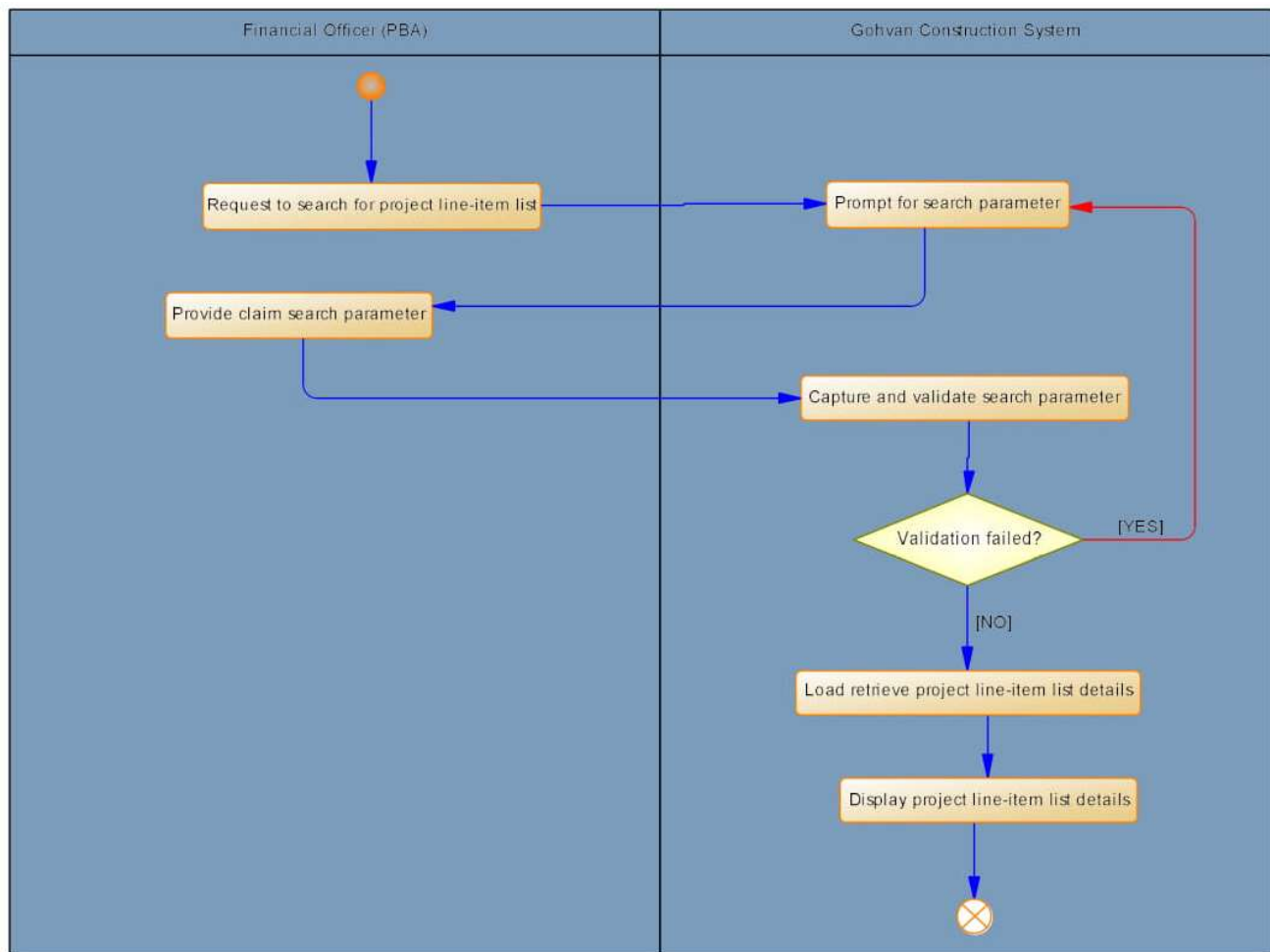
4.1.7 Team Subsystem

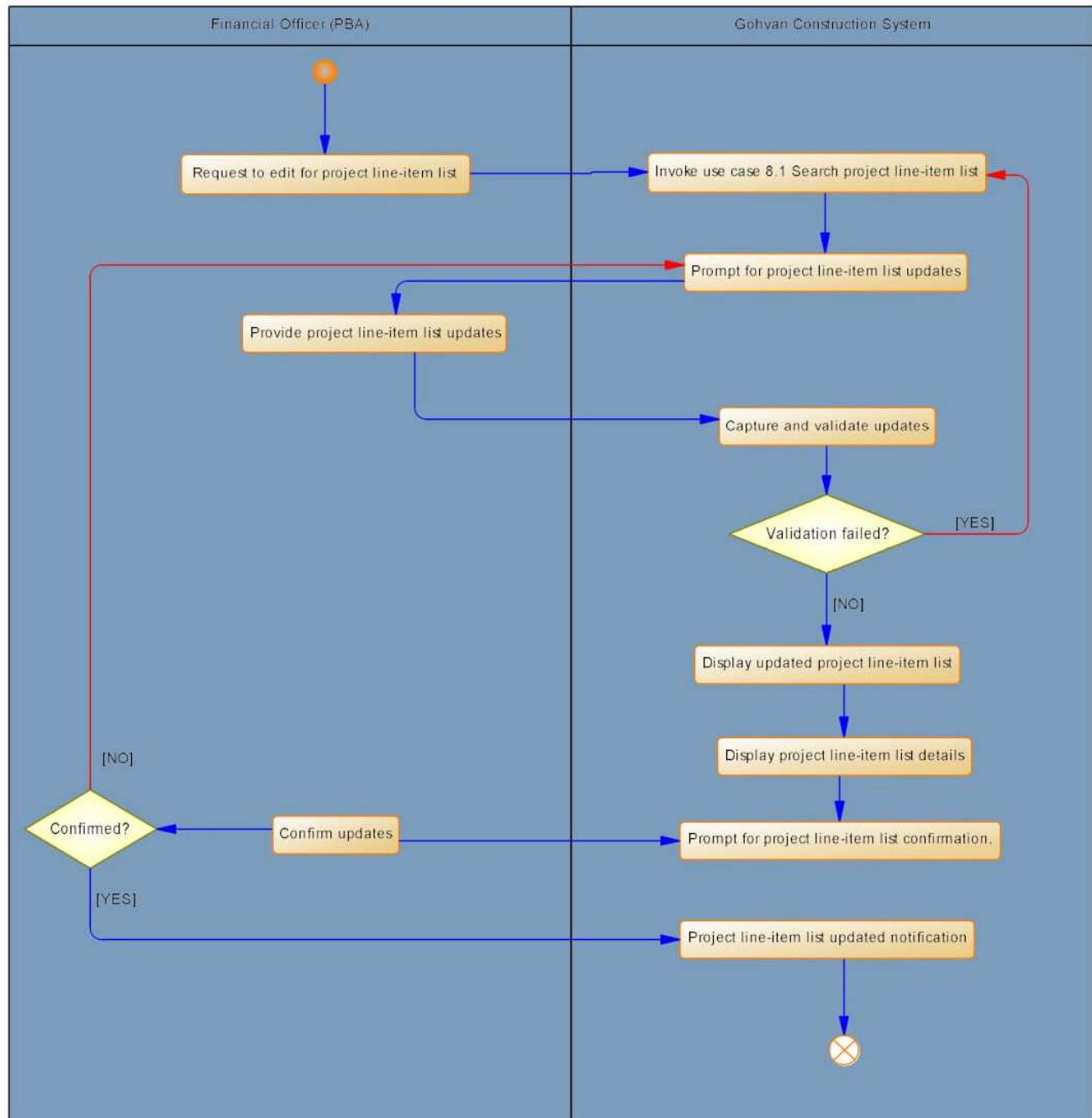


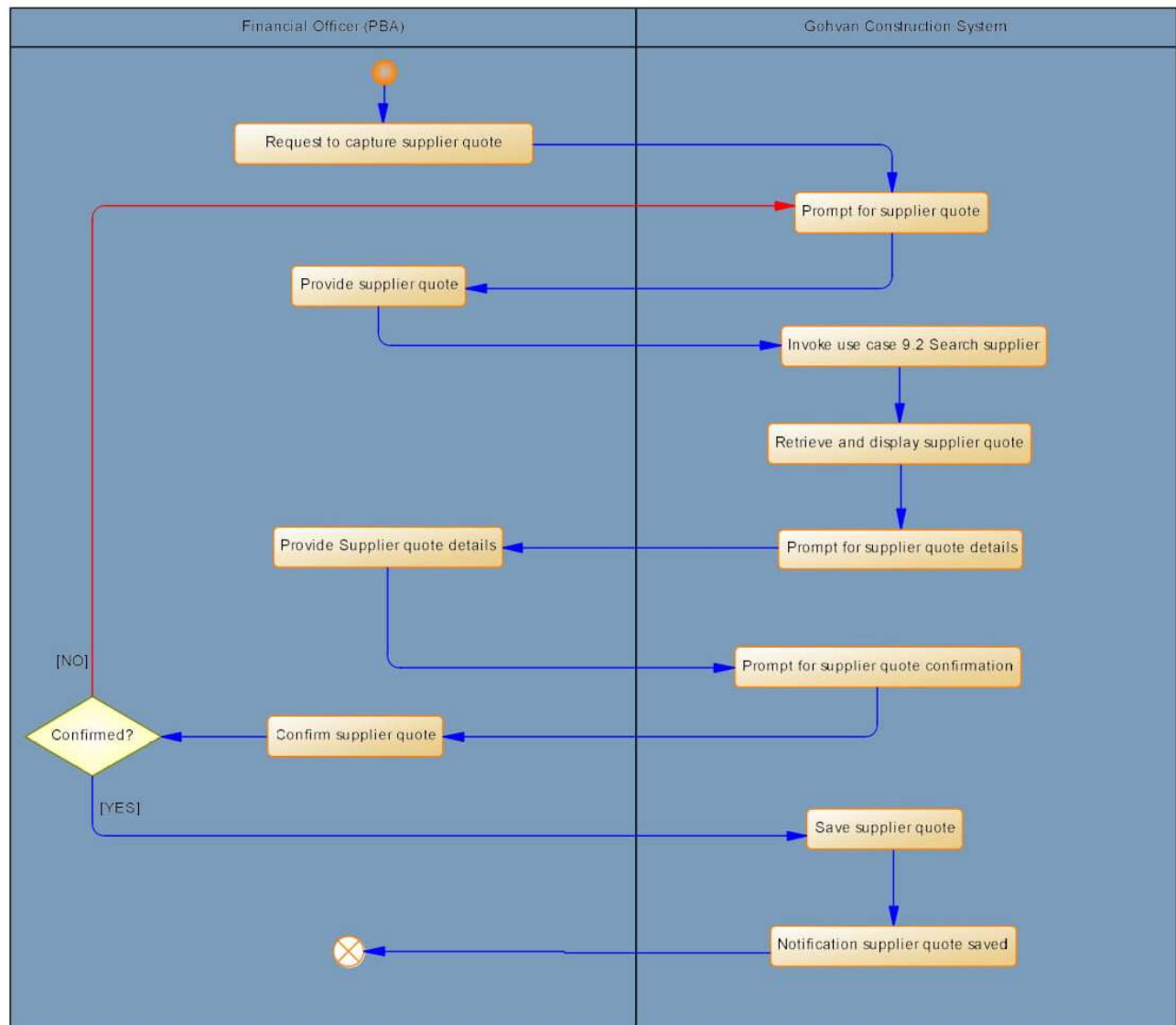


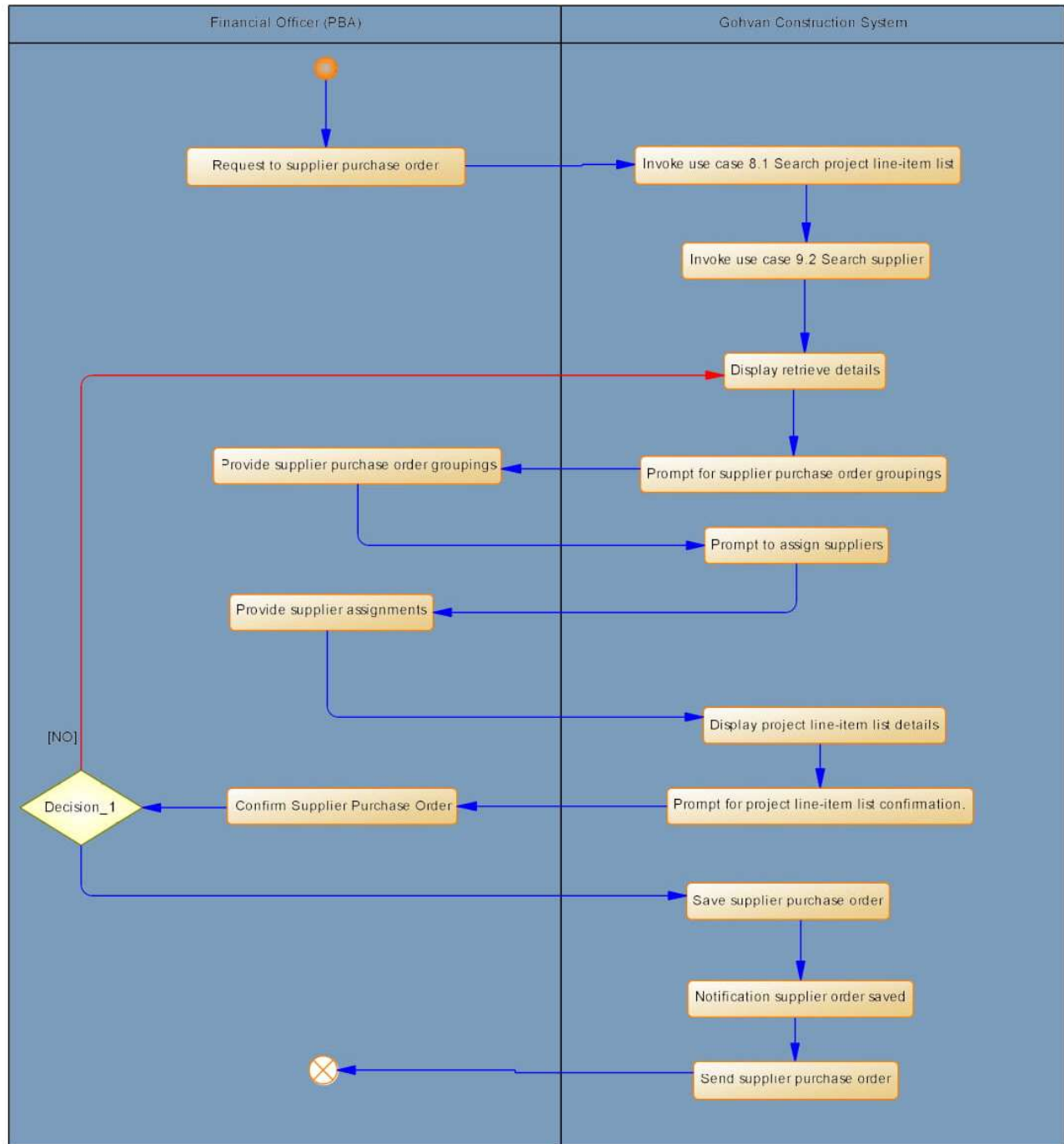


4.1.8 Supplier Order Subsystem

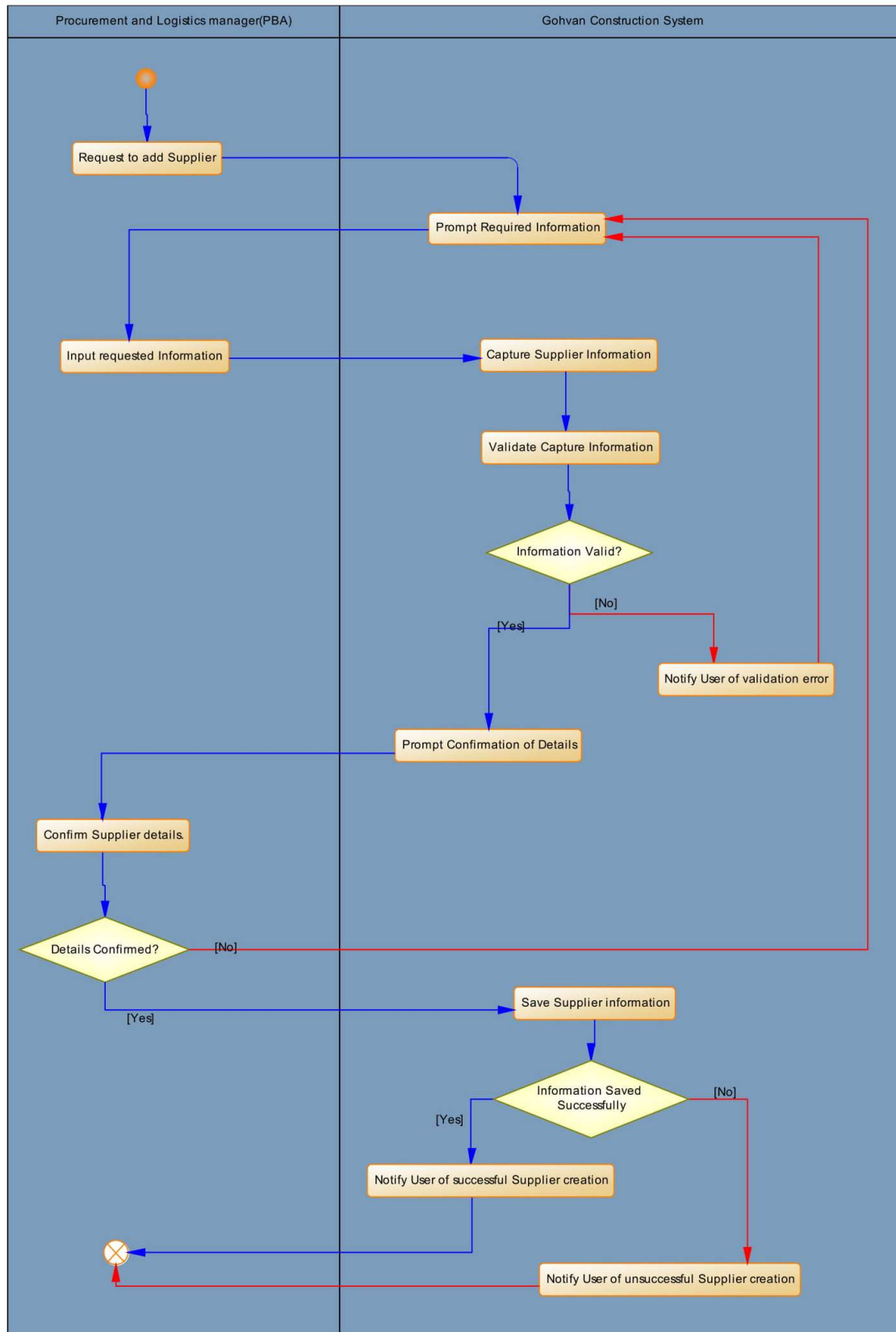


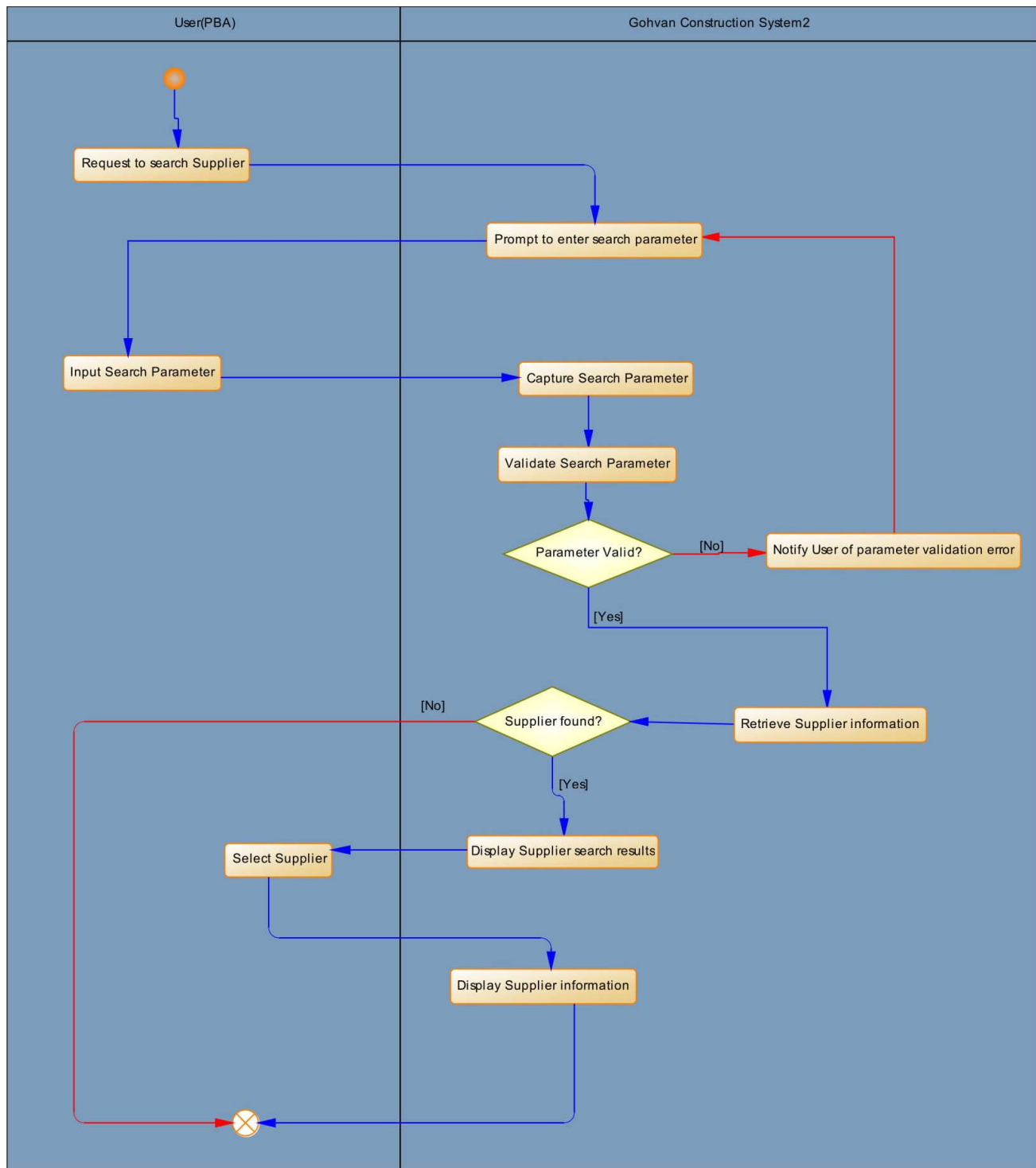


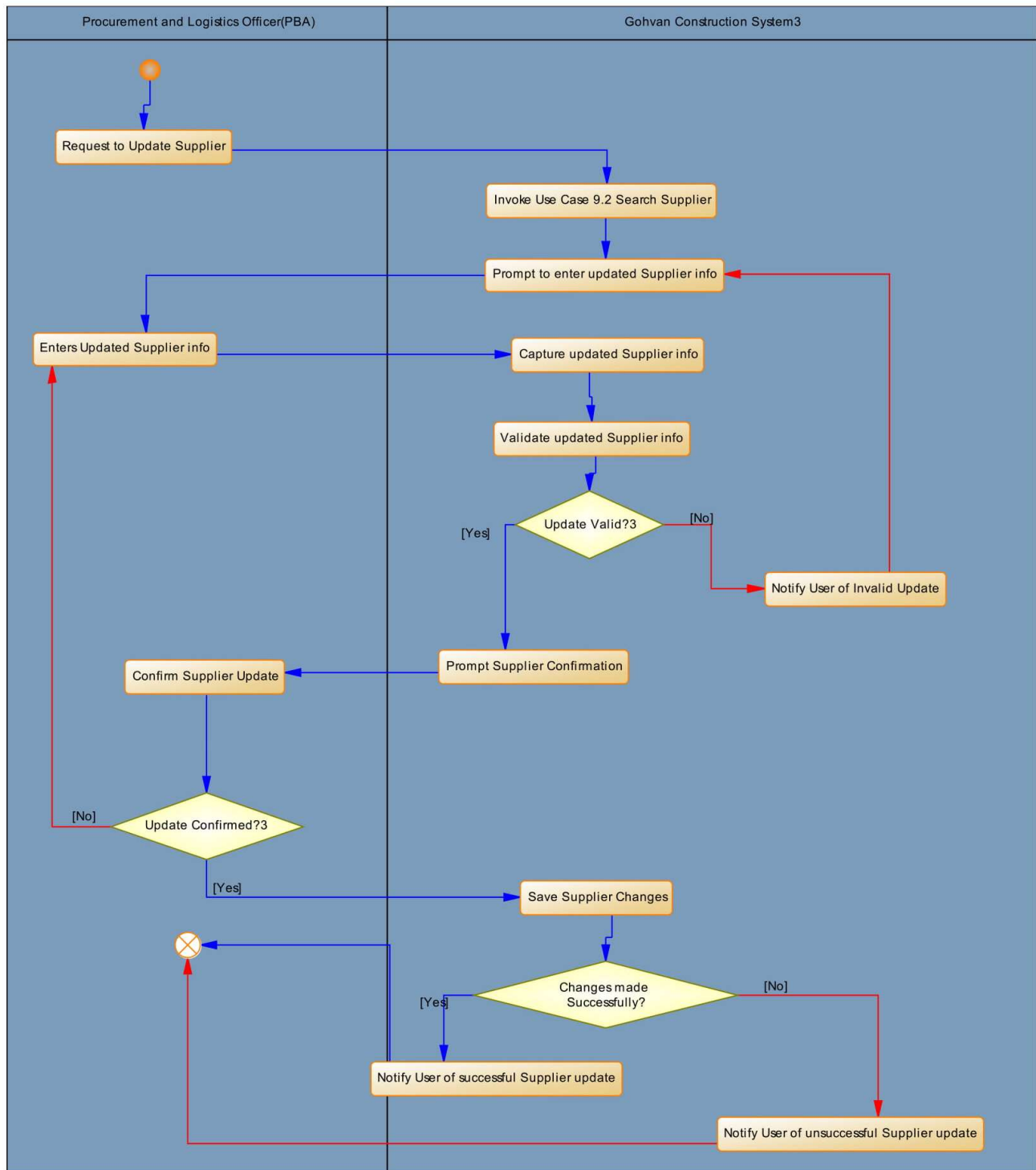


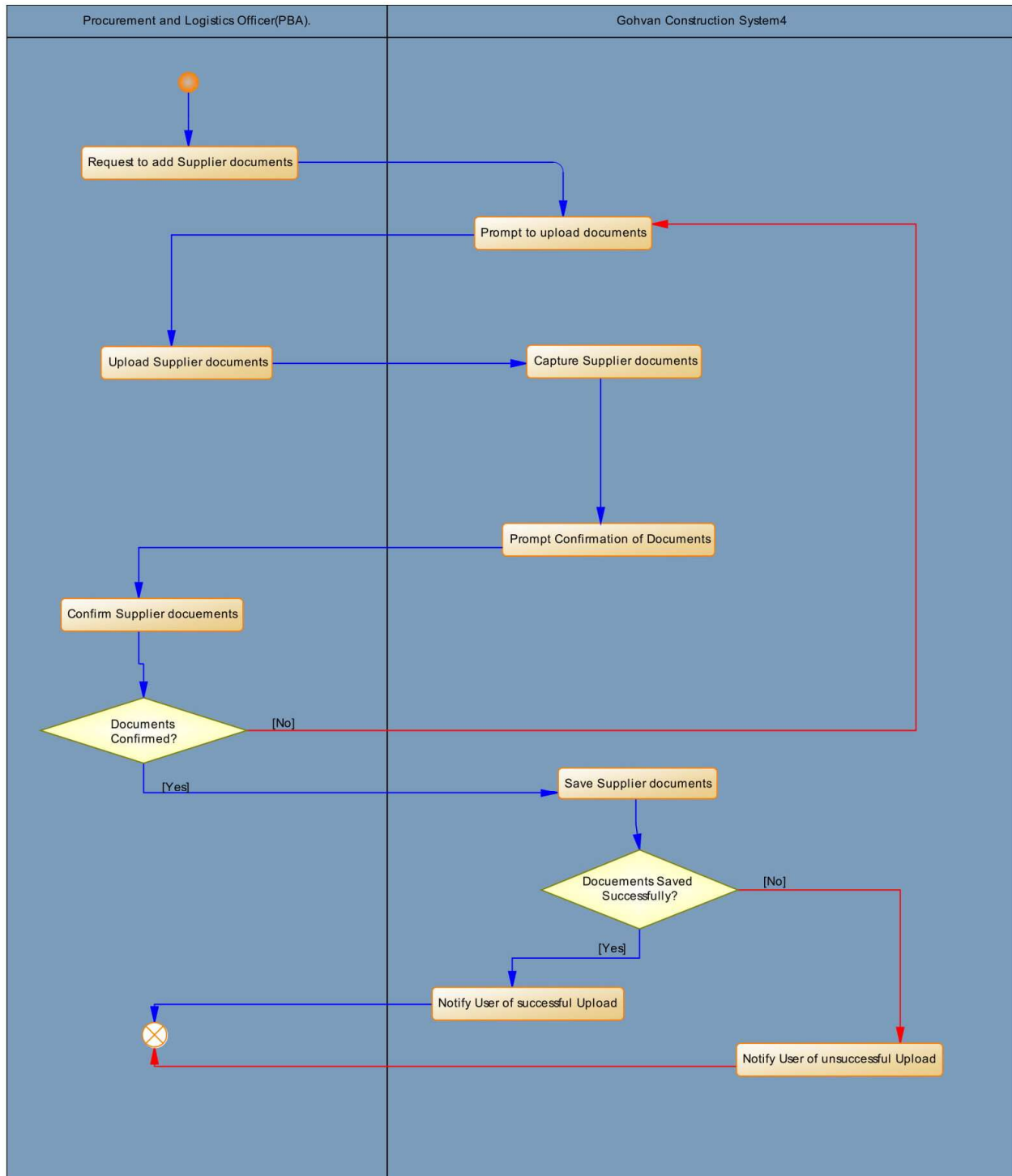


4.1.9 Supplier Subsystem

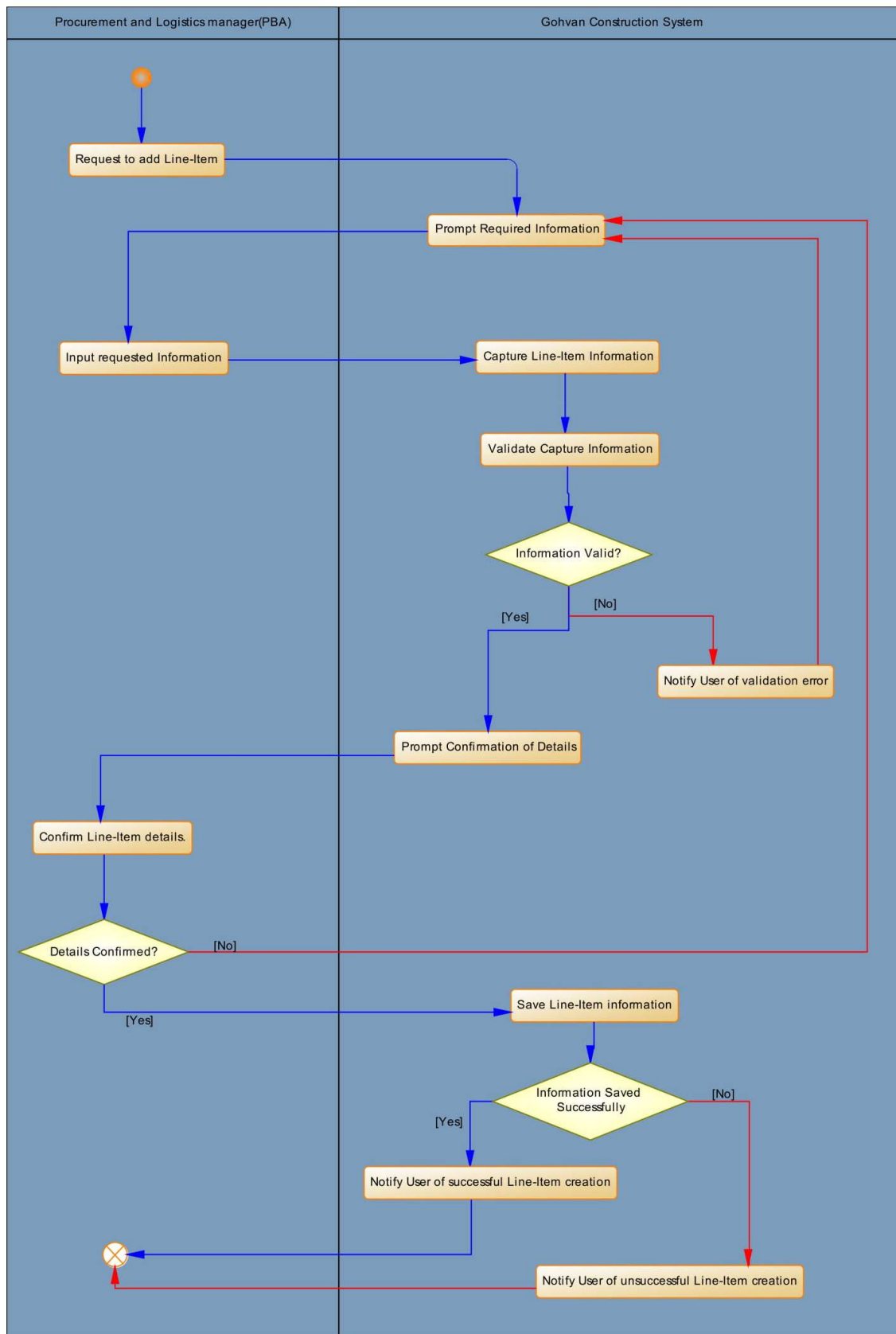


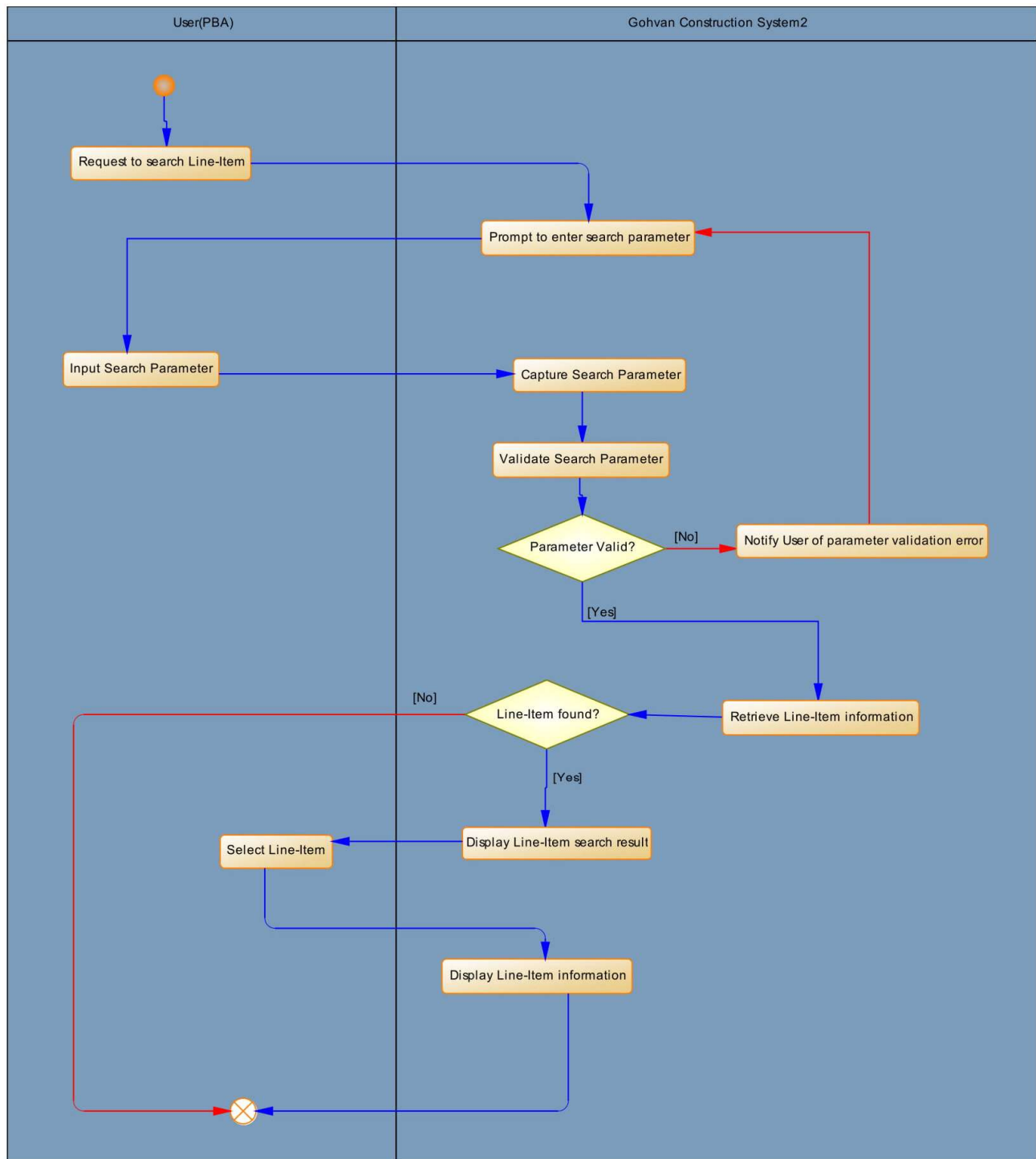


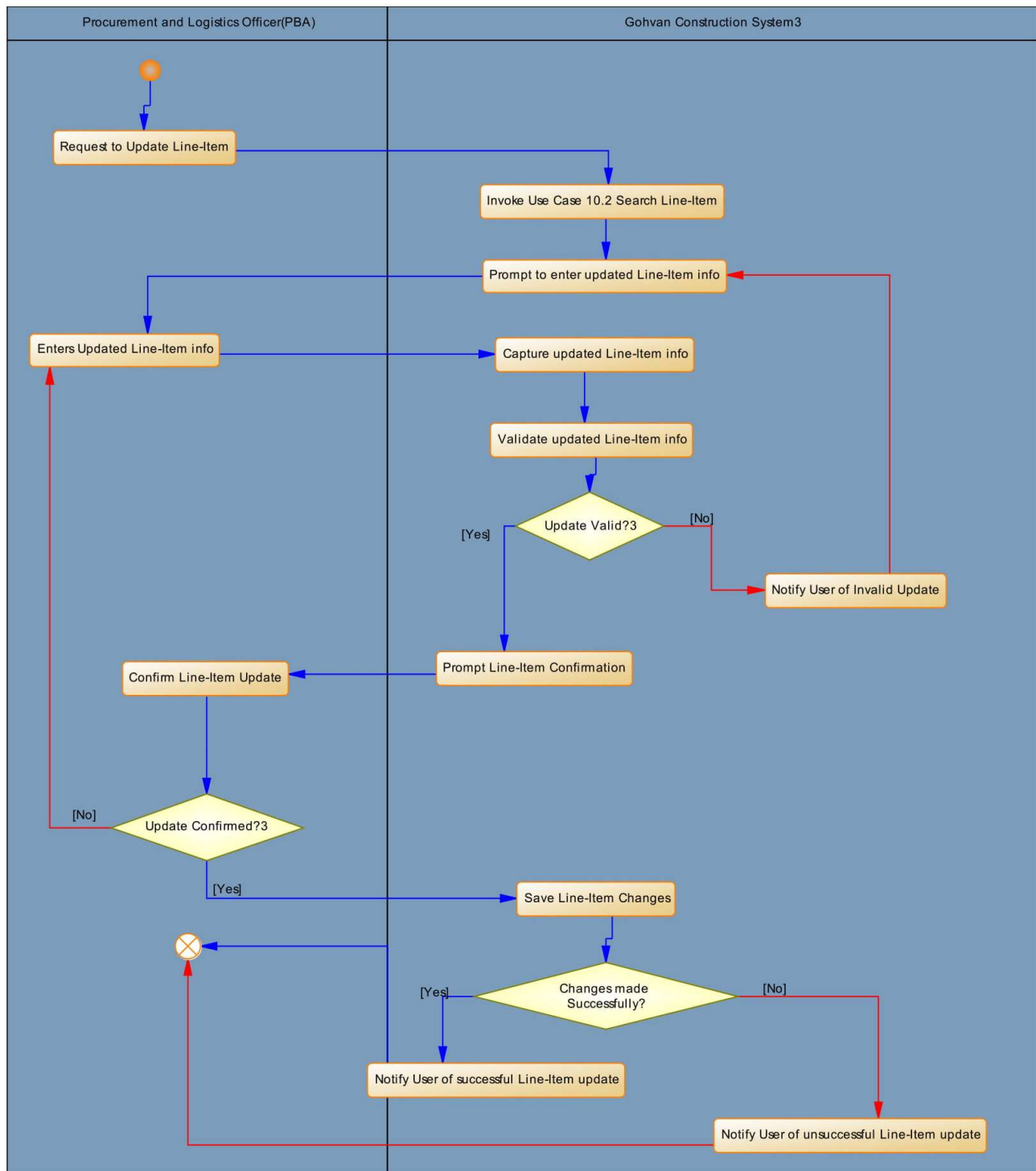




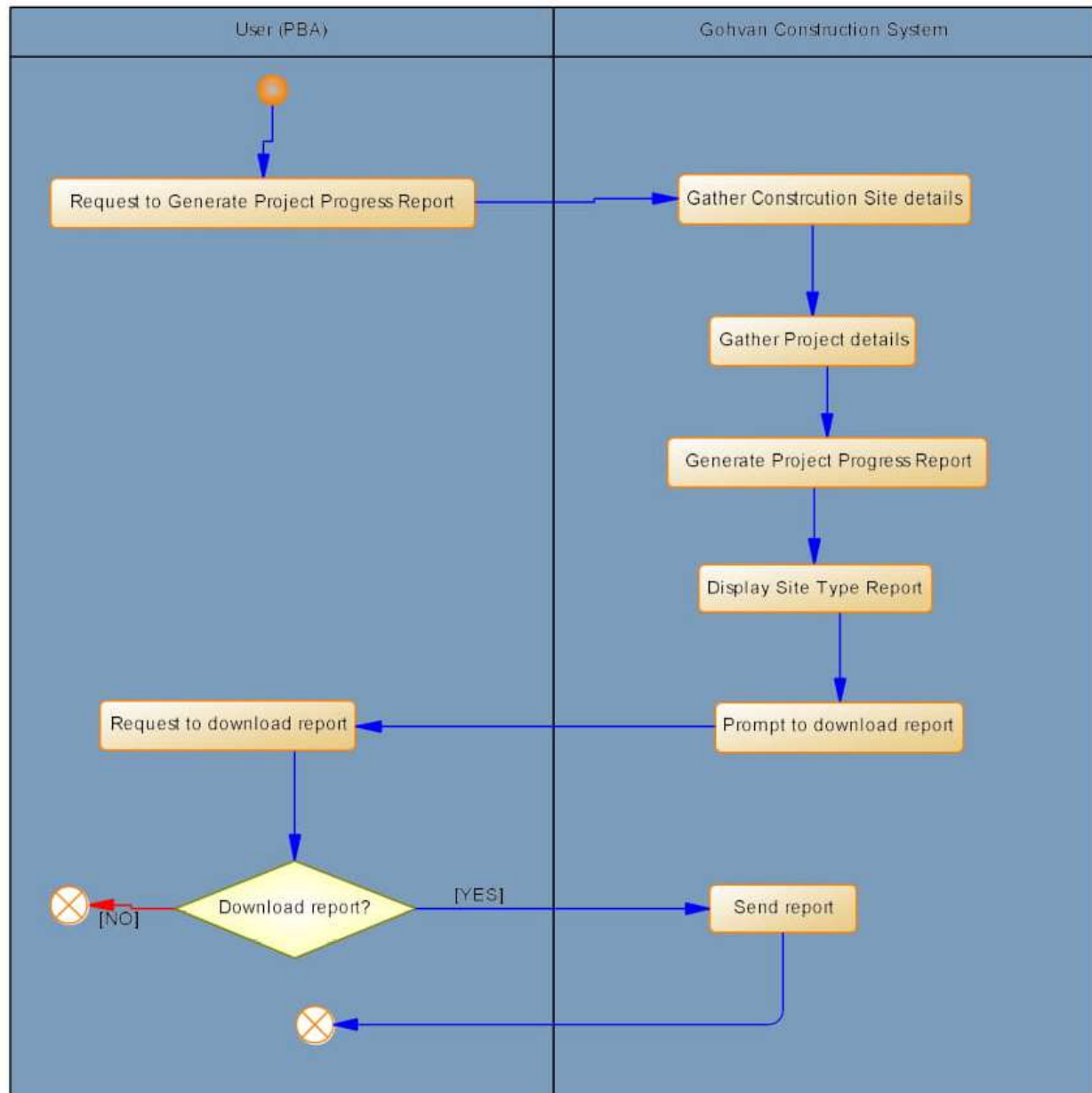
4.1.10 Inventory Management Subsystem

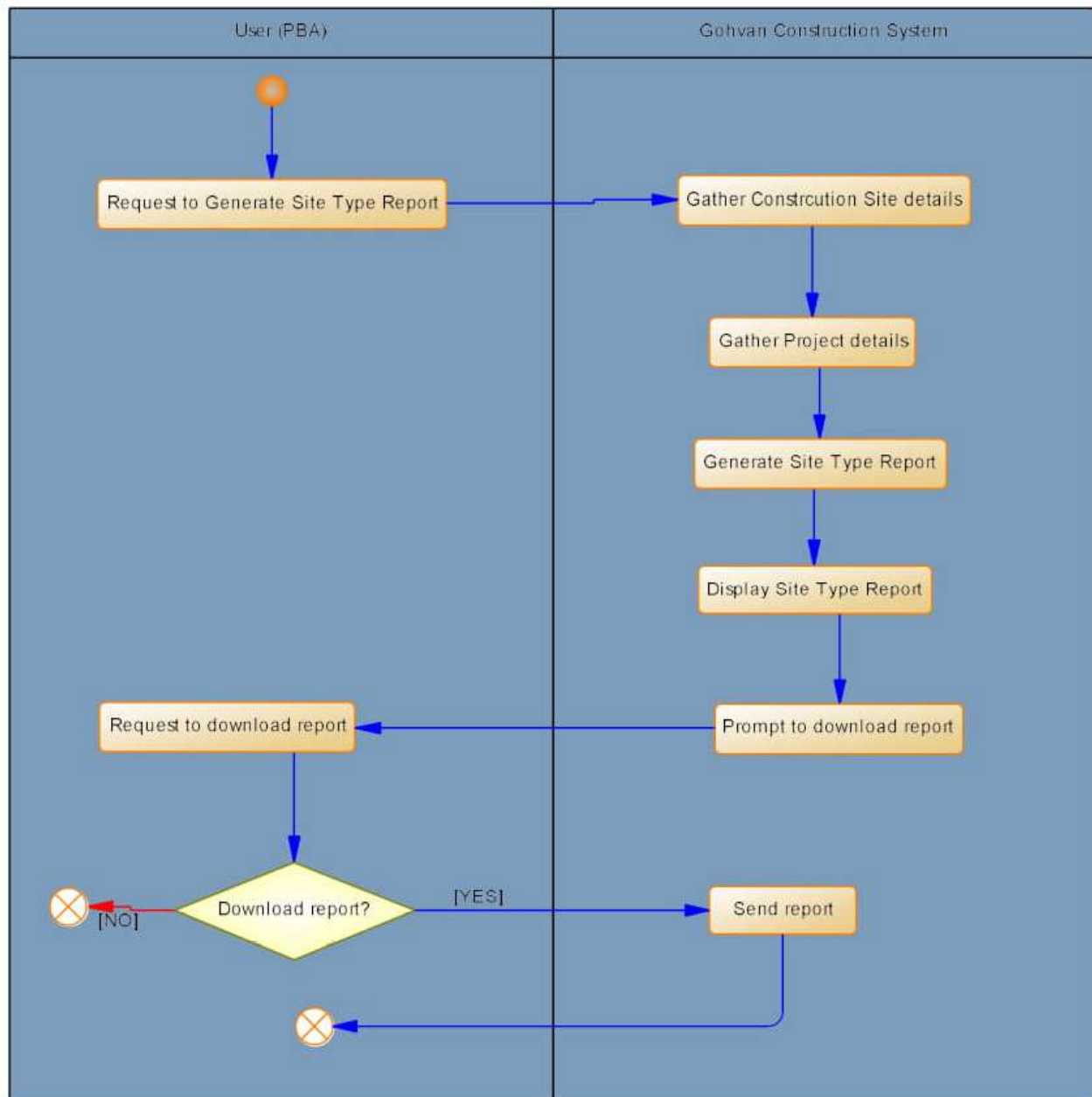


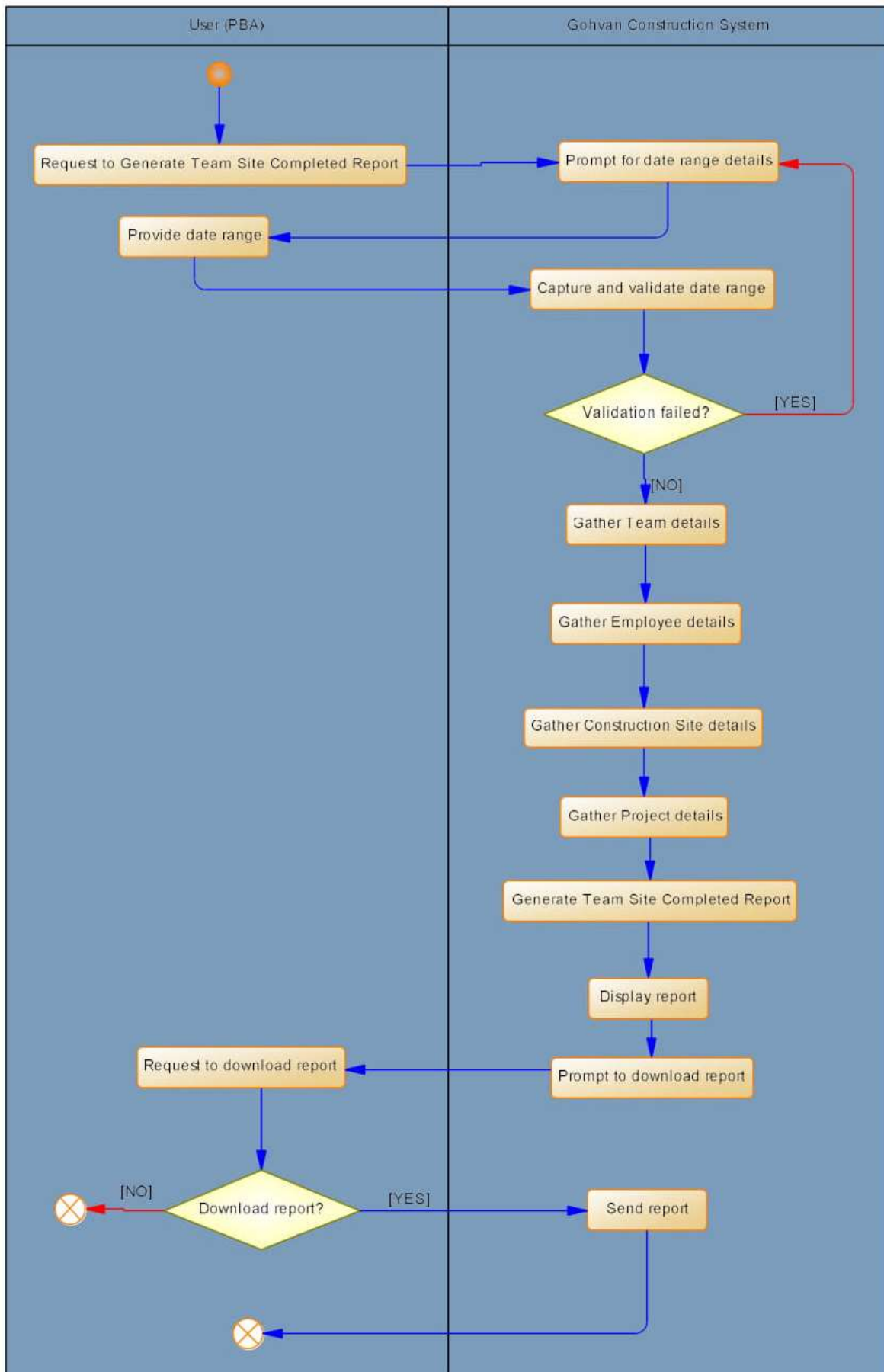


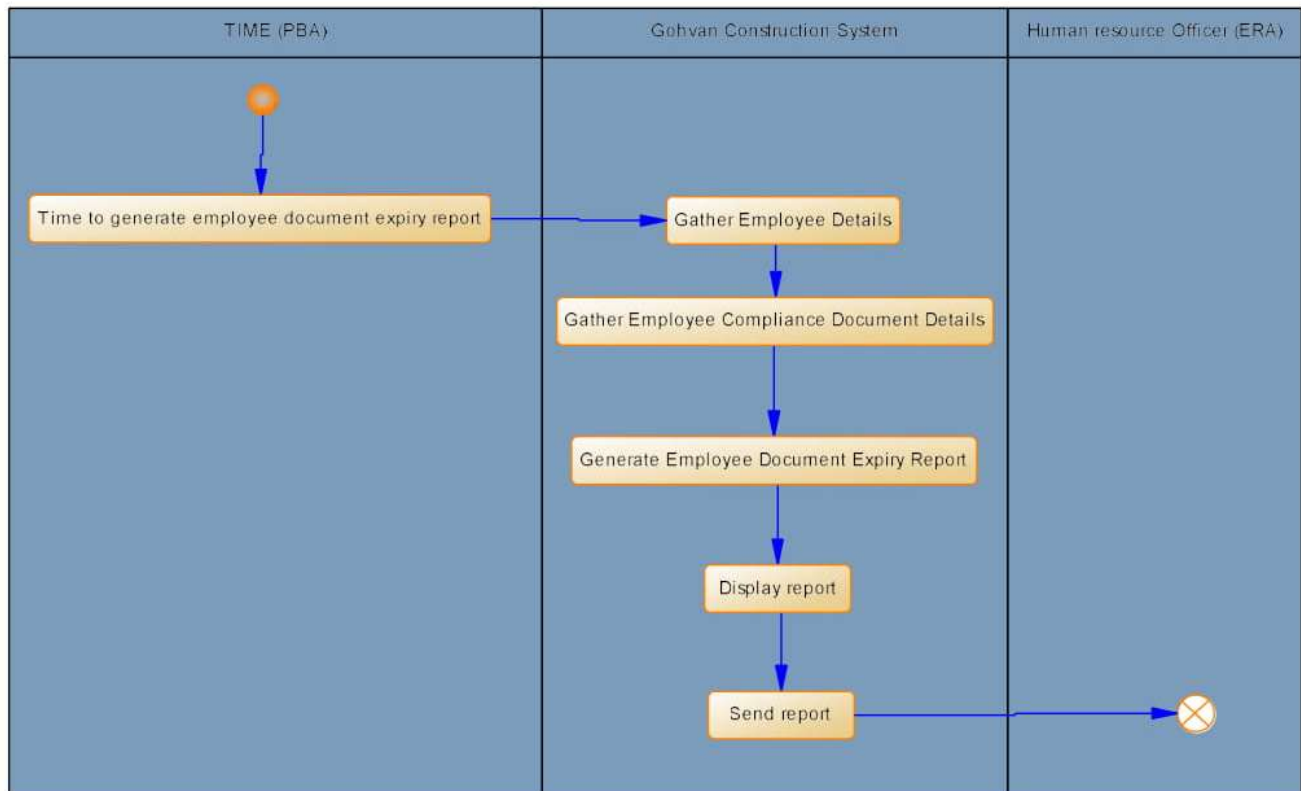


4.1.11 Report Subsystem

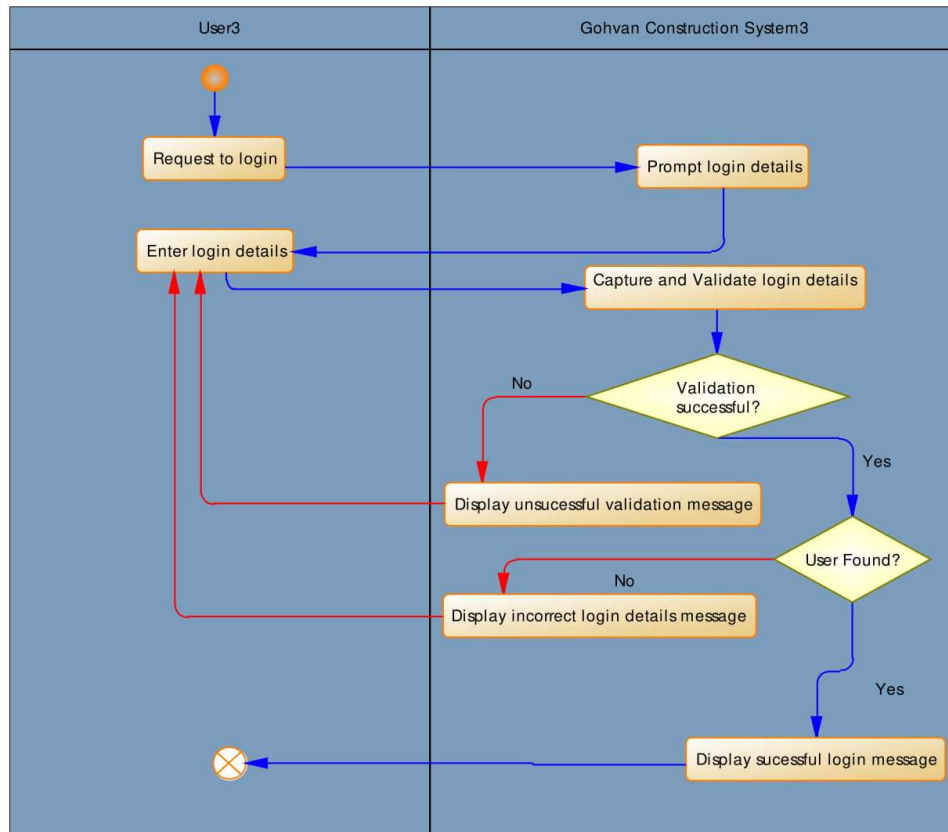


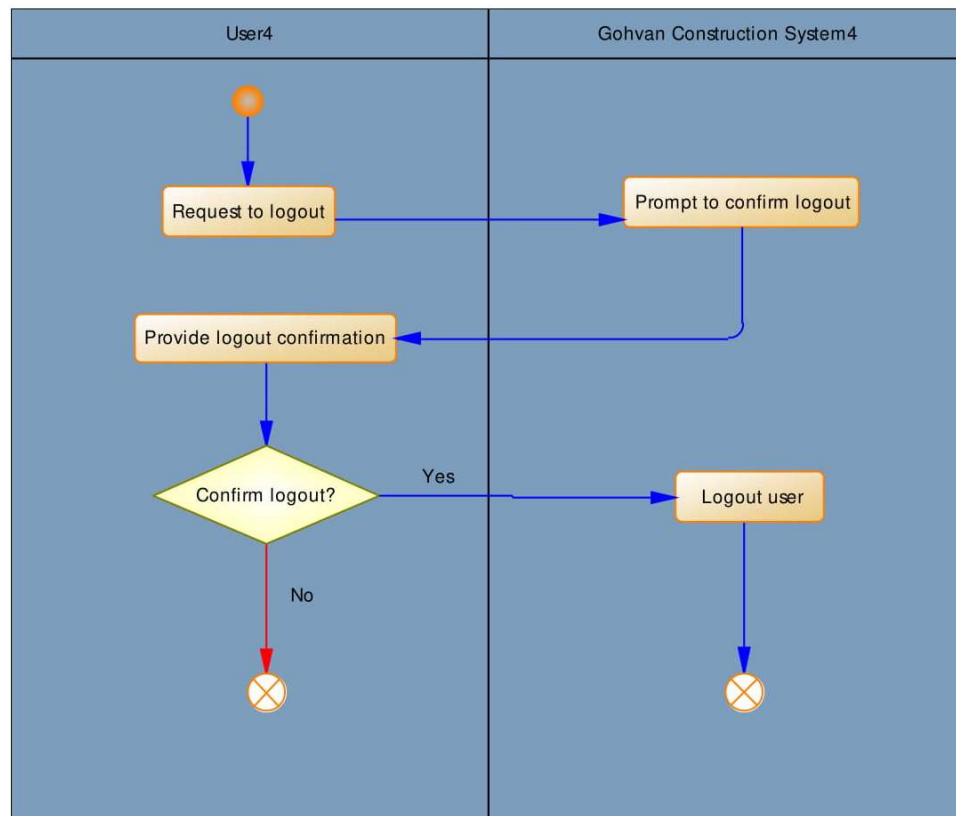


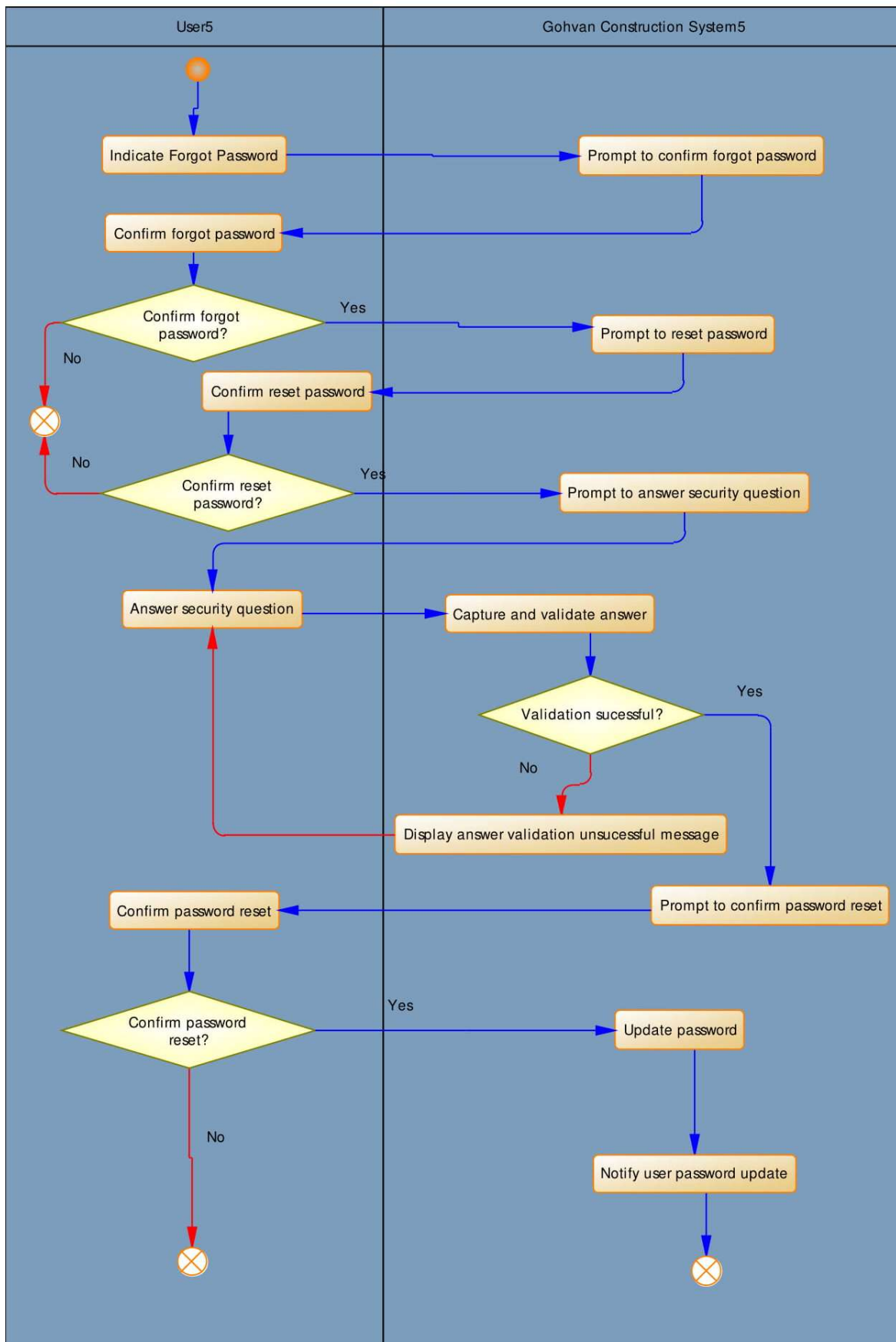




4.1.12 User Management Subsystem







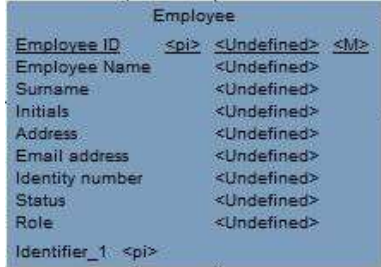
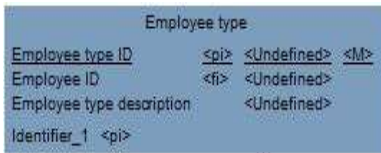
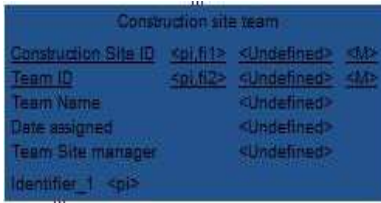
Conclusion

This concludes the section of the UML Modelling diagrams that are represented by activity diagrams

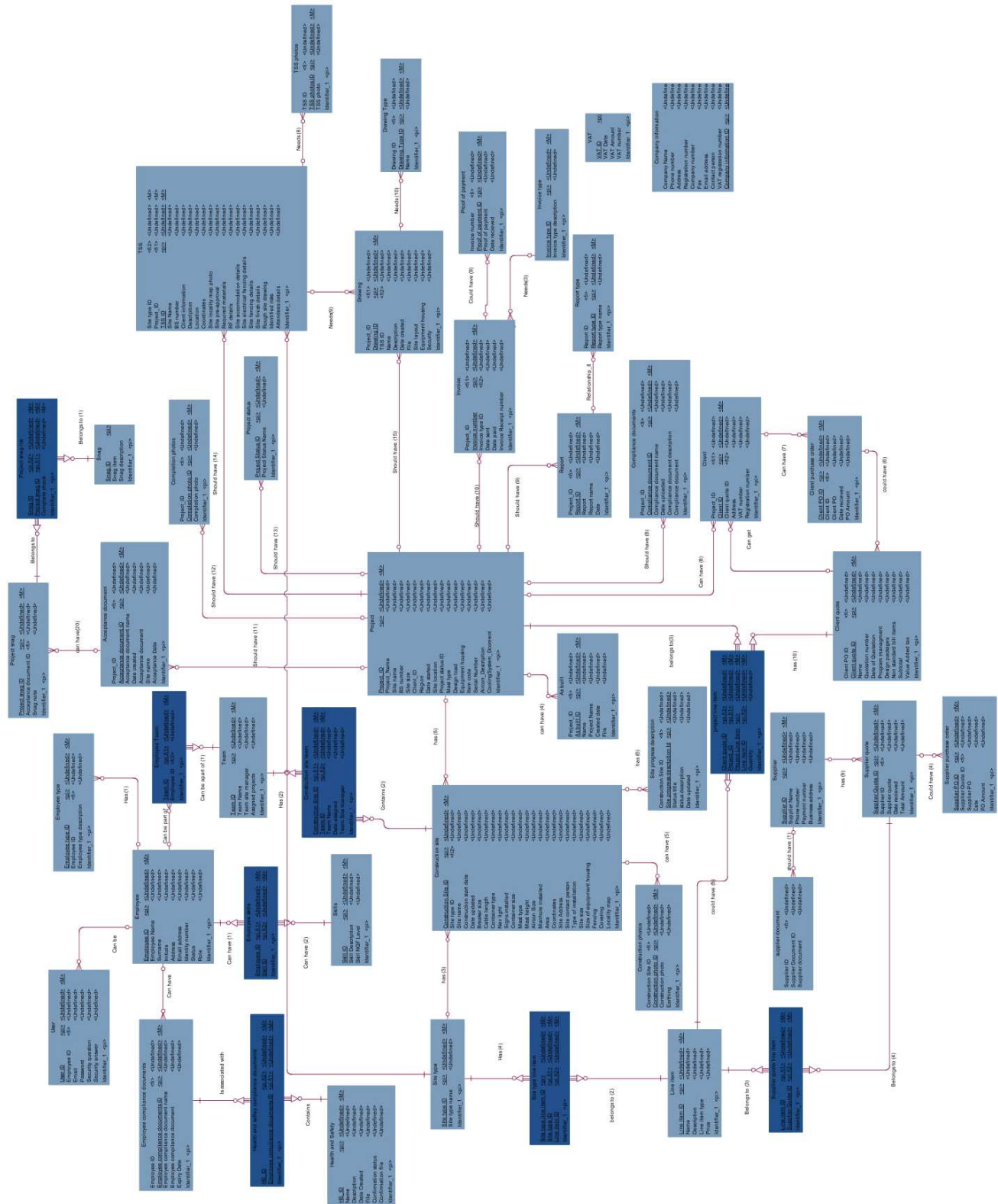
5. Logical Data Model

Introduction

This section of the document contains the Logical Entity Relationship Diagram. This contains symbols and connectors that help us to understand the major entities and their attributes within the system and the relationship between them. This diagram will also help us to understand Gohvan Construction's database design clearly.

Data Modelling Diagram Key		
Element	Description	Preview
Standalone Entity	Entity element, filled with a light blue and black text.	 Employee Employee ID <pi> <Undefined> <M> Employee Name <Undefined> Surname <Undefined> Initials <Undefined> Address <Undefined> Email address <Undefined> Identity number <Undefined> Status <Undefined> Role <Undefined> Identifier_1 <pi>
Lookup Entity	Entity element, filled with light blue and black text.	 Employee type Employee type ID <pi> <Undefined> <M> Employee ID <fi> <Undefined> Employee type description <Undefined> Identifier_1 <pi>
Associative Entity	Entity element filled with dark blue and black text.	 Construction site team Construction Site ID <pi,f1> <Undefined> <M> Team ID <pi,f2> <Undefined> <M> Team Name <Undefined> Date assigned <Undefined> Team Site manager <Undefined> Identifier_1 <pi>
Relationship	Element, with relevant relationship types, with red outline.	

5.1 Entity relationship diagram



Conclusions

In this section we have seen the Logical Entity Relationship Diagram. The major entities and their attributes within the system and the relationship between them have helped us to have a better understanding of the database. We have come to see that it is an important addition to the many diagrams that has been presented in this deliverable because it brings them all together.

6. Interface and Other Inputs

Introduction

This section includes the interface and other Inputs, this indicates the complete description of the interface for the presented solution to the Gohvan Construction System.

6.1 Complete Interface Design Descriptions

6.1.1 Establishment Subsystem

1. Establishment Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
1.1	Create TSS	New TSS request information	This contains the information required to initiate the creation of a new TSS	This is used when the operations manager wants to create a new TSS	None	Selected by the Operations manager
		Details of TSS information	This contains the details of the TSS which is needed to create a new TSS	This is used when the operations manager enters information to create a new TSS	TSS - TSSID - SiteName - BSnumber - SiteType - ClientID - Description - Location - Coordinates - SiteLocalityMapPhoto - Site_pre-approval - RequiredMaterials - RF_details - Site_Accommodation details - SiteElectricalFencing details - SiteFencing details - SiteFinish details - TSSphotosID - RoughSiteDrawing - IdentifiedRisks - AttendeesDetails TSS Photo - TSSphotosID - Photo - TSSID Project Line Items - ProjectLine-itemID	Selected by the Operations manager

1. Establishment Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
					- LineItemID - Project ID Project - ProjectID - SiteName - BSnumber - ClientID	
		Confirmation of entered details information	This an option the operations manager can select to confirm that the entered details are correct	This is used when the operations manager confirms that the entered details are correct	None	Selected by the Operations manager
		Unconfirmed details information [ALT]	This an option the operations manager can select to confirm that the entered details are not correct	This is used when the operations manager confirms that the entered details are not correct	None	Selected by the Operations manager
1.2	Search TSS	TSS request search info	This contains the information needed to initiate the process of searching for an existing TSS.	This is used when the operations manager wants to search for an existing TSS.	None	Selected by the Operations manager
		Requested search parameter	This contains the parameters to search for an existing TSS.	This is used when the operations manager enters parameters to search for an existing TSS.	TSS - SiteName - SiteType - ClientInformation	Selected by the Operations manager
		Selected TSS information	This an option the operations manager can select to indicate which TSS	This is used when the operations manager selects a TSS from the search results.	None	Selected by the Operations manager

1. Establishment Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			they would like to view			
1.3	Update TSS	Request TSS edit info	This contains the information needed to initiate the process of updating an existing TSS	This is used when the operations manager wants to update an existing TSS	TSS - TSSID - SiteName - BSnumber - SiteType	Selected by the Operations manager
		TSS edit Info	This contains the details of the TSS which is needed to update an existing TSS.	This is used when the operations manager enters information to update an existing TSS.	TSS - SiteType - ClientID - Description - Location - Coordinates - SiteLocalityMapPhoto - Site_pre-approval - RequiredMaterials - RF_details - Site_Accommodation details - SiteElectricalFencing details - SiteFencing details - SiteFinish details - TSSphotosID - RoughSiteDrawing - IdentifiedRisks - AttendeesDetails TSS Photo - TSSphotoID - Photo - TSSID Project Line Items - ProjectLine-itemID - LineItemID - Project ID Project - ProjectID - SiteName - BSnumber - ClientID	Selected by the Operations manager
		Confirmation of TSS edit info	This an option the operations	This is used when the operations	None	Selected by the

1. Establishment Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			manager can select to confirm that the entered details are correct	manager confirms that the entered details are correct		Operations manager
		Unconfirmed TSS edit Info [ALT]	This an option the operations manager can select to confirm that the entered details are not correct	This is used when the operations manager confirms that the entered details are not correct	None	Selected by the Operations manager
1.4	Submit TSS report	Request submit TSS info	This contains the information required to initiate submitting the TSS.	This is used when the operations manager wants to submit a TSS.	None	Selected by the Operations manager
		Confirmation of TSS submit info	This an option the operations manager can select to confirm that the TSS details are correct	This is used when the operations manager confirms that the TSS details are correct	None	Selected by the Operations manager
		Unconfirmed TSS submit Info [ALT]	This an option the operations manager can select to confirm that the TSS details are not correct	This is used when the operations manager confirms that the TSS details are not correct.	None	Selected by the Operations manager

6.1.2 Quotation Subsystem

2. Quotation Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
2.1	Create quote	Create quote request	Contains the request to create quote	When the client requests a quote	None	Selected by the Client
		ALT: Additional required quote details	Contains the additional quote after the first information	When the user provides additional quote information	<u>The Cover Sheet</u> - Client Name - Region - BS Number From Client table - Site Name - Budget Code - Mast Type - Design Load - Equipment Housing - Site Size From Project table - Name From Company Information table - Quotation Number - Date of Quotation - Quote Revision To Client Quote table <u>The Civils Summary</u> - Name From Company Information table - BS Number - Site Name - Region From Project table - Quotation Number - Date of Quotation	Selected by the Operations Manager

2. Quotation Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					- Quote Revision From Client Quote table - VAT Amount From VAT table <u>The Package Pricing</u> - Site Name - BS Number From Project table - SAP Material ID - Material Number - Package Name From Price Line Item table - Unit - Unit Price - Quantity From Price Line Item table	
		Quote content confirmation	Contains the quote confirmation	When the user confirms quote details	None	Selected by the Operations Manager
		ALT: decline quote confirmation info	Contains the quote's declined confirmation information	When the user declines confirmation of quote info	None	Selected by the Operations Manager
2.2	Search quote	Search quote request	Contains the request information to search for a quote	When the user requests to search for a quote	None	Selected by the Operations Manager
		Quote search info	Contains the details provided to search for the quote	When the user provides details to search for the quote	- Quote ID - Quote Name - Quote Description From Client Quote table	Selected by the Operations Manager

2. Quotation Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		Select quote info	Contains the selected quote information	When the user selects the quote requested to view it	None	Selected by the Operations Manager
2.3	Capture purchase order	Purchase order document info	Contains the purchase order document information	When the user wants to upload a purchase order on the system	- Purchase Order ID - Purchase Order File From Client Purchase Order table	Selected by the Financial Officer
		Capture purchase order request	Contains the request by the client to capture the purchase order	When the client requests that the purchase order be captured	None	Selected by the Client
		Confirmation accepted info	Contains the confirmation information of the document	When the user wishes to confirm the purchase order details	None	Selected by the Financial Officer
		Confirmation declined info	Contains the declined confirmation of the document	When the user wishes to decline the purchase order details	None	Selected by the Financial Officer

6.1.3 Administration Subsystem

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
3.1	Create Health and Safety file	Request to upload HS File	Contains the information to create and upload a HS file.	When the health and safety officer wants to create and upload a HS file.	None	Requested by health and safety officer
3.1	Create Health and Safety file	Uploading of the HS file	Contains the information to upload a HS file.	When the health and safety officer wants to upload a HS file.	Health and Safety: - File - Created_Date - Name - Description	Requested by health and safety officer
3.1	Create Health and Safety file	ALT Cancel Uploading of the HS file	Contains the cancelled upload information	When the Health and safety officer cancels the upload of the HS file	None	Requested by health and safety officer
3.2	Search Health and Safety file	Request to search HS file	Contains the information to request to search for a HS file.	When the health and safety officer wants to search for a HS file.	None	Requested by health and safety officer
3.2	Search Health and Safety file	Search HS file	Contains the information to	When the health and safety officer wants to	Health and Safety: - File - Created_Date - Name - Description	Requested by health and

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			search for a HS file.	search for a HS file.		safety officer
3.2	Search Health and Safety file	ALT Cancel search of the HS file	Contains the cancelled search information	When the Health and safety officer cancels the search of the HS file	None	Requested by health and safety officer
3.2	Search Health and Safety file	Request to download HS file	Contains the information to view a HS file.	When the health and safety officer wants to view a HS file.	Health and Safety: - File - Created_Date - Name - Description	Requested by health and safety officer
3.2	Search Health and Safety file	ALT Cancel viewing of the HS file	Contains the cancelled viewing information	When the Health and safety officer cancels the viewing of the HS file	None	Requested by health and safety officer
3.3	Capture Health and Safety Confirmation	Receive and capture HS file confirmation	Contains the request information to create and upload a HS file confirmation.	When the health and safety officer wants to create and upload a HS file confirmation.	None	Requested by health and safety officer
3.3	Capture Health and Safety Confirmation	Upload HS file confirmation	Contains the information to create and upload a HS file confirmation.	When the health and safety officer wants to create and upload a HS file confirmation.	None	Requested by health and safety officer
3.3	Capture Health and Safety Confirmation	ALT Cancel upload of the HS file	Contains the cancelled upload information	When the Health and safety officer cancels the upload	None	Requested by health and safety officer

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		confirmati on		of the HS file confirmati on.		
3.3	Capture Health and Safety Confirmation	Upload HS file confirmation	Contains the information to create and upload a HS file confirmation, confirmation.	When the health and safety officer wants to create and upload a HS file confirmation.	Health and Safety: - File_confirmation - File_confirmation_status	Request ed by health and safety officer
3.3	Capture Health and Safety Confirmation	ALT Cancel upload of the HS file confirmation	Contains the cancelled upload information	When the Health and safety officer cancels the upload of the HS file confirmation.	None	Request ed by health and safety officer
3.4	Upload Formal Drawing	Request to upload formal drawing	Contains the request information to upload a formal drawing.	When the drafts person wants to upload a formal drawing.	None	Request ed by drafts person
3.4	Upload Formal Drawing	Request to upload formal drawing	Contains information to upload a formal drawing.	When the drafts person wants to upload a formal drawing.	Drawing: - File - Created_Date - Name - Description Drawing_Type: - Drawing_Type_ID	Request ed by drafts person
3.4	Upload Formal Drawing	ALT Cancel upload of formal drawing	Contains the cancelled upload information	When the drafts person wants to cancel the upload of the formal drawing.	None	Request ed by drafts person
3.4	Upload Formal Drawing	Formal drawing	Contains the request	When the drafts person	None	Request ed by

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		upload confirmation	information to upload a formal drawing confirmation.	wants to upload a formal drawing.		drafts person
3.4	Upload Formal Drawing	ALT Cancel upload of formal drawing	Contains the cancelled upload information	When the drafts person wants to cancel the upload of the formal drawing.	None	Requested by drafts person
3.5	Upload Second cut Drawing	Request to upload second cut drawing	Contains the request information to upload a second cut drawing.	When the drafts person wants to upload a second cut drawing.	None	Requested by drafts person
3.5	Upload Second cut Drawing	Request to upload second cut drawing	Contains information to upload a second cut drawing.	When the drafts person wants to upload a second cut drawing.	Drawing: - File - Created_Date - Name - Description Drawing_Type: - Drawing_Type_ID	Requested by drafts person
3.5	Upload Second cut Drawing	ALT Cancel upload of second cut drawing	Contains the cancelled upload information	When the drafts person wants to cancel the upload of the second cut drawing.	None	Requested by drafts person
3.5	Upload Second cut Drawing	Second cut drawing upload confirmation	Contains the request information to upload a second cut drawing	When the drafts person wants to upload a second cut drawing.	None	Requested by drafts person

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			confirmation.			
3.5	Upload Second cut Drawing	ALT Cancel upload of second cut drawing	Contains the cancelled upload information	When the drafts person wants to cancel the upload of the second cut drawing.	None	Requested by drafts person
3.6	Search As-built document	Request to search As-built document	Contains the information to request to search for a As-built document.	When the health and safety officer wants to search for a As-built document.	None	Requested by health and safety officer
3.6	Search As-built document	Search As-built document	Contains the information to search for an As-built document.	When the health and safety officer wants to search for a As-built document.	Health and Safety: - File - Created_Date - Name - Description	Requested by health and safety officer
3.6	Search As-built document	ALT Cancel search of the As-built document	Contains the cancelled search information	When the Health and safety officer cancels the search of the As-built document	None	Requested by health and safety officer
3.6	Search As-built document	Request to download As-built document	Contains the information to view an As-built document	When the health and safety officer wants to view a HS file.	Health and Safety: - File - Created_Date - Name - Description	Requested by health and safety officer
3.6	Search As-built document	ALT Cancel viewing of the As-built document	Contains the cancelled viewing information	When the Health and safety officer cancels the viewing of	None	Requested by health and safety officer

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
				the As-built document		
3.7	Create As-Built Document	Request to create As-built document	Contains the request information to create an As-built document	When the health and safety officer wants to create a As-built document.	Project: Project_status	Requested by health and safety officer
3.7	Create As-Built Document	Create As-built document confirmation	Contains the information to create an As-built document	When the health and safety officer wants to create a As-built document.	Construction-Site table: - Area - Coordinates - Site_Address - Site_Contact_Person - Type_of_Installation - Site_Size - Size_of_Equipment_Housing - Mast_Type - Mast_Height - Fencing - Covering - Locality_Map - Radio_frequency_Document Drawing Table: - Site_Layout - Equipment_housing - Security Compliance_Documents Table: - Compliance_Document_File Construction Photos table: - Earthing - Health and Safety table: - Confirmation_File Report table: - Site_Acceptance_Schedule Completion_Photos table: - Project_photos Project table: - Item code - Serial Number - Description - Document invoice	Requested by health and safety officer

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
3.7	Create As-Built Document	Add extra section	Contains the information to create an As-built document added section	When the health and safety officer wants to create a As-built document.	None	Request ed by health and safety officer
3.7	Create As-Built Document	ALT Add extra section	Contains the information to create an As-built document added section	When the health and safety officer wants to create a As-built document.	None	Request ed by health and safety officer
3.7	Create As-Built Document	ALT Decline add section information	Contains the information to decline an As-built document added section	When the health and safety officer wants to decline an added section to the As-built document.	None	Request ed by health and safety officer

6.1.4 Construction Subsystem

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
4.1	Capture "Site-Go-Ahead"	Request to Capture "Site-Go-Ahead"	This request contains the information used to initiate the process to capture the Site-Go-Ahead information	When the Operations Manager wants to allocate a team to a construction site.	None	Requested by the Operations Manager
		Site-Go-Ahead Email Screenshot	Contains the information of the Site-Go-Ahead	When the Operations Manager wants to upload the Site-Go-Ahead document information.	Compliance Document: - Compliance Document Description - Compliance Document Name - Compliance Document	Entered by the Operations Manager
		Confirmation of selected Site-Go-Ahead email	Confirmation of the Site-Go-Ahead information to be uploaded to the system.	When the Operations Manager confirms to upload the Site-Go-Ahead document information.	Project Project Status	Confirmed by the Operations Manager
		ALT Rejection of Site-Go-Ahead email	The Site-Go-Ahead details are not correct to the Operations Manager and the confirmation is rejected.	When the Operations Manager rejects the upload of the Site-Go-Ahead information.	None	Rejected by the Operations Manager
4.2	Allocate Team Site	Request to Allocate Team Site	This request contains the information to allocate an initial team to the constructions site.	When the Operations Manager wants to assign a team to a construction site.	None	Requested by the Operations Manager

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
		Select Add Initial Team information	For the Operations Manager to select an initial team.	When the Operations Manager wants to add an initial team to the construction site.	None	Selected by the Operations Manager
		Select Team Information	For the Operations manager to Select team information.	When the Operations manager Selects the team to be assigned to the Construction site.	Team - Team Name - Team Site Manager - Assigned Project.	Selected by the Operations Manager
		Confirmation on Initial Team select	For the Operations Manager to confirm selected team to be assigned.	When the Operations Manager confirms to add the selected team to the construction site.	None	Confirmed by the Operations Manager
		ALT Additional Team Information	For the Operations Manager to Add an additional team.	When the Operations Manager wants to add an additional team to the construction site.	Construction Site Team - Team ID - Construction Site ID - Team Name Date Assigned	Selected by the Operations Manager
		ALT Reject Team information	For the Operations Manager to reject assigning team information.	When the Operations Manager rejects to add the team information to the construction site.	None	Rejected by the Operations Manager
4.3	Update Team Site Allocation	Request to remove team information	For the Operations Manager to remove an assigned team from a construction site.	When the Operations manager wants to remove a team from the	None	Requested by the Operations Manager

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
				construction site.		
		Select remove specific team information	For the Operations Manager to select a team to be removed from the construction site.	When the Operations Manager selects the team to be removed from the construction site.,	Construction Site Team - Team ID - Construction Site ID - Team Name - Date Assigned	Selected by the Operations Manager
		Remove Team confirmation	For the Operations Manager to confirm to remove an assigned team.	When the Operations manager confirms to remove the selected team from the construction site.	None	Removed by the Operations Manager
		ALT Reject Team removable information	For the Operations Manager to reject the removal of an assigned team.	When the Operations Manager rejects to remove the team from the construction site.	None	Rejected by the Operations Manager
4.4	Upload Compliance Documents	Request to Upload compliance documents	For the Health and safety officer to upload compliance documents	When the Health and Safety Officer wants to upload compliance documents.	None	Requested by the Health and safety officer
		Compliance document information	For the Health and safety officer to enter compliance document information.	When the Health and Safety Officer is prompted to enter the compliance document information.	Compliance Document - Compliance Document Name - Compliance Document description - Compliance Document	Uploaded by the Health and safety officer
		Compliance Document confirmation	For the Health and safety officer	When the Health and Safety	None	Confirmed by the Health and

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			to confirm to upload the compliance document information.	Officer confirms to upload the compliance document information.		safety officer
		ALT Reject Compliance document	For the Health and safety officer to reject the upload of the compliance document information.	When the Health and Safety Officer rejects to upload the compliance document information.	None	Rejected by the Health and safety officer
4.5	Search Project	Request to search project information	For the User to search for a project.	When the User wants to search for a project and retrieve its details.	None	Requested by the User
		Project Search criteria	For the User to enter project search criteria.	When the user enters the search project criteria.	Project • Project Number • BS Number • Project Name • Date Started	Entered by the User
		Select project search information	For the User to select desired project details.	When the user selects the desired search project results.	Project • Project Name • Date started • Site location • Project status • BS Number • Site Size • Region • Project Status	Selected by the User
4.6	Create Site Progress description	Request to create site progress description	For the Operations Manager to create a site progress description.	When the Operations Manager wants to Create a site progress description.	None	Requested by the Operations Manager
		Site progress information	For the Operations	When the Operations	Site Progress Description	Entered by the

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			Manager to enter site progress information.	Manager enters the site progress description information.	- Progress Title - Progress Description Construction Photos - Construction photos	Operations Manager
		Confirmation on progress description	For the Operations Manager to confirm to upload site progress description information.	When the Operations Manager confirms to upload the site progress description information.	None	Confirmed by the Operations Manager
		ALT Reject confirmation on progress description	For the Operations Manager to reject the uploading of the site progress description.	When the Operations manager rejects to upload the site progress description.	None	Rejected by the Operations Manager
4.7	View Site Progress description	Request to view construction site progress	For the Operations Manager to view construction site progress.	When the Operations manager wants to view the Construction site progress.	None	Requested by the Operations Manager
		View Site progress description	For the Operations Manager to select to view site progress information.	When the Operations manager selects to view the Construction site progress	Site Progress Description - Status title - Status description - Date updated - Site Name - Current Status - Construction start date Construction Photos - Construction photos	
4.8	Upload Complete Site photos	Request to Upload	For the Operations Manager to	When the Operations manager	None	Requested by the

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
		Complete site photos	upload completed site photos.	wants to upload the completed site photos.		Operations Manager
		Complete Site photo information	For the Operations Manager to select the completed site photos.	When the Operations Manager selects the completed site photos.	Completion Photos Completion Photo	Entered by the Operations Manager
		Confirmation on site photos information	For the Operations Manager to confirm to upload the Completed site photos.	When the Operations manager confirms to upload the complete site photos.	None	Confirmed by the Operations Manager
		ALT Reject confirmation on site photos	For the Operations Manager to reject to upload the completed site photos.	When the Operations Manager rejects to upload the completed site photos.	None	Rejected by the Operations Manager
4.9	Upload Radio Frequency Report	Request to upload Radio Frequency Report	For the Operations Manager to upload the Radio Frequency report information.	When the Operations Manager wants to upload the Radio Frequency report.	None	Requested by the Operations Manager
		Cooling system details	For the Operations Manager to enter the Cooling system information.	When the Operations Manager enters the cooling, system details.	Project - Item code - Serial Number - Description - Document invoice	Entered by the Operations Manager
		Radio Frequency Report information	For the Operations Manager to enter the Radio Frequency report information.	When the Operations Manager enters the Radio Frequency report details.	Report - Report ID - Report Name - Date (date uploaded) - Report (the actual report being uploaded)	Entered by the Operations Manager

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
					Report Type (Foreign Key)	
		Confirmation on Radio Frequency report and cooling system details	For the Operations Manager to confirm to upload the Radio Frequency report and cooling system details.	When the Operations Manager confirms to upload the Radio Frequency report information.	None	Confirmed by the Operations Manager
		ALT Reject confirmation on Radio Frequency report and cooling system info	For the Operations Manager to reject to upload the Radio Frequency report and cooling system information.	When the Operations Manager rejects to upload the Radio Frequency report information.	None	Rejected by the Operations Manager
4.10	Search Radio Frequency Report	Request to view Radio Frequency Report	For the User to search for a Radio Frequency report.	When the User wants to search for a Radio Frequency report.	None	Requested by the User
		Select Radio Frequency report information	For the User view the Radio Frequency report.	When the User selects the desired Radio Frequency report information.	Report Radio Frequency report	Selected by the User
4.11	Request Site Visit	Request Site visit	For the Operations Manager to request to a site visit.	When the Operations Manager wants to request a site visit from the Quality Control Officer.	None	Requested by the Operations Manager
		Confirmation on Site Visit	For the Operations Manager the confirm	When the Operations manager confirms to	None	Confirmed by the Operations Manager

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			request for site visit.	request a site visit.		
		ALT Reject confirmation on site visit	For the Operations Manager to reject request for site visit.	When the Operations Manager rejects to request a site visit from the quality control officer.	None	Rejected by the Operations Manager
4.12	Edit Acceptance Document	Request to edit Acceptance Document	For the Quality Control Officer to edit a site acceptance document.	When the Quality Control Officer wants to edit the site acceptance details.	None	Requested by the Quality Control Officer
		Confirmation on site details	For the Quality Control Officer to confirm correct site acceptance details.	When the Quality Control Officer confirms the site acceptance information.	Project • Site Name • Acceptance Date • Site Type • BS No. • Breaker Size • Cable Length • Container Type • Nav Light • Signs Installed • Container Size • Mast Type • Aircon Size • Manhole Installed	Confirmed by the Quality Control Officer
		ALT Reject confirmation on site details	For the Quality Control Officer to reject confirmation on correct site acceptance details.	When the Quality Control Officer rejects the site acceptance information.	None	Rejected by the Quality Control Officer

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
		ALT Updated Site details	For the Quality Control Officer to Enter updated details for the Site acceptance document.	When the Quality Control Officer enters the new site acceptance details.	Project - Site Name - Acceptance Date - Site Type - BS No. - Breaker Size - Cable Length - Container Type - Nav Light - Signs Installed - Container Size - Mast Type - Aircon Size - Manhole Installed	Entered by the Quality Control Officer
		Common Snag list information	For the Quality Control Officer to select list of common snags.	When the Quality Control Officer selects snags for the site acceptance document.	Common Snag - Snag Item - Snag Description	Selected by the Quality Control Officer
		ALT Custom Snag list information	For the Quality Control Officer to enter custom snag list information	When the Quality Control Officer wants to enter a custom snag from the site acceptance document.	Project Snag List - Snag Item - Snag Description - Snag Note	Entered by the Quality Control Officer
		Snag list confirmation	For the Quality Control Officer to confirm snag list information.	When the Quality Control Officer confirms the snags to be uploaded to the system	None	Confirmed by the Quality Control Officer
		ALT Reject snag list confirmation	For the Quality Control	When the Quality Control	None	Rejected by the Quality

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			Officer to reject snag list information.	Officer rejects to upload the snags to the site acceptance document.		Control Officer
4.13	Search Acceptance Document	Request to view Acceptance document	For the User to Search for a Site Acceptance document.	When the User wants to view the Site acceptance document information	None	Requested by the User
		Acceptance document search criteria	For the User to enter site acceptance document search criteria.	When the User selects enters the search criteria for the Site acceptance document.	None	Entered by the User
		Select Acceptance document info	For the User to select desired site acceptance information.	When the User selects the desired site acceptance document information.	Acceptance Document • Site Name • Acceptance Date • Site Type • BS No. • Breaker Size • Cable Length • Container Type • Nav Light • Signs Installed • Container Size • Mast Type • Aircon Size • Manhole Installed	Selected by the User
4.14	Confirm Acceptance Document	Request to confirm acceptance document	For the Quality Control Officer to confirm site acceptance document.	When Quality Control Officer wants to confirm the Snags in the	None	Requested by the Quality Control Officer

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
				Site Acceptance document.		
		Mark snag complete info	For the Quality Control Officer to mark completed snag list items.	The Quality Control Officer wants to mark the completed snags listed in the Site Acceptance document.	Project Snag List • Snag Item • Snag Description • Snag Note • Complete Check	Marked by the Quality Control Officer
		Confirmation on completed snag list	For the Quality Control Officer to confirm snag list has been completed.	When the Quality Control Officer Confirms the marked snag list information.	None	Confirmed by the Quality Control Officer
		ALT Reject confirmation on completed snag list	For the Quality Control Officer to reject completed snag list.	When the Quality Control Officer rejects the confirmation to complete the snag list in the Site acceptance document.	None	Rejected by the Quality Control Officer
4.15	Capture Site Sign-off	Request to Upload Site acceptance schedule	For the Quality Control Officer to upload site acceptance schedule.	When the Quality Control Officer wants to upload the Site Acceptance Schedule (Site sign off)	None	Requested by the Quality Control Officer
		Acceptance schedule information	For the Quality Control Officer to enter Site acceptance schedule information.	The Quality Control Officer enters the site acceptance schedule information.	Report • Report ID • Report Name • Date • Report Type ID • Report	Entered by the Quality Control Officer

4. Construction Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
		Confirmation on acceptance schedule	For the Quality Control Officer to confirm Site acceptance schedule information.	The Quality Control Officer confirms to upload the Site Acceptance Schedule.	None	Confirmed by the Quality Control Officer
		ALT Reject Confirmation on site acceptance schedule	For the Quality Control Officer to reject Site Acceptance schedule information.	The Quality Control Officer rejects to upload the Site Acceptance schedule.	None	Rejected by the Quality Control Officer
4.16	Capture Commission report	Request to upload commission report	For the Operations Manager to upload Commission report information.	When the Operations Manager wants to upload the Commission report.	None	Requested by the Operations Manager
		Commission report information	For the Operations Manager to enter the Commission report info	When the Operations manager enters the Commission report information.	Report • Report name • Report • Date Uploaded	Entered by the Operations Manager
		Confirmation on commission report	For the Operations Manager to confirm Commission report information.	When the Operations manager confirms to upload the Commission report information.	None	Confirmed by the Operations Manager
		ALT Reject confirmation on commission report	For the Operations Manager to reject the Commission report information.	When the Operations manager Rejects to upload the Commission report.	None	Rejected by the Operations Manager

6.1.5 Invoicing Subsystem

5. Invoicing Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
5.1	Search Invoice	5.1 Request to search invoice information.	This contains the information required to begin the process of searching for a project's invoice.	The financial officer would like to search for a project's invoice	None	Selected by the financial officer
		5.1 Requested search parameter information	This search parameter is required to retrieve the invoice.	This is used when the financial officer wants to enter the search parameter for the desired invoice.	Invoice	Entered by the financial officer
5.2	Send invoice	5.2 Request to send Initial Claim invoice information	This contains the information required to begin the process of sending an initial claim invoice.	This will be used when the financial officer would like to send an initial claim invoice.	None	Selected by the financial officer
		5.2 Invoice correct confirmation information	This contains an option that will be selected by the financial officer to confirm the invoice information	When the financial officer confirms that the invoice is correct and wishes to proceed.	None	Selected by the financial officer
		5.2 ALT: Request to send Final Claim invoice information.	This contains the information required to begin the process of sending a final claim invoice.	This will be used when the financial officer would like to send a final claim invoice.	None	Selected by the financial officer

		5.2 ALT: Invoice incorrect information.	This contains an option that will be selected by the financial officer to confirm that the invoice is incorrect .	When the financial officer confirms that the invoice is incorrect .	None	Selected by the financial officer
5.3	Capture Proof of Payment	5.3 Request to capture proof of payment	This contains the information required to begin the process of capturing proof of payment	This will be used when the financial officer would like to capture proof of payment	None	Selected by the financial officer
		5.3 Proof of payment information	This contains the proof of payment required to be captured	When the financial officer would like to upload the proof of payment	Proof of payment	Provided by the financial officer
		5.3 Proof of payment details information	This contains the proof of payment details required to be captured	When the financial officer would like to provide the proof of payment details	Proof of payment	Provided by the financial officer
		5.3 Proof of payment correct confirmation information.	This contains an option that will be selected by the financial officer to confirm the proof of payment	When the financial officer confirms that the proof of payment is correct and wishes to proceed.	None	Selected by the financial officer
		5.3 ALT Proof of payment incorrect information.	This contains an option that will be selected by the financial officer to confirm that the proof of payment is incorrect .	When the financial officer confirms that the proof of payment is incorrect .	None	Selected by the financial officer
5.4	Capture Claim	5.4 Request to capture claim information.	This contains the information required to begin the process of	The financial officer would like to capture a claim	None	Selected by the financial officer

			capturing a claim			
		5.4 Claim receipt number information.	This contains the claim (receipt number) required to be captured	When the financial officer would like to upload the claim receipt number	Invoice	Provided by the financial officer
		5.4 Receipt number correct confirmation information.	This contains an option that will be selected by the financial officer to confirm the claim	When the financial officer confirms that the claim receipt number is correct and wishes to proceed.	None	Selected by the financial officer
		5.4 ALT Receipt number incorrect information.	This contains an option that will be selected by the financial officer to confirm that claim details are incorrect .	When the financial officer confirms that the claim details are incorrect .	None	Selected by the financial officer

6.1.6 Human Resource Subsystem

6. Human Resource Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
6.1	Add Employee	Add employee request	Contains the request to add a new employee to the system	When the officer requests to add a new employee	None	Selected by the Human Resource Officer
		New employee info	Contains the details provided for the new employee	When officer provides employee info	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address - Security Question - Password To the Employee table - Employee Skills To the Employee Skills table - Employee Type To the Employee Type table	Selected by the Human Resource Officer
		Details confirmation info	Contains the confirmation information	When the officer wants to confirm given information	None	Selected by the Human Resource Officer
		ALT: Details not confirmed info	Contains the declined confirmation information	When the officer wants to decline given information	None	Selected by the Human Resource Officer
6.2	Update employee	Update employee request	Contains the request details to update a pre-existing employee	When the officer requests to update employee	None	Selected by the Human Resource Officer
		New updated employee info	Contains the information given by the officer	When the officer provides the information to update employee	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address	Selected by the Human Resource Officer

6. Human Resource Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					- Postal address - Email address - Security Question - Password To the Employee table - Employee Skills To the Employee Skills table - Employee Type To the Employee Type table	
		Employee confirmation info	Contains the confirmation information	When the officer provides confirmation of updated details	None	Selected by the Human Resource Officer
		ALT: Decline employee confirmation info	Contains the declined confirmation information	When the officer provides a declines confirmation for updated details	None	Selected by the Human Resource Officer
6.3	Search Employee	Employee search request	Contains the request to search an employee on the system	When a user requests to search an employee	None	Selected by the Human Resource Officer
		Employee search details	Contains the details provided by the officer	When a user provides information to search an employee	- Employee Name - EmployeeID From the Employee	Selected by the Human Resource Officer
6.4	Upload Employee Documents	Update employee document request	Contains the request to upload employee document to the system	When the officer request to upload an employee document	None	Selected by the Human Resource Officer
		Document info	Contains the employee document to upload	When the officer provides employee document information	Employee Compliance Document: - Emp_Comp_ID - Emp_Comp_File	Selected by the Human Resource Officer
		Expiry date info	Contains the expiry date information of document	When the officer wishes to provide expiration date	Employee Compliance Document: Expiry date	Selected by the Human Resource Officer

6. Human Resource Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
				information of the document		
6.5	Update Employee Documents	Update document request	Contains the update document request	When the officer request to update employee document	None	Selected by the Human Resource Officer
		Updated document info	Contains the updated document information	When the officer provides updated document information	Employee Compliance Document: - Emp_Comp_ID - Emp_Comp_File	Selected by the Human Resource Officer
		Expiry date info	Contains the expiry date information of document	When the officer wishes to provide expiration date information of the document	Employee Compliance Document: Expiry date	Selected by the Human Resource Officer
		Save updated document info	Contains the save information	When the officer saves updated details	Employee Compliance Document: - Emp_Comp_ID - Emp_Comp_File	Selected by the Human Resource Officer
		Confirm document update info	Contains the confirmation information	When the officer confirms the document uploaded is correct	None	Selected by the Human Resource Officer
		ALT: decline confirmation info	Contains the declined confirmation information	When the officer declines confirmation of the uploaded document	None	Selected by the Human Resource Officer
6.6	Search Employee Document	Search employee document request	Contains the search document request	When the requests to search for an employee document	None	Selected by the Human Resource Officer
		Search details info	Contains the search information to retrieve the	When the officer provides search details for	Employee Compliance Document: - Emp_Comp_ID - Emp_Comp_File	Selected by the Human Resource Officer

6. Human Resource Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			employee document	the document		
		Employee document selection	Contains the selected employee document by the officer	When the officer selects the document wished to view	None	Selected by the Human Resource Officer
6.7	Register New Account	Register account request	Contains the request information to register an account on the system	When an officer requests to be registered on the system	None	Selected by the Human Resource Officer
		Account details	Contains details provided by the user	When user provides registration details	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Role From the Employee table - Employee Skills From the Employee Skills table - Employee Type From the Employee Type table	Selected by the Human Resource Officer
		Confirmation info	Contains confirmation information	When the officer wishes to confirm	None	Selected by the Human Resource Officer
		ALT: Confirmation declined info	Contains declined confirmation info	When the officer wishes to decline confirmation	None	Selected by the Human Resource Officer
6.8	Search Account	Search account request	Contains the request to search an account	When the user requests to search an account	None	Selected by the Human Resource Officer
		Account search criteria	Contains the account search information	When the officer requests to search using the account criteria	- Employee Name - Employee Surname - Cell Number - ID/Passport number	Selected by the Human Resource Officer

6. Human Resource Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					- Tax number - Home address - Postal address - Role From the Employee table - Employee Skills From the Employee Skills table - Employee Type From the Employee Type table	
		Account selection info	Contains the selected account	When the officer has selected the account to view	None	Selected by the Human Resource Officer
6.9	Edit employee account details	Edit employee account request	Contains the request to edit account	When the officer requests to edit account	None	Selected by the Human Resource Officer
		Edited account details	Contains the information provided to edit account	When the officer edits details	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Role From the Employee table - Employee Skills From the Employee Skills table - Employee Type From the Employee Type table	Selected by the Human Resource Officer
		Confirmation response info	Contains the confirmation information	When the officer confirms updated details	None	Selected by the Human Resource Officer
		ALT: Confirmation declined info	Contains the declined confirmation information	When the officer declines updated details	None	Selected by the Human Resource Officer

6.1.7 Team Subsystem

7. Team Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
7.1	Create Team	Request to create new team info	This contains the information required to initiate the creation of a new Team	This is used when the human resource manager wants to create a new Team	None	Selected by the human resource manager
		Details of Team information	This contains the details of the Team which is needed to create a new Team	This is used when the human resource manager enters information to create a new Team	Team • TeamID • TeamNumber • TeamSiteManager • EmployeeTeam • AssignedProject Employee team • EmployeeTeamID • TeamID • EmployeeID • Date	Selected by the human resource manager
		Confirmation of entered details information	This an option the human resource manager can select to confirm that the entered details are correct	This is used when the human resource manager confirms that the entered details are correct	None	Selected by the human resource manager
		Unconfirmed details information [ALT]	This an option the human resource manager can select to confirm that the entered details are not correct	This is used when the human resource manager confirms that the entered details are not correct	None	Selected by the human resource manager
7.2	Search Team	Request team search info	This contains the information needed to initiate the process of searching for an existing Team.	This is used when the user wants to search for an existing Team.	None	Selected by the User

7. Team Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
		Requested search parameter	This contains the parameters to search for an existing Team.	This is used when the user enters parameters to search for an existing Team.	Team TeamNumber	Selected by the User
		Selected Team information	This an option the user can select to indicate which Team they would like to view	This is used when the user selects a Team from the search results.	None	Selected by the User
7.3	Update Team	Request Team edit info	This contains the information needed to initiate the process of updating an existing Team	This is used when the Human resource officer wants to update an existing Team	None	Selected by the Human resource officer
		Team edit info	This contains the details of the team which is needed to update an existing team.	This is used when the Human resource officer enters information to update an existing Team	Team - TeamID - TeamNumber - TeamSiteManager - EmployeeTeam - AssignedProject Employee team - EmployeeTeamID - TeamID - EmployeeID - Date	Selected by the Human resource officer
		Confirmation of Team edit info	This an option the Human resource officer can select to confirm that the entered details are correct	This is used when the Human resource officer confirms that the entered details are correct	None	Selected by the Human resource officer
		Unconfirmed team edit info [alt]	This an option the Human resource officer can	This is used when the Human resource officer	None	Selected by the Human resource officer

7. Team Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			select to confirm that the entered details are not correct	confirms that the entered details are not correct		

6.1.8 Supplier Order Subsystem

8. Supplier Order Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
8.1	Search Project Line-Item List	8.1 Request to search project line-item list information.	This contains the information required to begin the process of searching for a project's line-item list.	The financial officer would like to search for a project's line-item list	None	Selected by the user
		8.1 Search parameter information	This search parameter is required to retrieve the project's line-item list.	This is used when the financial officer wants to enter the search parameter for the desired project line-item list	Project Line-Item	Provided by the user
8.2	Edit Project Line-Item List	8.2 Request to edit project line-item list information.	This contains the information required to begin the process of editing a project's line-item list.	The operations manager would like to edit a project's line-item list	None	Selected by the user
		8.2 Updated project line-item list information	This contains the updated project line-item list required to be captured	When the operations manager would like to update the project line-item list	Project Line-Item	Provided by the user
		8.2 Project line-item list correct confirmation.	This contains an option that will be selected by the financial officer to confirm the claim	When the operations manager confirms that the updated project line-item list is correct and wishes to proceed.	None	Selected by the user

8. Supplier Order Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		8.2 ALT Project line-item list incorrect information.	This contains an option that will be selected by the operations manager to confirm that the updated project line-item is incorrect .	When the operations manager confirms that the updated project line-item details are incorrect .	None	Selected by the user
8.3	Create Supplier Purchase Order	8.3 Request to create supplier purchase order information.	This contains the information required to begin the process of creating a supplier purchase order.	The financial officer would like to create a supplier purchase order	None	Selected by the user
		8.3 Grouped supplier purchase order information.	This contains the group supplier line-items required to be captured	When the financial officer would like to group the supplier line-items	Supplier Purchase Order	Selected by the user
		8.3 Supplier purchase orders correct confirmation information.	This contains an option that will be selected by the financial officer to confirm the supplier purchase orders	When the financial officer confirms that the supplier purchase orders are correct and wishes to proceed.	None	Selected by the user
		8.3 ALT Supplier purchase orders incorrect information.	This contains an option that will be selected by the financial officer to confirm that the supplier purchase	When the financial officer confirms that the supplier purchase order details are incorrect .	None	Selected by the user

8. Supplier Order Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			order details are incorrect.			
8.4	Capture Supplier Quote	8.4 Request to capture supplier quote information	This contains the information required to begin the process of capturing a supplier quote.	The financial officer would like to capture a supplier quote	None	Selected by the financial officer
		8.4 Supplier quote information	This contains the supplier quote required to be captured	When the financial officer would like to upload the supplier quote.	Supplier Quote	Provided by the financial officer
		8.4 Supplier quote details information.	This contains the supplier quote details required to be captured	When the financial officer would like to provide the supplier, quote details.	Supplier Quote	Provided by the financial officer
		8.4 Supplier quote correct confirmation information.	This contains an option that will be selected by the financial officer to confirm the supplier quote	When the financial officer confirms that the supplier quote is correct and wishes to proceed.	None	Selected by the financial officer
		8.4 ALT Supplier quote incorrect information.	This contains an option that will be selected by the financial officer to confirm that the supplier quote details are incorrect.	When the financial officer confirms that the supplier quote details are incorrect.	None	Selected by the financial officer

6.1.9 Supplier Subsystem

9. Supplier Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
9.1	Add Supplier	Request to add new Supplier info	This contains the information required to initiate the creation of a new Supplier	This is used when the Procurement logistics officer wants to add a new Supplier	None	Selected by the Procurement logistics officer
		New supplier info	This contains the details of the Supplier which is needed to add a new Supplier	This is used when the Procurement logistics officer enters information to add a new Supplier	Supplier • SupplierID • SupplierName • PhoneNumber • PaymentDetails • BusinessAddress	Selected by the Procurement logistics officer
		Confirmation of entered details information	This an option the Procurement logistics officer can select to confirm that the entered details are correct	This is used when the Procurement logistics officer confirms that the entered details are correct	None	Selected by the Procurement logistics officer
		Unconfirmed details information [ALT]	This an option the Procurement logistics officer can select to confirm that the entered details are not correct	This is used when the Procurement logistics officer confirms that the entered details are not correct	None	Selected by the Procurement logistics officer
9.2	Search Supplier	Request Supplier search info	This contains the information needed to initiate the process of searching for an existing Supplier.	This is used when the user wants to search for an existing Supplier.	None	Selected by the User
		Requested search parameter	This contains the parameters to search for	This is used when the user enters parameters to search for an	Supplier • SupplierName	Selected by the User

9. Supplier Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			an existing Supplier.	existing Supplier.		
		Selected Supplier information	This an option the user can select to indicate which Supplier they would like to view	This is used when the user selects a Supplier from the search results.	None	Selected by the User
9.3	Update Supplier	Request to update Supplier info	This contains the information needed to initiate the process of updating an existing Supplier	This is used when the Procurement logistics officer wants to update an existing Supplier	None	Selected by the Procurement logistics officer
		Supplier update info	This contains the details of the Supplier which is needed to update an existing Supplier.	This is used when the Procurement logistics officer enters information to update an existing Supplier	Supplier • SupplierID • SupplierName • PhoneNumber • PaymentDetails • BusinessAddress	Selected by the Procurement logistics officer
		Confirmation of Supplier update info	This an option the Procurement logistics officer can select to confirm that the entered details are correct	This is used when the Procurement logistics officer confirms that the entered details are correct	None	Selected by the Procurement logistics officer
		Unconfirmed Supplier update info [alt]	This an option the Procurement logistics officer can select to confirm that the entered details are not correct	This is used when the Procurement logistics officer confirms that the entered details are not correct	None	Selected by the Procurement logistics officer
9.4	Upload supplier documents	Request to add supplier documents	This contains the information	This is used when the Procurement	None	Selected by the Procurement

9. Supplier Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			required to add a new Supplier document	logistics officer wants to add a new Supplier document		logistics officer
		Supplier document info	This contains the details of the Supplier document which is needed to add a new Supplier document	This is used when the Procurement logistics officer uploads a document to add a new Supplier document	Supplier Document - Supplier documentID - Supplier document - SupplierID	Selected by the Procurement logistics officer
		Confirmation of supplier document info	This an option the Procurement logistics officer can select to confirm that the entered details are correct	This an option the Procurement logistics officer can select to confirm that the entered details are correct	None	Selected by the Procurement logistics officer
		Unconfirmed Supplier document info [alt]	This an option the Procurement logistics officer can select to confirm that the entered details are not correct	This an option the Procurement logistics officer can select to confirm that the entered details are not correct	None	Selected by the Procurement logistics officer

6.1.10 Inventory Management Subsystem

10. Line-Item Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
10.1	Add Line-Item	Request to add new Line-Item info	This contains the information required to initiate the creation of a new Line-Item	This is used when the Procurement logistics officer wants to add a new Line-Item	None	Selected by the Procurement logistics officer
		New Line-Item info	This contains the details of the Line-Item which is needed to add a new Line-Item	This is used when the Procurement logistics officer enters information to add a new Line-Item	Line-Item - Line-itemID - Name - Description - Line-itemType - SiteTypeLine-itemID - Price	Selected by the Procurement logistics officer
		Confirmation of entered details information	This an option the Procurement logistics officer can select to confirm that the entered details are correct	This is used when the Procurement logistics officer confirms that the entered details are correct	None	Selected by the Procurement logistics officer
		Unconfirmed details information [ALT]	This an option the Procurement logistics officer can select to confirm that the entered details are not correct	This is used when the Procurement logistics officer confirms that the entered details are not correct	None	Selected by the Procurement logistics officer
10.2	Search Line-Item	Request Line-Item search info	This contains the information needed to initiate the process of searching for an existing Line-Item.	This is used when the user wants to search for an existing Line-Item.	None	Selected by the User

10. Line-Item Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
		Requested search parameter	This contains the parameters to search for an existing Line-Item.	This is used when the user enters parameters to search for an existing Line-Item.	Line-Item Name	Selected by the User
		Selected Line-Item information	This an option the user can select to indicate which Line-Item they would like to view	This is used when the user selects a Line-Item from the search results.	None	Selected by the User
10.3	Update Line-Item	Request to update Line-Item info	This contains the information needed to initiate the process of updating an existing Line-Item	This is used when the Procurement logistics officer wants to update an existing Line-Item	None	Selected by the Procurement logistics officer
		Line-Item update info	This contains the details of the Line-Item which is needed to update an existing Line-Item.	This is used when the Procurement logistics officer enters information to update an existing Line-Item	Line-Item - Line-itemID - Name - Description - Line-itemType - SiteTypeLine-itemID - Price	Selected by the Procurement logistics officer
		Confirmation of Line-Item update info	This an option the Procurement logistics officer can select to confirm that the entered details are correct	This is used when the Procurement logistics officer confirms that the entered details are correct	None	Selected by the Procurement logistics officer
		Unconfirmed Line-Item update info [alt]	This an option the Procurement logistics officer can select to confirm that	This is used when the Procurement logistics officer confirms that the entered	None	Selected by the Procurement logistics officer

10. Line-Item Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When Used:	Entities & Attributes:	Logical Layout:
			the entered details are not correct	details are not correct		

6.1.11 Report Subsystem

11. Reporting Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
11.1	Generate Site Progress Report	11.1 Request to generate site progress report information	This contains the information required to begin the process of generating a site progress report.	The user would like to generate a site progress report	None	Selected by the user
		11.1 Request to download report information.	This contains an option that will be selected by the user to download the report	When the user wants to download the report.	Report	Selected by the user
11.2	Generate Site Type Report	11.2 Request to generate site type report information.	This contains the information required to begin the process of generating a site type report.	The user would like to generate a site type report	None	Selected by the user
		11.2 Request to download report information.	This contains an option that will be selected by the user to download the report	When the user wants to download the report.	Report	Selected by the user
11.3	Generate Team Site Completed Report	11.3 Request to generate team site completed report information.	This contains the information required to begin the process of generating a team site completed report.	The user would like to generate a site type report	None	Selected by the user
		11.3 Date range information.	This contains the date range details required to be captured	When the user would like to provide the date range details.	None	Provided by the user

11. Reporting Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		11.3 Request to download report information.	This contains an option that will be selected by the user to download the report	When the user wants to download the report.	Report	Selected by the user
11.4	Generate Employee Document Expiry Report	11.4 Wants to generate employee document expiry report information.	This contains the information required to begin the process of generating an employee document expiry report.	A month has passed and the Human Resource Officer is expecting an employee document expiry report	None	Prompted by Time
11.5	Generate Site Acceptance Document	11.5 Request to generate site acceptance document information.	This contains the information required to begin the process of generating a site type report.	The user would like to generate a site type report	None	Selected by the user
		11.5 Acceptance document correct confirmation information.	This contains an option that will be selected by the user to confirm the acceptance document	When the user confirms that the acceptance document is correct and wishes to proceed.	None	Selected by the user
		11.5 ALT Acceptance document incorrect information.	This contains an option that will be selected by the user to confirm that the acceptance document details are incorrect .	When the user confirms that the acceptance document details are incorrect .	None	Selected by the user
		11.5 ALT Updated site and project information	This contains the updated site and project information required to be captured	When the user would like to provide the updated site and project information.	None	Provided by the user

6.1.12 User Management Subsystem

12. User management subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
12.1	Login	Login request	Contains the request information for a user to login	When the user wants to login to system.	None	Requested by the user.
12.1	Login	Enter login information	Contains the information for a user to login	When the user wants to login to system.	User: - Email - Password	Requested by the user.
12.2	Logout	Logout request	Contains the request information for a user to logout	When the user wants to logout of system.	None	Requested by the user.
12.2	Logout	User logout confirmation	Contains the information for a user to logout	When the user wants to logout of system.	None	Requested by the user.
12.2	Logout	Alt Cancel User logout confirmation	Contains the cancel information for a user to logout	When the user wants to cancel logging out of system.	None	Requested by the user.
12.3	Reset password	Forgotten password	Contains the information for a user forgetting their password.	When the user forgets their password.	None	Requested by the user.
12.3	Reset password	Confirm forgot password prompt	Contains the information for a user forgetting their password.	When the user forgets their password.	None	Requested by the user.
12.3	Reset password	ALT Cancel forgot password prompt	Contains the information for a user cancelling forgetting their password.	When the user cancel forgets their password.	None	Requested by the user.
12.3	Reset password	Confirm	Contains the	When the user wants	None	Requested by the user.

12. User management subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		Reset password prompt	information for a user resetting their password.	to reset their password.		
12.3	Reset password	ALT Cancel reset password prompt	Contains the information for a user cancelling resetting their password.	When the user cancel reset their password.	None	Requested by the user.
12.3	Reset password	Security question answer	Contains the information for a user answering the security question.	When the user wants to reset their password.	User: Security_answer	Requested by the user.
12.3	Reset password	New password	Contains the information for a user's new password.	When the user wants to reset their password.	User: Password	Requested by the user.

Conclusions

This concludes the interface and other inputs section of the deliverable for the proposed solution to Gohvan Construction.

Output Description

Introduction

This section contains all the reports and the other outputs descriptions for the Gohvan Construction system.

7.1 Complete Output Description

7.1.1 Establishment Subsystem

1. Establishment Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
1.1	Create TSS	Request TSS details info	This contains the information required to prompt the creation of a new TSS	This is used when the operations manager wants to create a new TSS	None	Prompted by the system
		Validation error Info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user	None	Validated by the system
		Confirmation prompt info	This contains information that prompts the user to confirm the TSS details.	This is used when the system needs to receive confirmation that the entered details are correct.	None	Prompted by the system
		Notification of successful creation info	This contains the information to notify the user of the successful TSS creation	This is used when the TSS creation is successful.	None	Notified by the system
		Notification of unsuccessful creation [ALT]	This contains the information to notify the user of the unsuccessful TSS creation	This is used when the TSS creation is unsuccessful.	None	Notified by the system
1.2	Search TSS	Request search parameter info	This contains the information required to	This is used when the user requests to search for a TSS.	None	Prompted by the system

1. Establishment Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			prompt the user to enter a search parameter			
		Validation error Info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user		Validated by the system
		Search result information	This contains the details of the returned search results after the relevant table has been searched.	This is used when the system displays the searched TSS information.	TSS • TSS_ID • SiteName • BSnumber • SiteType	Displayed by the system
		No TSS found info [ALT]	This contains the details used to inform the user that no TSS was found.	This is used to show that no TSS was found that matched the TSS parameters	None	Notified by the system
		Selected TSS information	This contains the details of the selected TSS.	This is used when the user selects a TSS from the search results.	TSS • TSSID • SiteName • BSnumber • SiteType • ClientID • Description • Location • Coordinates • SiteLocalityMapPhoto • Site_pre-approval • RequiredMaterials • RF_details • Site_Accommodation details • SiteElectricalFencing details • SiteFencing details • SiteFinish details • TSSphotosID • RoughSiteDrawing	Displayed by the system

1. Establishment Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					- IdentifiedRisks - AttendeesDetails TSS Photo - TSSphotosID - Photo - TSSID Project Line Items - ProjectLine-itemID - LineItemID - Project ID Project - ProjectID - SiteName - BSnumber - ClientID	
1.3	Update TSS	Prompt to enter TSS edit info	This contains the details required to prompt the user to provide the updated TSS information.	This is used when the user wants to update an existing TSS.	None	Prompted by the system
		Validation error Info [ALT]	This contains information that indicates a failed validation message.	This is used when there is an error in the information provided by the user.	None	Validated by the system
		Confirmation prompt info	This contains information that prompts the user to confirm the TSS update details.	This is used when the system needs to receive confirmation that the entered details are correct	None	Prompted by the system
		Notification of successful edit info	This contains the information to notify the user of the successful TSS update	This is used when the TSS update is successful		Notified by the system

1. Establishment Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		Notification of unsuccessful edit info [ALT]	This contains the information to notify the user of the unsuccessful TSS update	This is used when the TSS creation is unsuccessful.	None	Notified by the system
1.4	Submit TSS report	Prompt confirmation of submit TSS info	This contains the information to prompt the user to confirm the submission of the TSS report	This is used when the TSS submission needs to be confirmed	None	Prompted by the system.
		TSS pdf report info	This contains the information of the submitted TSS report.	This is used when the TSS submission is made by the user.	None	Displayed by the system.

7.1.2 Quotation Subsystem

2. Quotation Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
2.1	Create Quote	ALT: details invalid info	Contains the invalid quote details	When the user provided invalid details	None	Prompts displayed by the system
		Quote confirmation prompt	Contains the confirmation request of quote information	When the created quote requires confirmation	None	Prompts displayed by the system
		Quote created successfully info	Contains the notification information of a successful quote created	When the quote has been successfully created	The Cover Sheet •Client Name •Region •BS Number From Client table •Site Name •Budget Code •Mast Type •Design Load •Equipment Housing •Site Size From Project table •Name From Company Information table •Quotation Number •Date of Quotation •Quote Revision To Client Quote table	Notification displayed by the system.

2. Quotation Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					The Civils Summary •Name From Company Information table •BS Number •Site Name •Region From Project table •Quotation Number •Date of Quotation •Quote Revision From Client Quote table •VAT Amount From VAT table The Package Pricing •Site Name •BS Number From Project table •SAP Material ID •Material Number •Package Name From Price Line Item table •Unit •Unit Price	

2. Quotation Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					•Quantity From Price Line Item table	
		ALT: Quote created unsuccessfully info	Contains the notification information of an unsuccessful quote created	When the quote has been unsuccessfully created	None	Notification displayed by the system.
2.2	Search Quote	Input search criteria prompt	Contains the details that the user can input to search for the quote	When the user requests to search for a quote	None	Notification displayed by the system.
		ALT: incorrect input details info	Contains the information after validation of the provided information	When the provided details of the user are invalid	•Quote ID •Quote Name •Quote Description From Client Quote table	Notification displayed by the system.
		Select quote prompt	Contains the details used to obtain quote selection	When the system has displayed quote matches and requires the user to select quote	None	Notification displayed by the system.
		Matches info	Contains the relevant matches from the provided search details	When the user has proceeded to search for a quote and matches need to be displayed	None	Notification displayed by the system.
		ALT: No matches info	Contains the notification that indicates the search details had no matches	When the provided details of the user results in no matches	None	Notification displayed by the system.

2. Quotation Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		Selected quote info	Contains the information from the selected quote	When the user selects a quote and the system needs to display it	None	Notification displayed by the system.
2.3	Capture Purchase Order	Upload purchase order prompt	Contains the details used to obtain a purchase order	When the system needs the user to provide a purchase document	None	Notification displayed by the system.
		Confirm purchase order prompt	Contains the confirmation option that the system provides to the user	When the system needs the user to confirm purchase order information	None	Notification displayed by the system.
		Saved successfully info	Contains the notification of successful storing of the purchase order	When the system has successfully stored the purchase order on the system	• Purchase Order ID • Purchase Order File From Client Purchase Order table	Notification displayed by the system.
		ALT: Saved unsuccessfully info	Contains the notification of unsuccessful storing of the purchase order	When the system has unsuccessfully stored the purchase order on the system	None	Notification displayed by the system.

7.1.3 Administration Subsystem

3. Administrative subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
3.1	Create Health and Safety file	Upload HS file prompt	Contains information of the Upload HS file prompt	When the user needs to enter HS file information.	None	Prompts display by the system.
3.1	Create Health and Safety file	Notify Hs officer	Contains information of the Upload HS file	When the user needs confirmation that the file has been uploaded	None	Notification display by the system.
3.1	Create Health and Safety file	ALT Notify Hs officer	Contains incorrect information of the Upload HS file	When the user needs to be aware that the file has not been uploaded	None	Notification display by the system.
3.2	Search Health and Safety file	Search HS file prompt	Contains information of the search HS file	When the user needs to enter HS file information.	None	Prompts display by the system.
3.2	Search Health and Safety file	Alt Capture HS file information	Contains incorrect information of the search HS file	When the user needs to be aware that the file has not been found	None	Notification display by the system.
3.2	Search Health and Safety file	Display HS file	Contains information of the search HS file	When the system displays the searched HS file information	Health and Safety: • File • Created_Date • Name • Description	Notification display by the system.
3.2	Search Health and Safety file	Download HS file	Contains information of the downloaded HS file	When the system displays the downloaded HS file information	Health and Safety: • File • Created_Date • Name • Description	Notification display by the system.
3.3	Capture Health and Safety Confirmation	Upload HS file confirmation prompt	Contains information of the Upload HS confirmation file	When the user needs to enter HS file confirmation information.	None	Prompts display by the system.

3. Administrative subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			prompt			
3.3	Capture Health and Safety Confirmation	ALT Validate HS file confirmation	Contains incorrect information of the Upload HS confirmation file	When the user needs to be notified the confirmation information is incorrect.	None	Notification display by the system.
3.3	Capture Health and Safety Confirmation	Prompt upload confirmation	Contains the information for the user to confirm the upload.	When the user needs to be aware that they need to confirm the upload.	None	Notification display by the system.
3.3	Capture Health and Safety Confirmation	Notify Hs file confirmation upload	Contains information of the Upload HS file confirmation	When the user needs confirmation that the HS file confirmation has been uploaded	None	Notification display by the system.
3.4	Upload Formal Drawing	Upload formal drawing prompt	Contains information of the formal drawing upload prompt.	When the user needs to be aware to upload formal drawing	None	Prompts display by the system.
3.4	Upload Formal Drawing	ALT Validate formal drawing	Contains incorrect information of the formal drawing upload.	When the user needs to be aware the upload formal drawing is incorrect	None	Notification display by the system.
3.4	Upload Formal Drawing	Confirm formal drawing upload prompt	Contains information of the Upload of formal drawing	When the user needs confirmation that the formal drawing needs to be uploaded	None	Prompts display by the system.
3.4	Upload Formal Drawing	Notify drafts person	Contains the uploaded formal	When the user needs to know about the uploaded	None	Notification display by the system.

3. Administrative subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			drawing information	formal drawing		
3.5	Upload Second cut Drawing	Upload second cut drawing prompt	Contains information of the second cut drawing upload prompt.	When the user needs to be aware to upload second cut drawing	None	Prompts display by the system.
3.5	Upload Second cut Drawing	ALT Validate second cut drawing	Contains incorrect information of the second cut drawing upload.	When the user needs to be aware the upload second cut drawing is incorrect	None	Notification display by the system.
3.5	Upload Second cut Drawing	Confirm second cut drawing upload prompt	Contains information of the Upload of second cut drawing	When the user needs confirmation that the second cut drawing needs to be uploaded	None	Prompts display by the system.
3.5	Upload Second cut Drawing	Notify drafts person	Contains the uploaded second cut drawing information	When the user needs to know about the uploaded second cut drawing	None	Notification display by the system.
3.6	Search As built document	Search As built document prompt	Contains information of the search As built document	When the user needs to enter As built document information.	None	Prompts display by the system.
3.6	Search As built document	Alt Capture As built document information	Contains incorrect information of the search As built document	When the user needs to be aware that the file has not been found	None	Notification display by the system.
3.6	Search As built document	Display As built document	Contains information of the search As built document	When the system displays the searched As built document information	As-built: - File - Created_Date - Name - Description	Notification display by the system.

3. Administrative subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
3.6	Search As built document	Download As built document	Contains information of the downloaded As built document	When the system displays the downloaded As built document information	As-built: - File - Created_Date - Name - Description	Notification display by the system.
3.7	Create As-Built Document	Create As-built document prompt	Contains information of the to create an As built document prompt	When the user needs to create the As built document.	None	Prompts display by the system.
3.7	Create As-Built Document	ALT Create As-built document prompt	Contains incorrect information regarding the project status.	When the system rejects the creation of the As-built document.	Project: Project_status	Notification display by the system.
3.7	Create As-Built Document	Add section prompt	Contains information regarding adding an extra section to the document.	When the user gets the option to add another section to the document	None	Prompts display by the system.
3.7	Create As-Built Document	ALT Capture and validate added section	Contains incorrect information regarding adding an extra section to the document	When the user needs to get notified about the incorrect information regarding added section.	None	Notification display by the system.
3.7	Create As-Built Document	Notify HS officer	Contains information regarding to the created As built document	When the user needs to get notified about the completion of the As built document.	As-built: - File - Created_Date - Name - Description	Notification display by the system.

7.1.4 Construction Subsystem

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
4.1	4.1 Capture "Site-Go-Ahead"	4.1 Provide Site-Go-Ahead Screenshot prompt information	For the system to request that the user uploads Site-Go-Ahead information.	This is used when the Operations Manager requests to upload Site-Go-Ahead information	None	Prompted by the system
		ALT 4.1 Unsuccessful Site-Go-Ahead Capture information	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.1 Confirm Site-Go-Ahead screenshot	This contains the details used to confirm that the captured Site-Go-Ahead information is correct.	This is used when the system requires the user to confirm the entered information.	None	Prompted by the system
		4.1 Site-Go-Ahead successful capture notification	This contains the information used to User of the successful Site-Go-Ahead Capture.	This is used when the system captures the Site-Go-Ahead.	None	Notification displayed on system
		4.1 Successful Site-Go-Ahead notification	This contains the information used to email the Procurement and Logistics Officer of the Site-Go-Ahead Approval	This is used when the system captures the Site-Go-Ahead and emails the Procurement and Logistics Officer	None	System sends Email to Procurement and Logistics Officer.

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		4.1 successful Site-Go-Ahead notification	This contains the information used to email the Health and Safety officer of the Site-Go-Ahead Approval	This is used when the system captures the Site-Go-Ahead and emails the Health and Safety officer.	None	System sends Email to Health and Safety officer
		4.1 successful Site-Go-Ahead notification	This contains the information used to email the Draftsperson of the Site-Go-Ahead Approval	This is used when the system captures the Site-Go-Ahead and emails the Draftsperson .	None	System sends Email to Draftsperson
4.2	4.2 Allocate Team Site	4.2 Prompt to assign initial team	This contains the information that prompts the user to assign an initial team to the construction site.	This is used when the Operations Manager wants to assign a team to the construction project.	None	Prompted by the system
		4.2 All Teams Available Information	This contains the information of all available teams to be assigned to the construction project	This is used when the system displays to the Operations Manager a list of all available teams.		Displayed by the system
		4.2 Prompt to select Team information	This contains the information that prompts the user to select a team to be assigned to the	The is used when the Operations Manager selects a team from the list of displayed teams.	Team: • Team name • Team Site Manager • Assigned Projects	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			construction site.			
		4.2 Prompt to confirm initial team	This contains the details used to confirm to assign initial team.	This is used when the system requires the user to confirm the selected information.	None	Prompted by the system
		4.2 Successful Team assignment notification	This contains the information to notify user that the team has been assigned to the construction site.	This is used when the system notifies the Operations Manager that the team has been assigned to the construction project.	None	Displayed by the system
		4.2 List of assigned team information	This contains the information that displays a list of all assigned teams to the construction site.	This is used when the system displays a list of assigned teams for the construction project to the Operations Manager.	Construction Site Team: - Team ID - Team Name - Date Assigned - Team Site Manager	Displayed by the system
		ALT 4.2 Add Additional team information	This contains the information that is used to prompt the user to assign an additional team to the construction site.	This is used when the Operations Manager wants to add an additional team to the construction project.	None	Prompted by the system
		ALT 4.2 Rejected Team Information notification	This contains the information that the team is not to be	The is used when the system displays to the Operations	None	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
4.3	4.3 Update Team Site Allocation		assigned to the construction project.	Manager the rejected team notification		
		4.2 Team Assignment information	This contains the information of the assigned teams to the construction site.	This is used when the system notifies the Health and Safety Officer on the assigned team to the construction site.	Construction Site Team: - Team ID - Team Name - Date Assigned - Team Site Manager	System sends email to the Health and Safety Officer.
		4.3 List of assigned team information	This contains the information of the assigned teams to the construction site	This is used when the Operations Manager wants to edit the assigned teams on the construction site. The system will display the list of assigned teams for the construction project to the Operations Manager	Construction Site Team: - Team ID - Team Name - Date Assigned - Team Site Manager	Displayed by the system
		4.3 Prompt to remove team information	This contains the information to prompt the user to remove an assigned team from the construction site.	This is used when the Operations Manager wishes to remove the assigned team from the construction site.	None	Prompted by the system
		4.3 Confirmation to remove team information	This contains the details used to confirm to remove an assigned team.	This is used when the system requires the user to confirm to remove the	None	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
				selected information.		
		4.3 Remove Team notification	This contains the information that notifies the user that the team has been removed from the construction project.	This is used when the System notified the Operations Manager that the team has been removed from the construction site.	None	Displayed by the system
		ALT 4.3 No Assigned team information	This contains the information that notifies the User that no team is assigned to the construction site.	This is used when the system notifies to the Operations Manager that not team is assigned to the construction site.	None	Displayed by the system
4.4	4.4 Upload Compliance Documents	4.4 Prompt to receive compliance information	This contains the information to prompt the user to enter the compliance document information.	This is used when the health and Safety Officer wishes to upload the Compliance documents for the Construction Project to the system.	None	Prompted by the system
		ALT 4.4 Validation error on compliance documents	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.4 Prompt compliance confirmation	This contains the details used	This is used when the system	None	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			to confirm to upload the compliance document information.	requires the user to confirm the entered information.		
		4.4 Uploaded compliance document information	This contains the information that notifies the user on the uploaded compliance document.	This is used when the system notifies the Health and Safety Officer that the compliance documents have been uploaded to the system.	None	Displayed by the system
4.5	4.5 Search Project	4.5 Prompt to enter project information	This contains the information to prompt the user to enter the Project search criteria.	This is used the User requests to search for a project.	None	Prompted by the system
		ALT 4.5 Validation error on project search information	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		ALT 4.5 No Project Found info	This contains the information that notifies the user that the project does not exist.	This is used when the system notifies to the user that the searched for project does not exist.	None	Displayed by the system
		4.5 Prompt to select searched project information	This contains the details of the results obtained from the search criteria.	This is used when the system displays the list of projects obtained from the	Project: • Project ID • Project Name • Date Started • Site Location	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
				search result.		
		4.5 Display selected project	This contains the information of the Selected project.	This is used when the system displays the selected project details to the user.	Project • Project ID • Project Name • BS Number • Site Size • Region • Site Location • Project Status	Displayed by the system
4.6	4.6 Create Site Progress description	4.6 Prompt to enter progress information	This contains the information for the user to enter site progress details	This is used when the Operations Manager request to create a site progress description.	None	Prompted by the system
		ALT 4.6 Validation error on progress description	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.6 Prompt to confirm progress description	This contains the details used to confirm to upload the Site Progress information.	This is used when the system requires the user to confirm the entered information.	None	Prompted by the system
		4.6 Notification on site progress description	This contains the information that notifies the user on the created site progress description.	This is used when the system notifies the Operations Manager that the site progress status has been created.	None	Displayed by the system
4.7	4.7 View Site Progress description	4.7 Prompt to view site progress	This contains the information for the user	This is used when the Operations Manager	None	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			view the Site progress details	request to view the site progress on the construction site.		
		4.7 Site Progress description information	This contains the information of the site progress details.	This is used when the system displays the site progress descriptions to the Operations Manager	Site Progress Description: • Status Title • Status Description • Date Updated	Displayed by the system
4.8	4.8 Upload Complete Site photos	4.8 Prompt to select complete photos	This contains the information to prompt the user to enter the Completed site photos.	This is used when the Operations Manager requests to upload the completed site photos for the construction site.	None	Prompted by the system
		ALT 4.8 Validation Error on selected photos	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.8 Prompt to confirm selected photos information	This contains the details used to confirm to upload the completed site photos.	This is used when the system requires the user to confirm the selected information.	None	Prompted by the system
		4.8 Notification on uploaded site photos	This contains the information that notifies the user that the complete site photos have been uploaded.	This is used when the system notifies the Operations Manager on the uploaded completed site photos.	None	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		4.8 Notification on Complete site photos uploaded	This contains the information that emails the Health and Safety Officer on the upload completed site photos	This is used when the system emails and notifies the Health and Safety officer on the uploaded and completed construction site.	None	The system emails the Health and safety Officer.
4.9	4.9 Upload Radio Frequency Report	4.9 Prompt to receive Radio Frequency Report	This contains the information to prompt the user to enter the radio frequency report information.	This is used when the Operations Manager requests to upload the Radio Frequency report to the system.	None	Prompted by the system
		ALT 4.9 Validation error on Radio Frequency Report	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.9 Prompt user to enter Cooling system details	This contains the information to prompt the user to enter the cooling system details.	This is used when the system requires the Operations Manager to enter the Cooling system details for the Radio Frequency report.	None	Prompted by the system
		ALT 4.9 Validation error on Cooling system information	This contains the information that indicates a failed validation message	When the system captures a validation error in the entered information	None	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		4.9 Prompt confirmation on Radio Frequency report	This contains the details used to confirm to upload the Radio Frequency report information.	This is used when the system requires the user to confirm the entered information.	None	Prompted by the system
		4.9 Notification on Radio Frequency report uploaded and cooling system details logged	This contains the information that notifies the user on the uploaded Radio Frequency report details and the cooling system details.	This is used when the system notifies the Operations Manager on the uploaded Radio Frequency report and the Cooling system details.	None	Displayed by the system
		4.9 Upload Radio Frequency report notification	This contains the information that emails the Financial Officer the notification on the uploaded details.	The is used when the system emails the Financial Officer on the uploaded radio Frequency report.	None	The system emails the Financial Officer
		4.9 Completed site Notification	This contains the information that emails the Quality Control Officer on the uploaded Radio Frequency report and cooling system details.	The is used when the system emails the Quality Control Officer on the uploaded Radio Frequency report.	None	The system emails the Quality Control Officer.
4.10	4.10 Search Radio	4.10 Prompt to view Radio	This contains the information	This is used when the user request	None	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
	Frequency Report	Frequency Report	to prompt the user to enter the Radio Frequency Report criteria.	to search for a Radio Frequency report for the project.		
		4.10 Radio Frequency Report information	This contains the information of the searched for Radio Frequency report.	This is used when the system displays to the user the Radio Frequency report on the project.	Report: - Report Name - Date - Report (Digital document)	Displayed by the system
		ALT 4.10 No Radio Frequency Report Notification	This contains the information that the Radio frequency searched for does not exist.	This is used to display to the user that the Radio Frequency report is not uploaded to the project.	None	Displayed by the system
4.11	4.11 Request Site Visit	4.11 Prompt confirmation for site visit	This contains the details used to confirm to request a site visit from the client.	This is used when the system requires the user to confirm to request the site visit from the Quality Control Officer	None	Prompted by the system
		ALT 4.11 Notification on missing site documents	This contains the information that notifies the user that the Site visit cannot be requested	This is used when the system notifies the Operations Manager on documents that are missing before the site visit can be requested.	None	Displayed by the system
		4.11 Notification	This contains the	This is used when the	None	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		on request for site visit	information that notifies the user on the site visit request.	system notified the Operations Manager on the request made to the Quality Control Officer		
		4.11 Notification on site acceptance document	This contains the information that notifies the user on the Site acceptance document being created.	This is used when the system notifies the Operations Manager that the site acceptance document has been created.	None	Displayed by the system
		4.11 Notification to visit site	This contains the information that emails the Quality Control Officer that a site visit has been requested.	This is used when the system notifies the Quality Control Officer that a request to visit the construction site has been made.	None	The system emails the Quality Control Officer.
		4.11 Site acceptance document info	This contains the information of the site acceptance document creation.	This is used when the system displays to the Operations Manager the site acceptance document details.	Acceptance Document: • Acceptance Document Name • Date Created • Acceptance Documents	The system emails the Quality Control Officer.
4.12	4.12 Edit Acceptance Document	4.12 Prompt Confirmation on acceptance document details	This contains the details used to confirm that the displayed information is correct.	This is used when the system requires the user to confirm the information on the site	None	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
				acceptance document.		
		ALT 4.12 Prompt details on acceptance document	This contains the details to prompt the user to enter the updated Acceptance Document information.	This is used when the system requires the user to confirm the information being updated on the acceptance document.	None	Prompted by the system
		4.12 Prompt information on snags	This contains the information to prompt the user enter the information on the snags.	This is used when the Quality Control Officer requests to add snags to the Site Acceptance Document.	None	Prompted by the system
		ALT 4.12 prompt custom snag list items	This contains the information to prompt the user to enter the custom snag item list info.	This is used when the system requires the user to confirm the entered information for the custom snag.	Snags • Snag item • Snag Description	Prompted by the system
		4.12 Confirm Snag list item	This contains the details used to confirm the snag item list on the acceptance document.	This is used when the system requires the user to confirm the entered information on the snag list.	None	Prompted by system
		4.12 Combined snag list and acceptance document information	This contains the information of the acceptance document information	This is used when the system displays to the user the combined project snag	Acceptance Document: • Acceptance Document Name • Date Created	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			and the snag list information.	list and the Site acceptance document.	- Acceptance Documents - Project Snag List: - Snag item - Snag Description - Snag Note.	
		4.12 Acceptance document (Snag list) information	This contains the information of the Snag list in the acceptance document.	This is used when the system notifies the Operations Manager on the Site acceptance document with the newly added snags to the Site acceptance document.	None	The system emails the Operations Manager
4.13	4.13 Search Acceptance Document	4.13 Prompt for acceptance document search criteria	This contains the information to prompt the user to search for a site acceptance document.	This is used when the system requires the user to enter the search criteria for the desired project.	None	Prompted by the system
		ALT 4.13 validation Error on acceptance document info	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		ALT 4.13 Notification on no acceptance document	This contains the information to display that there is no acceptance document information.	This is used when the system notifies the User that the Site acceptance document does not exist within the system.	None	Displayed by the system
		4.13 Prompt to select	This contains the	This is used when the	Acceptance Document:	Prompted by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
		desired acceptance document	information to prompt the user to select the desired acceptance document	system displays the Site acceptance document search results and requests the user to select the desired site acceptance document.	- Acceptance Document Name - Date Created	
		4.13 Acceptance document information	This contains the information of the Site acceptance document.	This is used when the system displays the information on the selected Site Acceptance Document.		Displayed by the system
4.14	4.14 Confirm Acceptance Document	4.14 Prompt to mark snag list	This contains the information to prompt the user to mark the completed	This is used when the Quality Control Officer requests to confirm snags on the Site Acceptance document.	Project Snag List: - Snag Item - Snag Description - Complete check	Prompted by the system
		4.14 Confirm completed snags	This contains the details used to confirm that the snag item list is completed.	This is used when the system displays the list of snags to the Quality Control Officer for the confirmation of each snag.	None	Displayed by the system
		ALT 4.14 Snags not completed notification	This contains the information of the snags not completed.	This is used when the Quality Control Officer tries to confirm	None	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
				site Acceptance document and the system captures not all snags have been completed.		
		4.14 Request site visit from client notification	This contains the information for the notification on the request for site visit.	This is used when the system notifies the Quality Control Officer to request a client site visit.	None	Requested by the system
		4.14 Request for client visit notification	This contains the information of the request to visit site.	This is used when the system emails the Operations Manager that the client visit has been requested.	None	The system sends an email to the Operations Manager
4.15	4.15 Capture Site Sign-off	4.15 Prompt to upload acceptance schedule	This contains the details used to upload the Acceptance schedule information.	This is used when the Quality Control Officer wants to upload the site Acceptance schedule information.	None	Prompted by the system
		ALT 4.15 Validation error on site acceptance schedule	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.15 confirm acceptance schedule	This contains the details used to confirm to	This is used when the system requires the	None	Prompted by system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
			Site Acceptance schedule information.	Quality Control officer to confirm the Site acceptance Schedule to be uploaded.		
		4.15 Site sign-off notification	This contains the information to notify Financial Officer that site has been signed off	This is used when the system sit sign off has been uploaded to the system and emails the Financial officer.	None	The system sends an email to the Financial Officer
4.16	4.16 Capture Commission report	4.16 Prompt to receive upload Commission report	This contains the information for the user to enter the Commission report information.	This is used when the Operations Manage wants to upload the commission report.	None	Prompted by the system
		ALT 4.16 Validation error on commission document	This contains the information that indicates a failed validation message	This is used when the system captures a validation error in the entered information	None	Displayed by the system
		4.16 Prompt confirmation on upload	This contains the details used to confirm the Commission report information.	This is used when the system requires the user to confirm the entered information on the commission report.	None	Prompted by the system
		4.16 Notification on commission report upload	This contains the information on the commission report	This is used when the system displays to the user that the Commission	None	Displayed by the system

4. Construction subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	Usage	Entities & Attributes:	Logical Layout:
				report has been uploaded.		

7.1.5 Invoicing Subsystem

5. Invoicing Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
5.1	Search Invoice.	5.1 Prompt for search parameter information.	Contains the information needed by the financial officer to enter the search parameter information.	This is used when the financial officer requests to search for a project's invoice.	None.	Prompted by the system.
		5.1 ALT Validation Error information.	Contains the information used to notify the financial officer the entered search parameter is invalid.	This is used when the financial officer entered an invalid search parameter.	None	Generated by the system.
		5.1 Display search result information	Contains the information of the returned search result, from the relevant searched table.	This is used when the system displays the results of the search function.	Invoice	Displayed by the system.
		5.1 ALT: No Invoice found information	Contains the information used to notify the financial officer that no invoice was found.	This is used when the system cannot retrieve the result based on the provided search parameter.	None	Generated by the system.
5.2	Send Invoice	5.2 Display generated Initial Claim invoice information	Contains the information of the generated Initial Claim invoice with the details from the relevant table.	This is used when the system displays the generated invoice.	Client Purchase Order	Displayed by the system

		5.2 Prompt to confirm Invoice details information.	This contains the details used to confirm the invoice details.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		5.2 ALT Display generated Final Claim invoice information	Contains the information of the generated Final Claim invoice with the details from the relevant table.	This is used when the system displays the generated invoice.	Client Purchase Order	Displayed by the system
		5.2 Invoice details information	This contains the details of the confirmed invoice.	Used when the financial officer wants to download the invoice	Invoice	Displayed by the system
		5.2 ALT Invoice not saved information	This informs the financial officer that the invoice was not saved.	Used when the invoice is incorrect and the generated invoice is not saved.	Invoice	Generated by the system.
5.3	Capture Proof of Payment	5.3 Prompt for proof of payment information.	Contains the information needed by the financial officer to upload the proof of payment information.	Used when the financial officer requests to capture a proof of payment.	None	Prompted by the system
		5.3 Display uploaded proof of payment information	Contains the information of the uploaded proof of payment.	Used when the system displays the uploaded proof of payment information.	Proof of payment	Displayed by the system
		5.3 Prompt for proof of payment details information.	Contains the information needed by the financial officer to provide the proof of payment details.	Used when the financial officer requests to capture a proof of payment details.	None	Prompted by the system

		5.3 Prompt for proof of payment confirmation information	This contains the details used to confirm the proof of payment details.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		5.3 Proof of payment successfully captured notification information	Contains the information that the proof of payment was successfully saved.	This is used when the system saved the proof of payment.	None	Generated by the system.
		5.3 ALT Proof of payment not captured information.	Contains the information that the proof of payment was not captured.	This is used when the proof of payment was not captured.	None	Generated by the system
5.4	Capture Claim	5.4 Prompt for claim receipt number information.	Contains the information needed by the financial officer to provide the receipt number details.	Used when the financial officer requests to capture the receipt number details.	None	Prompted by the system
		5.4 Prompt for receipt number confirmation information.	This contains the details used to confirm the receipt number.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		5.4 Claim successfully captured notification information	This contains the information that the claim was captured	Used when the claim is successfully captured.		
		5.4 ALT Claim not captured information.	This contains the information that the claim was not captured	Used when the claim is not captured.	None	Generated by the system

7.1.6 Human Resource Subsystem

6. Human Resource Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
6.1	Add Employee	Employee details prompt	Contains details that prompt user to input employee details	When the user has requested to add a new employee	None	Notification displayed by the system.
		ALT: invalid employee details	Contains information of invalid detailed provided by the user	When the system must inform the user that details provided are invalid	None	Notification displayed by the system.
		Confirm details prompt	Contains the details needed to obtain confirmation from the user	When the user has saved provided details	None	Notification displayed by the system.
		Add new employee success info	Contains the notification of the unsuccessful addition of employee to the system	When the system needs to inform the user of the employee addition success.	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address - Security Question - Password To the Employee table - Employee Skills	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					To the Employee Skills table Employee Type To the Employee Type table	
		ALT: add new employee unsuccessful info	Contains the notification of the successful addition of employee to the system	When the system needs to inform the user of the employee addition failure.	None	Notification displayed by the system.
6.2	Update Employee	Update employee prompt	Contains information that prompts the user to provided update details	When the user requests to update an employee	None	Notification displayed by the system.
		Unupdated employee info	Contains the original information of the employee	When the user has selected employee to update	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address - Security Question - Password To the Employee table - Employee Skills To the Employee Skills table	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					Employee Type To the Employee Type table	
		ALT: invalid employee details	Contains the invalid employee details	When the user provided invalid details	None	Notification displayed by the system.
		Confirm employee details prompt	Contains the details needed to obtain confirmation from the user	When the user has saved provided details	None	Notification displayed by the system.
		Update employee successful info	Contains the notification of the unsuccessful update of employee to the system	When the system needs to inform the user of the employee update success.	None	Notification displayed by the system.
		ALT: update employee unsuccessful info	Contains the notification of the successful update of employee to the system	When the system needs to inform the user of the employee update failure.	None	Notification displayed by the system.
6.3	Search Employee	Employee search details prompt	Contains the information that prompts the user to enter search details	When the user requests to search for an employee	None	Notification displayed by the system.
		ALT: incorrect input details	Contains the invalid employee details	When the user provided	- Employee Name - EmployeeID From the Employee	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
				invalid details		
		Retrieved search details	Contains the retrieved details of the employee	When the user has given search information that has been used by the system	- Employee Name - Employee Surname - Cell Number - ID/Passport number - Tax number - Home address - Postal address - Email address - Security Question - Password To the Employee table - Employee Skills To the Employee Skills table - Employee Type To the Employee Type table	Notification displayed by the system.
		ALT: No matches notification	Contains the error details to be displayed to the user	When there are no results that match search details provided	None	Notification displayed by the system.
6.4	Upload Employee Document	Upload document prompt	Contains the information that prompts the user to upload an employee document	When the user requests to upload an employee document	None	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		ALT: validation error info	Contains the information after validation to be displayed	When the user has entered invalid info relating to the expiry date	Employee Compliance Document: • Emp_Comp_ID • Emp_Comp_File	Notification displayed by the system.
		Successfully uploaded document info	Contains the notification of the successful upload to the system	When the system needs to inform the user of the employee document upload success.	None	Notification displayed by the system.
		ALT: unsuccessfully uploaded document info	Contains the notification of the unsuccessful upload to the system	When the system needs to inform the user of the employee document upload failure.	None	Notification displayed by the system.
6.5	Update Employee Documents	Update document prompt	Contains the information that prompts the user to update the employee document	When the user requests to update an employee document	None	Notification displayed by the system.
		ALT: invalid document (exp.date) info	Contains the information after validation to be displayed	When the user has entered invalid info relating to the expiry date	Employee Compliance Document: • Emp_Comp_ID • Emp_Comp	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					<u>_File</u>	
		Confirm saved request info	Contains the verification of the request to save the information by the user	When the user has selected the option to save document details	None	Notification displayed by the system.
		Document updated successfully info	Contains the notification of the successful update to the system	When the system needs to inform the user of the employee document update success.	None	Notification displayed by the system.
		ALT: document updated unsuccessfully info	Contains the notification of the unsuccessful update to the system	When the system needs to inform the user of the employee document update failure.	None	Notification displayed by the system.
6.6	Search Employee Document	Search details prompt	Contains the information that prompts the user to search for a document	When the user requests to search for an employee document	None	Notification displayed by the system.
		ALT: search details invalid	Contains the information after validation to be displayed	When the user has entered invalid info relating to the search details	Employee Compliance Document: • Emp_Comp_ID • Emp_Comp_File	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		ALT: no documents match search details	Contains the error details to be displayed to the user	When there are no results that match search details provided	None	Notification displayed by the system.
		Employee document display info	Contains the information of the employee document to be displayed	When the user has selected the document initially requested to view	None	Notification displayed by the system.
6.7	Register New Account	Input account details prompt	Contains the information that prompts the user to input account details	When the user requests to register a new account	None	Notification displayed by the system.
		ALT: invalid input details	Contains the information after validation to be displayed	When the user has entered invalid info relating to the registration details	•Employee Name •Employee Surname •Cell Number •ID/Passport number •Tax number •Home address •Postal address •Role From the Employee table •Employee Skills From the Employee Skills table •Employee Type	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					From the Employee Type table	
		Confirm request info	Contains the information to confirm a request	When the user has input details and saved the details	None	Notification displayed by the system.
		Account registered successfully info	Contains the notification of the successful update to the system	When the system needs to inform the user of the registration success.	None	Notification displayed by the system.
		Account registered unsuccessfully info	Contains the notification of the unsuccessful update to the system	When the system needs to inform the user of the registration failure.	None	Notification displayed by the system.
6.8	Search Account	Account search prompt	Contains the information that prompts the user to search for a user account	When the user requests to search for an account	None	Notification displayed by the system.
		Account search details	Contains the details required for input to search for an account	When the user has indicated a request to search for an account	•Employee Name •Employee Surname •Cell Number •ID/Passport number •Tax number •Home address •Postal address •Role	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					From the Employee table •Employee Skills From the Employee Skills table •Employee Type From the Employee Type table	
		ALT: no matches error details	Contains the error details to be displayed to the user	When there are no results that match search details provided	None	Notification displayed by the system.
		Account selected info	Contains the selected account information	When the user has selected an account that the user wishes to view	None	Notification displayed by the system.
6.9	Edit Employee Account Details	Edit account prompt	Contains the information that prompts the user to edit an account	When the user requests to edit an account's details	None	Notification displayed by the system.
		ALT: validation error account info	Contains the information after validation to be displayed	When the user has entered invalid info relating to the account	• Employee Name • Employee Surname • Cell Number • ID/Passport number • Tax number	Notification displayed by the system.

6. Human Resource Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
					• Home address • Postal address • Role From the Employee table • Employee Skills From the Employee Skills table • Employee Type From the Employee Type table	
		Successfully updated account notification	Contains the notification of the successful update to the system	When the system needs to inform the user of the update success.	None	Notification displayed by the system.
		ALT: Unsuccessfully updated account notification	Contains the notification of the unsuccessful update to the system	When the system needs to inform the user of the update failure.	None	Notification displayed by the system.

7.1.7 Team Subsystem

7. Team Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
7.1	Create team	Request team details info	This contains the information required to prompt the creation of a new team	This is used when the human resource officer wants to create a new team	None	Prompted by the system
		Validation error Info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user	None	Validated by the system
		Confirmation prompt info	This contains information that prompts the user to confirm the team details.	This is used when the system needs to receive confirmation that the entered details are correct.	None	Prompted by the system
		Notification of successful creation info	This contains the information to notify the user of the successful team creation	This is used when the team creation is successful.	None	Notified by the system
		Notification of unsuccessful creation [ALT]	This contains the information to notify the user of the unsuccessful team creation	This is used when the team creation is unsuccessful.	None	Notified by the system
7.2	Search team	Request search parameter info	This contains the information required to prompt the user to enter a search parameter	This is used when the user requests to search for a team.	None	Prompted by the system

7. Team Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		Validation error info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user		Validated by the system
		Search result information	This contains the details of the returned search results after the relevant table has been searched.	This is used when the system displays the searched team information.	Team - TeamID - TeamNumber	Displayed by the system
		No team found info [ALT]	This contains the details used to inform the user that no team was found.	This is used to show that no team was found that matched the team parameters	None	Notified by the system
		Selected team information	This contains the details of the selected team.	This is used when the user selects a team from the search results.	Team - TeamID - TeamNumber - TeamSitemanager - EmployeesTeam - AssignedProject Employee Team - EmployeeTeamID - TeamID - Employee ID	Displayed by the system
7.3	Update team	Prompt to enter team edit info	This contains the details required to prompt the user to provide the updated team information.	This is used when the user wants to update an existing team.	None	Prompted by the system
		Validation error info [ALT]	This contains information	This is used when there is an error in the	None	Validated by the system

7. Team Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			that indicates a failed validation message.	information provided by the user.		
		Confirmation prompt info	This contains information that prompts the user to confirm the team update details.	This is used when the system needs to receive confirmation that the entered details are correct	None	Prompted by the system
		Notification of successful edit info	This contains the information to notify the user of the successful team update	This is used when the team update is successful		Notified by the system
		Notification of unsuccessful edit info [ALT]	This contains the information to notify the user of the unsuccessful team update	This is used when the team creation is unsuccessful.	None	Notified by the system

7.1.8 Supplier Order Subsystem

8. Supplier Order Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
8.1	Search Project Line-Item List	8.1 Prompt for search parameter information.	Contains the information needed by the user to enter the search parameter information.	This is used when the user requests to search for a project's invoice.	None	Prompted by the system
		8.1 Display project line-item list information.	Contains the information of the retrieved project line-item list.	Used when the system displays the retrieved project line-item list information.	Project Line-Item	Displayed by the system
		8.1 ALT Validation error information	Contains the information used to notify the user that the entered search parameter is invalid.	This is used when the user entered an invalid search parameter.	None	Generated by the system
		8.1 ALT Project line-item list not found information.	Contains the information used to notify the user that no project line-item list.	This is used when the system cannot retrieve the result based on the provided search parameter.	None	Generated by the system
8.2	Edit Project Line-Item List	8.2 Display project line-item list information.	Contains the information of the retrieved project line-item list.	Used when the system displays the retrieved project line-item list information.	Project Line-Item	Displayed by the system
		8.2 Prompt for project line-item list updates information.	Contains the information needed by the operations manager to provide the required	This is used when the operations manager wants to provide updates for a	None	Prompted by the system

8. Supplier Order Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			updated project line-item list information.	project's line-item list.		
		8.2 Display updated project line-item list information.	Contains the information of the updated project line-item list.	Used when the system displays the updated project line-item list information.	Project Line-Item	Displayed by the system
		8.2 Prompt for project line-item list correct information.	This contains the details used to confirm the project line-item list.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		8.2 Project line-item list updated information.	This contains the information that the line-item list was updated	Used when the project line-item list is successfully updated.	None	Generated by the system
		8.2 ALT No updates captured notification information.	This contains the information that the updates were not captured	Used when the provided updates are not captured.	None	Generated by the system
8.3	Create Supplier Purchase Order	8.3 Display groupable project line-item list information.	Contains the information of the groupable project line-item list.	Used when the system displays the groupable project line-item list information.	Project Line-Item	Displayed by the system
		8.3 Prompt for supplier purchase order grouping information.	Contains the information needed by the financial officer to provide the required grouped project line-item lists and assign the suppliers.	This is used when the financial officer wants to provide the grouped line-item lists and assign the suppliers.	None	Prompted by the system

8. Supplier Order Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		8.3 Display grouped supplier purchase order information.	Contains the information of the grouped supplier purchase orders.	Used when the system displays the grouped supplier purchase orders information.	Supplier Purchase Order	Displayed by the system
		8.3 Prompt for supplier purchase order confirmation information.	This contains the details used to confirm the supplier purchase order.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		8.3 Supplier purchase order created and saved notification information.	This contains the information that the supplier purchase orders were created and saved.	Used when the supplier purchase orders are successfully created and saved.	None	Generated by the system
		8.3 Supplier purchase order information.	This contains the supplier purchase orders.	Used when the financial officer wants to download the supplier purchase orders.	Supplier Purchase Order	Generated by the system
		8.3 ALT Supplier purchase order not created information.	This contains the information that the supplier purchase orders were not created	Used when the supplier purchase orders are not created.	None	Generated by the system
8.4	Capture Supplier Quote	8.4 Prompt for supplier quote information	Contains the information needed by the financial officer to upload the supplier quote.	Used when the financial officer requests to capture the receipt number details.	None	Prompted by the system
		8.4 Display supplier quote information.	Contains the information of the uploaded	Used when the system displays the uploaded	Supplier Quote	Displayed by the system

8. Supplier Order Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			supplier quote.	supplier quote information.		
		8.4 Prompt for supplier quote details information.	Contains the information needed by the financial officer to provide the supplier quote details.	Used when the financial officer requests to capture a supplier quote details.	None	Prompted by the system
		8.4 Display supplier quote details information.	Contains the information of the provided supplier quote details.	Used when the system displays the provided supplier quote details.	Supplier Quote	Displayed by the system
		8.4 Prompt for supplier quote confirmation information.	This contains the details used to confirm the supplier quote.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		8.4 Supplier quote captured notification information.	This contains the information that the supplier quote was captured	Used when the supplier quote is successfully captured.	None	Generated by the system
		8.4 ALT Supplier quote not captured information.	This contains the information that the supplier quote was not captured	Used when the supplier quote is not captured.	None	Generated by the system

7.1.9 Supplier Subsystem

9. Supplier Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
9.1	Create Supplier	Request Supplier details info	This contains the information required to prompt the creation of a new Supplier	This is used when the Procurement and logistics officer wants to create a new Supplier	None	Prompted by the system
		Validation error Info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user	None	Validated by the system
		Confirmation prompt info	This contains information that prompts the user to confirm the Supplier details.	This is used when the system needs to receive confirmation that the entered details are correct.	None	Prompted by the system
		Notification of successful creation info	This contains the information to notify the user of the successful Supplier creation	This is used when the Supplier creation is successful.	None	Notified by the system
		Notification of unsuccessful creation [ALT]	This contains the information to notify the user of the unsuccessful Supplier creation	This is used when the Supplier creation is unsuccessful.	None	Notified by the system
9.2	Search Supplier	Request search parameter info	This contains the information required to prompt the user to enter a search parameter	This is used when the user requests to search for a Supplier.	None	Prompted by the system
		Validation error info	This contains	This is used when there is		Validated by the system

9. Supplier Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		[ALT]	information that indicates a failed validation message	an error in the information provided by the user		
		Search result information	This contains the details of the returned search results after the relevant table has been searched.	This is used when the system displays the searched Supplier information.	Supplier - SupplierID - SupplierName	Displayed by the system
		No Supplier found info [ALT]	This contains the details used to inform the user that no Supplier was found.	This is used to show that no Supplier was found that matched the Supplier parameters	None	Notified by the system
		Selected Supplier information	This contains the details of the selected Supplier.	This is used when the user selects a Supplier from the search results.	Supplier - SupplierID - SupplierName - PhoneNumber - PaymentDetails - BusinessAddress	Displayed by the system
9.3	Update Supplier	Prompt to enter Supplier edit info	This contains the details required to prompt the user to provide the updated Supplier information.	This is used when the user wants to update an existing Supplier.	None	Prompted by the system
		Validation error info [ALT]	This contains information that indicates a failed validation message.	This is used when there is an error in the information provided by the user.	None	Validated by the system
		Confirmation prompt info	This contains information that prompts	This is used when the system needs to receive	None	Prompted by the system

9. Supplier Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			the user to confirm the Supplier update details.	confirmation that the entered details are correct		
		Notification of successful edit info	This contains the information to notify the user of the successful Supplier update	This is used when the Supplier update is successful		Notified by the system
		Notification of unsuccessful edit info [ALT]	This contains the information to notify the user of the unsuccessful Supplier update	This is used when the Supplier creation is unsuccessful.	None	Notified by the system
9.4	Upload supplier documents	Request details of supplier document info	This contains the information required to prompt the upload of a new Supplier document	This is used when the Procurement and logistics officer wants to upload a new Supplier document.	None	Prompted by the system
		Confirmation prompt info	This contains information that prompts the user to confirm the Supplier document details.	This is used when the system needs to receive confirmation that the entered details are correct.	None	Prompted by the system
		Notification of successful upload info	This contains the information to notify the user of the successful Supplier document upload	This is used when the Supplier document upload is successful.	None	Notified by the system
		Notification of unsuccessful upload info [ALT]	This contains the information to notify the user of the	This is used when the Supplier document	None	Notified by the system

9. Supplier Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
			unsuccessful Supplier document upload	upload is unsuccessful.		

7.1.10 Inventory Management Subsystem

10. Inventory Management Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
10.1	Add line-item	Request line-item details info	This contains the information required to prompt the creation of a new line-item	This is used when the procurement and logistics officer wants to create a new line-item	None	Prompted by the system
		Validation error info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user	None	Validated by the system
		Confirmation prompt info	This contains information that prompts the user to confirm the line-item details.	This is used when the system needs to receive confirmation that the entered details are correct.	None	Prompted by the system
		Notification of successful creation info	This contains the information to notify the user of the successful line-item creation	This is used when the line-item creation is successful.	None	Notified by the system
		Notification of unsuccessful creation [ALT]	This contains the information to notify the user of the unsuccessful line-item creation	This is used when the line-item creation is unsuccessful.	None	Notified by the system
10.2	Search line-item	Request search parameter info	This contains the information required to prompt the user to enter a search parameter	This is used when the user requests to search for a line-item.	None	Prompted by the system

10. Inventory Management Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		Validation error info [ALT]	This contains information that indicates a failed validation message	This is used when there is an error in the information provided by the user	None	Validated by the system
		Search result information	This contains the details of the returned search results after the relevant table has been searched.	This is used when the system displays the searched line-item information.	Line-Item Name	Displayed by the system
		No line-item found info [ALT]	This contains the details used to inform the user that no line-item was found.	This is used to show that no line-item was found that matched the line-item parameters	None	Notified by the system
		Selected line-item information	This contains the details of the selected line-item.	This is used when the user selects a line-item from the search results.	Line-Item - Line-itemID - Name - Description - Line-ItemType - SiteTypeLine-ItemID - Price	Displayed by the system
10.3	Update line-item	Prompt to enter line-item edit info	This contains the details required to prompt the user to provide the updated line-item information.	This is used when the user wants to update an existing line-item.	None	Prompted by the system
		Validation error info [ALT]	This contains information that indicates a failed validation message.	This is used when there is an error in the information provided by the user.	None	Validated by the system

10. Inventory Management Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		Confirmation prompt info	This contains information that prompts the user to confirm the line-item update details.	This is used when the system needs to receive confirmation that the entered details are correct	None	Prompted by the system
		Notification of successful edit info	This contains the information to notify the user of the successful line-item update	This is used when the line-item update is successful	None	Notified by the system
		Notification of unsuccessful edit info [ALT]	This contains the information to notify the user of the unsuccessful line-item update	This is used when the line-item creation is unsuccessful.	None	Notified by the system

7.1.11 Report Subsystem

11. Reporting Subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
11.1	Generate Site Progress Report	11.1 Prompt to download report information.	This contains the details used to download the report.	Used when the system needs to receive a trigger to proceed.	None	Prompted by the system
		11.1 Site progress report information.	This contains the site progress report.	Used when the system needs to send the report to the user.	Report Construction Site Project	Generated by the system
11.2	Generate Site Type Report	11.2 Prompt to download report information.	This contains the details used to download the report.	Used when the system needs to receive a trigger to proceed.	None	Prompted by the system
		11.2 Site type report information.	This contains the site type report.	Used when the system needs to send the report to the user.	Report Construction Site Project	Generated by the system
11.3	Generate Team Site Completed Report	11.3 Prompt for date range information.	Contains the information needed by the user to generate a team site completed report.	Used when the user requests to generate a team site completed report.	None	Prompted by the system
		11.3 ALT Validation error information.	Contains the information used to notify the user the entered date range is invalid.	This is used when the user entered an invalid date range.	None	Generated by the system
		11.3 Prompt to download report information.	This contains the details used to download the report.	Used when the system needs to receive a trigger to proceed.	None	Prompted by the system

11. Reporting Subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
		11.3 Team site completed report information.	This contains the team site completed report.	Used when the system needs to send the report to the user.	Report Team Employee Construction Site	Generated by the system
11.4	Generate Employee Document Expiry Report	11.4 Employee document expiry report information.	This contains the employee document expiry report.	Used when the system needs to send the report to the user.	Report Employee Employee Compliance Document	Selected by the user
11.5	Generate Site Acceptance Document	11.5 Prompt for acceptance document confirmation information	This contains the details used to confirm the acceptance document.	Used when the system needs to receive confirmation to proceed.	None	Prompted by the system
		11.5 Site acceptance document information.	This contains the site acceptance document.	Used when the system needs to send the acceptance document to the user.	Site acceptance document	Generated by the system
		11.5 ALT Prompt for updated site and project information	Contains the information needed by the user to provide the required updated site and project information.	This is used when the user wants to provide updated site and project information.	Project Construction Site	Prompted by the system

7.1.12 User Management Subsystem

12. User management subsystem						
Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
12.1	Login	Prompt to enter login information	Contains information about prompt to enter login information	When a user needs to be notified about entering their login details	None	Prompts display by the system.
12.1	Login	ALT Capture and Validate login information	Contains incorrect information regarding the entered login details	When a user needs to be notified their entered login details are incorrect.	None	Notification display by the system.
12.1	Login	Logged in	Contains information about the user being logged into the system.	When the user has logged into the system the user is notified.	None	Notification display by the system.
12.2	Logout	Logout Prompt logout confirmation	Contains information regarding the Logout Prompt confirmation	When the user needs to confirm that they want to logout.	None	Prompts display by the system.
12.2	Logout	Logged out	Contains information about the user being logged out of the system.	When the user has logged out of the system the system needs to notify them.	None	Notification display by the system.
12.3	Reset password	Prompt forgot password	Contains information regarding the prompt forgot password	When the user needs to confirm they forgot their password.	None	Prompts display by the system.
12.3	Reset password	Prompt reset password	Contains information regarding the prompt reset password	When the user needs to confirm they want to reset their password.	None	Prompts display by the system.
12.3	Reset password	Prompt answer for security question	Contains information regarding the prompt answer for security question	When the user needs to answer for the security question.	None	Prompts display by the system.

12. User management subsystem

Use Case No.	Use Case Title:	Description:	Purpose:	When it will be produced:	Entities & Attributes:	Logical Layout:
12.3	Reset password	ALT Capture and Validate security answer	Contains incorrect information regarding security answer	When a user needs to be notified their answer given for security question is incorrect	None	Notification display by the system.
12.3	Reset password	Prompt new password	Contains information regarding the prompt new password	When the user needs to enter their new password.	None	Prompts display by the system.
12.3	Reset password	ALT Capture and Validate new password	Contains incorrect information regarding new password	When a user needs to be notified their new password does not match the confirmed password.	None	Notification display by the system.
12.3	Reset password	Prompts confirm new password	Contains information regarding the prompt new password	When the user needs to confirm the new password.	None	Prompts display by the system.
12.3	Reset password	Password reset	Contains information regarding reset password	When the user gets notified, the password has been reset.	None	Notification display by the system.

Conclusion

This section of the functional specification deliverable contained all the reports and other output descriptions of the system.

8. Validation

Introduction

This section in the deliverable displays the validation tables which represent every use case requirement and the data flows within and which entities are being interacted with.

8.1.1 Establishment Subsystem

1.Establishment Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
1.1 Create TSS	1.1	Create TSS	1.1.1 Capture TSS detail	Site Type
			1.1.2 Validate Captured details	None
			1.1.3 Confirmation of details	None
			1.1.4 Save TSS details	TSS, TSS Photos, Project Line Items, Project
1.2 Search TSS	1.2	Search TSS	1.2.1 Capture TSS search parameter	None
			1.2.2 Validate search parameter	None
			1.2.3 Retrieve TSS search parameter	TSS, TSS Photos, Project Line Items
			1.2.4 Return TSS search results	None
			1.2.5 Return Selected TSS information	TSS, TSS Photos, Project Line Items
1.3 Update TSS	1.3	Update TSS	1.3.1 Retrieve and display TSS details	TSS, TSS Photos, Project Line Items
			1.3.2 Request and capture edited TSS info	None

1.Establishment Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			1.3.3 Validate Captured TSS details	None
			1.3.4 Confirmation of updated TSS info	None
			1.3.5 Update TSS info	TSS, TSS Photos, Project Line Items
1.4 Submit TSS report	1.4	Submit TSS report	1.4.1 Retrieve and display TSS information	None
			1.4.2 Confirmation of TSS information	None
			1.4.3 Submit TSS report	Project

8.1.2 Quotation Subsystem

2. Quotation Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
2.1 Create quote	2.1	Create Quote	2.1.1 Retrieve associated Line Item List	None
			2.1.2 Validate provided details	None
			2.1.3 Retrieve line item details	Price_Line_Item
			2.1.4 Create Quote	Client Price_Line_Item VAT Company_Information Project
			2.1.5 Confirm to store quote details	Client_Quote
			2.1.6 Quote created successfully notification	Project
2.2 Search Quote	2.2	Search Quote	2.2.1 Capture search quote details	None
			2.2.2 Retrieve quote details	Quote
			2.2.3 Display related search quote details	None
			2.2.4 Display selected quote info	None
2.3 Capture Purchase Order	2.3	Capture Purchase Order	2.3.1 Capture purchase order	None
			2.3.2 Confirm purchase order	None
			2.3.3 Store purchase order	Client_Purchase_Order
			2.3.4 Purchase order captured notification	Project

8.1.3 Administration Subsystem

3. Administrative Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
3.1 Create Health and Safety file	3.1	Create Health and Safety file	3.1.1 Request to upload HS File	None
			3.1.2 Upload HS file prompt	None
			3.1.3 Upload HS file	None
			3.1.4 Capture and Validate HS file	Health and Safety
			3.1.5 Notify HS Officer	None
3.2 Search Health and Safety File	3.2	Search Health and Safety File	3.2.1 Request to search HS file	None
			3.2.2 Search HS file prompt	None
			3.2.3 Search HS file	None
			3.2.4 Capture HS file information	Health and Safety
			3.2.5 Display HS file	None
			3.2.6 Request to download HS file	None
			3.2.7 Retrieve HS file	Health and Safety
			3.2.8 Download HS file	None
3.3 Capture Health and Safety Confirmation	3.3	Capture Health and Safety Confirmation	3.3.1 Receive and capture HS file confirmation	None
			3.3.2 Upload HS file confirmation prompt	None
			3.3.3 Upload HS file confirmation	None

3. Administrative Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			3.3.4 Validate HS file confirmation	None
			3.3.5 Prompt upload confirmation	None
			3.3.6 Confirm upload prompt	None
			3.3.7 Capture HS file confirmation	Health and Safety
			3.3.8 Notify Hs file confirmation upload	None
3.4 Upload Formal Drawing	3.4	Upload Formal Drawing	3.4.1 Request to upload formal drawing	None
			3.4.2 Upload formal drawing prompt	None
			3.4.3 Upload formal drawing	None
			3.4.4 Validate formal drawing	None
			3.4.5 Confirm formal drawing upload prompt	None
			3.4.6 Formal drawing upload confirmation	None
			3.4.7 Capture formal drawing	Drawing, Drawing-Type
			3.4.8 Notify drafts person	None
3.5 Upload second cut drawing	3.5	Upload second cut drawing	3.5.1 Request to upload Second cut drawing2	None
			3.5.2 Upload Second cut drawing prompt2	None
			3.5.3 Upload Second cut drawing2	None
			3.5.4 Validate Second cut drawing2	None
			3.5.5 Confirm Second cut drawing upload prompt2	None

3. Administrative Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			3.5.6 Second cut drawing upload confirmation ²	None
			3.5.7 Capture Second cut drawing ²	Drawing, Drawing-Type
			3.5.8 Notify drafts person ²	None
3.6 Search As-built document	3.6	Search As-built document	3.6.1 Request to search As-built document	None
			3.6.2 Search As- built document prompt	None
			3.6.3 Search As- built document	None
			3.6.4 Capture As- built document information	As-Built
			3.6.5 Display HS file ²	None
			3.6.6 Request to download As-built document	None
			3.6.7 Retrieve As- built document	As-Built
			3.6.8 Download As- built document	None
3.7 Create As-Built Document	3.7	Create As-Built Document	3.7.1 Request to create As-built document	None
			3.7.2 Validate project status	Project
			3.7.3 Create As- built document prompt	None
			3.7.4 Create As- built document confirmation	None
			3.7.5 Gather As- built document information	Project, Health and Safety, Construction Site, Compliance documents, Report,

3. Administrative Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
				Construction photos, Completion photos, Drawing
			3.7.6 Add section prompt	None
			3.7.7 Add extra section	None
			3.7.8 Capture and validate added section	None
			3.7.9 Compile attributes to generate pdf	None
			3.7.10 Create As- built document	As-Built
			3.7.11 Notify HS officer	None

8.1.4 Construction Subsystem

4. Construction Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
4.1 Capture "Site-Go-Ahead"	4.1	Capture "Site-Go-Ahead"	4.1.1 Capture Site-Go-Ahead details	None
			4.1.2 Validate captured Site-Go-Ahead details	None
			4.1.3 Confirmation of Site-Go-Ahead details	None
			4.1.4 Update Project statuses	Compliance Document Construction site Project
			4.1.5 Generate Notification on Site-Go-Ahead	None
4.2 Allocate Team Site	4.2	Allocate Team Site	4.2.1 Check for existing teams	Construction Site Team
			4.2.2 Assign initial team	None
			ALT 4.2.2a Assign Additional team	None
			4.2.3 Search for available teams	None
			4.2.4 Generate available teams	None
			4.2.5 Capture selected team info	None
			4.2.6 Confirm selected team information	None
			4.2.7 Assign team to construction site	Construction Site Team
			4.2.8 Generate notification on newly assigned team	None

4. Construction Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			4.2.9 Display all assigned teams to construction project	Construction Site Team
4.3 Update Team Site Allocation	4.3	Update Team Site Allocation	4.3.1 Capture all assigned teams	Construction Site Team
			4.3.2 Display all assigned teams	None
			4.3.3 Capture Team information	None
			4.3.4 Confirm to remove selected team info	None
			4.3.5 Remove team from construction site	Construction Site Team
			4.3.6 Check for assigned teams	Construction Site Team
			4.3.7 Generate Notification on removed team	None
			ALT 4.3.7a Assign new initial team	None
4.4 Upload Compliance Documents	4.4	Upload Compliance Documents	4.4.1 Display Project details	None
			4.4.2 Capture Compliance Document	None
			4.4.3 Validate Compliance Document information	Compliance Document
			4.4.4 Confirm Compliance Document details	None
			4.4.5 Upload Compliance document information	Compliance Document
4.5 Search Project	4.5	Search Project	4.5.1 Capture Project Search Criteria	None
			4.5.2 Validate Project Search Criteria	None
			4.5.3 Retrieve Project Search Results	Project

4. Construction Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			4.5.4 Display Project Search Results	None
			4.5.5 Return Selected Project information	None
4.6 Create Site Progress description	4.6	Create Site Progress description	4.6.1 Display Project details	None
			4.6.2 Capture Site Progress description	None
			4.6.3 Validate captured Site progress information	None
			4.6.4 Confirmation of captured site progress information	None
			4.6.5 Create Site Progress description	Construction Photos, Site Progress Description, Construction Site
			4.5.6 Generate Notification on site progress description	None
4.7 View Site Progress description	4.7	View Site Progress description	4.7.1 Display Project details	None
			4.7.2 Capture Site description	None
			4.7.3 Obtain all site description for project	Site Progress Description, Construction Site, Construction Photos
			4.7.4 Generate list of all progress descriptions	None
4.8 Upload Complete Site photos	4.8	Upload Complete Site photos	4.8.1 Capture Completion Photos of construction site	None
			4.8.2 Validates captured Completion photos	None
			4.8.3 Confirm captured completion photos	None

4. Construction Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			4.8.4 Upload completion photos	Completion Photos
			4.8.5 Update project status	Project
			4.8.6 Generate Notification on uploaded completion photos	None
4.9 Upload Radio Frequency Report	4.9	Upload Radio Frequency Report	4.9.1 Capture Radio Frequency report	None
			4.9.2 Capture Cooling system info	None
			4.9.3 Validate captured information	None
			4.9.4 Confirmation on captured information	None
			4.9.5 Upload Radio Frequency report	Report
			4.9.6 Upload Cooling system details	Project
			4.9.7 Update Project status	Project
			4.9.8 Generate Notification on uploaded information	None
4.10 Search Radio Frequency Report	4.10	Search Radio Frequency Report	4.10.1 Display Project details	None
			4.10.2 Capture Radio Frequency report select request	None
			4.10.3 Retrieve Radio Frequency report info	Report
			4.10.4 Display Radio Frequency report info	None
4.11 Request Site Visit	4.11	Request Site Visit	4.11.1 Capture site visit request	None
			4.11.2 Determine for eligible site visit	Project

4. Construction Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			4.11.3 Capture confirmation on site visit request	None
			4.11.4 Create Site Acceptance Document	None
			4.11.5 Capture Site Acceptance Document	None
			4.11.6 Generate Notification on site acceptance document	None
			4.11.7 Request Site visit	None
			4.11.8 Update Project status	Project
4.12 Edit Acceptance Document	4.12	Edit Acceptance Document	4.12.1 Display Project details	None
			4.12.2 Capture acceptance document information/site details	Acceptance Document
			4.12.3 Confirm Acceptance document site details	None
			ALT 4.12.4 Update Acceptance document details	Acceptance Document
			4.12.5 Generate form for snags	Common Snags
			ALT 4.12.6 Capture custom snags	None
			4.12.7 Capture common list information	None
			4.12.8 Confirm captured snag item info	None
			4.12.9 Create snag item list	Project snag, Project Snag list
			4.12.10 Combine Acceptance document and snag item list	Acceptance Document
			4.12.11 Generate Notification on update Acceptance document	None

4. Construction Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
4.13 Search Acceptance Document	4.13	Search Acceptance Document	4.13.1 Capture Acceptance document search criteria	None
			4.13.2 Validate Acceptance document search criteria	None
			4.13.3 Retrieve Acceptance document information	Acceptance Document
			4.13.4 Display acceptance document search results	None
			4.13.5 Return Selected Acceptance document information	None
4.14 Confirm Acceptance Document	4.14	Confirm Acceptance Document	4.14.1 Display Site acceptance information	None
			4.14.2 Retrieve acceptance document snag list	Project Snag list
			4.14.3 Capture Completed snag items	None
			4.14.4 Confirm completed snag items	None
			4.14.5 Check all snags have been completed	None
			4.14.6 Generate notification for client site visit	Project
4.15 Capture Site Sign-off	4.15	Capture Site Sign-off	4.15.1 Display Project details	None
			4.15.2 Capture Site acceptance schedule	None
			4.15.3 Validate site acceptance schedule information	None
			4.15.4 Confirm site acceptance document	None
			4.15.5 Upload Site acceptance schedule	Report
			4.15.6 Update Project status	Project

4. Construction Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			4.15.7 Capture site acceptance document	Acceptance Document
			4.15.8 merge site acceptance document with site acceptance schedule	Acceptance Document
			4.15.9 Generate Merged site acceptance document notification	None
4.16 Capture Commission report	4.16	Capture Commission report	4.16.1 Display Project details	None
			4.16.2 Capture Commission report info	None
			4.16.3 Validate captured commission report	None
			4.16.4 Confirm Commission report to be uploaded	None
			4.16.5 Upload Commission report info	Report
			4.16.6 Generate Notification on uploaded commission report	None

8.1.5 Invoicing Subsystem

5. Invoicing Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
5.1 Search Invoice	5.1	5.1 Search Invoice	5.1.1 Capture Search Parameter Task	None
			5.1.2 Validate Search Parameter Task	None
			5.1.3 Retrieve Search Result Task	Invoice
			5.1.4 Display Search Result Task	None
5.2 Send Invoice	5.2	5.2 Send Invoice	5.2.1 Generate and Display Initial Claim Invoice Task	Client Purchase Order
			5.2.1 ALT Generate and Display Final Claim Invoice Task	Client Purchase Order
			5.2.2 Request Invoice Confirmation Task	
			5.2.3 Save Invoice Task	Invoice
			5.2.4 Notification of Saved Invoice Task	None
			5.2.5 Send Invoice Task	Invoice
5.3 Capture Proof of Payment	5.3	5.3 Capture Proof of Payment	5.3.1 Capture Proof of Payment Task	None
			5.3.2 Confirmation of Proof of Payment Task	None
			5.3.3 Capture Proof of Payment Details Task	None
			5.3.4 Confirmation of Proof of Payment details Task	None
			5.3.5 Save Proof of Payment Task	Proof of Payment

5. Invoicing Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			5.3.6 Notification of Saved Proof of Payment Task	None
5.4 Capture Claim	5.4	5.4 Capture Claim	5.4.1 Capture Claim Information Task	None
			5.4.2 Confirmation of Claim Receipt Number Task	None
			5.4.3 Update Invoice Receipt Number Task	Invoice
			5.4.4 Notification of Receipt Number Captured Task	None

8.1.6 Human Resource Subsystem

6. Human Resource Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
6.1 Add Employee	6.1	Add Employee	6.1.1 Capture Employee Details	None
			6.1.2 Validate employee details	None
			6.1.3 Confirm employee details	None
			6.1.4 Generate Employee ID automatically	Employee
			6.1.5 Save employee details	Employee Employee_Type Employee_Skills
			6.1.6 Notification for successfully adding employee	None
6.2 Update Employee	6.2	Update Employee	6.2.1 Retrieve employee details	None
			6.2.2 Capture update employee details	None
			6.2.3 Verify employee details	None
			6.2.4 Confirm employee details	None
			6.2.5 Update employee details	Employee Employee_Type Employee_Skills
			6.2.6 Updated employee details notification	None
6.3 Search Employee	6.3	Search Employee	6.3.1 Capture employee search details	None
			6.3.2 Retrieve employee details	Employee Employee_Type Employee_Skills
			6.3.3 Display searched employee details	None
6.4 Upload Employee Document	6.4	Upload Employee Document	6.4.1 Capture employee document	None
			6.4.2 Validate employee info	None

6. Human Resource Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			6.4.3 Store employee document	Employee_Compliance_Document
			6.4.4 confirm employee details	None
6.5 Update Employee Document	6.5	Update Employee Document	6.5.1 Retrieve document details	None
			6.5.2 Capture updated document details	None
			6.5.3 Validate updated document info	None
			6.5.4 Confirm updated document	None
			6.5.5 Update employee document	Employee_Compliance_Documet
			6.5.6 Updated employee document notification	None
6.6 Search Employee Document	6.6	Search Employee Document	6.6.1 Capture search details	None
			6.6.2 Validate search details	None
			6.6.3 Retrieve employee documents	Employee_Compliance_Documet
			6.6.4 Update employee details	None
6.7 Register New Account	6.7	Register New Account	6.7.1 Capture user details	None
			6.7.2 Validate account details	None
			6.7.3 Verify account details	User
			6.7.4 Confirm account details	None
			6.7.5 Store new account details	User
			6.7.6 Account registered successfully info	None
6.8 Search Account	6.8	Search Account	6.8.1 Capture search details	None

6. Human Resource Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			6.8.2 Validate search details	None
			6.8.3 Display search details matches	User
			6.8.4 Display selected user account details	None
6.9 Edit Employee Account Details	6.9	Edit Employee Account Details	6.9.1 Find account	None
			6.9.2 Capture edited account details	None
			6.9.3 Verify account details	Employee
			6.9.4 Confirm account details	None
			6.9.5 Update account details notification	Employee

8.1.7 Team Subsystem

7. Team Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
7.1 Create Team	7.1	Create Team	7.1.1 Capture Team detail	Employee
			7.1.2 Validate Captured details	None
			7.1.3 Confirmation of details	None
			7.1.4 Save Team details	Team, Employee Team
7.2 Search Team	7.2	Search Team	7.2.1 Capture Team search parameter	None
			7.2.2 Validate search parameter	None
			7.2.3 Retrieve Team search parameter	Team
			7.2.4 Return Team search results	None
			7.2.5 Return Selected Team information	Team, Employee Team
7.3 Update Team	7.3	Update Team	7.3.1 Retrieve and display Team details	Team, Employee Team
			7.3.2 Request and capture edited Team info	None
			7.3.3 Validate Captured Team details	None
			7.3.4 Confirmation of updated Team info	None
			7.3.5 Update Team info	Team, Employee Team

8.1.8 Supplier Order Subsystem

8. Supplier Order Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
8.1 Search Project Line-Item List	8.1	8.1 Search Project Line-Item List	8.1.1 Capture Search Parameter Task	None
			8.1.2 Validate Captured Parameter Task	None
			8.1.3 Retrieve Search Results Task	Project Line-item
			8.1.4 Display Search Results Task	None
8.2 Edit Project Line-Item List	8.2	8.2 Edit Project Line-Item List	8.2.1 Retrieve and Display Project Line-Item List Task	None
			8.2.2 Capture Project Line-Item List Task	None
			8.2.3 Validate Captured Updates Task	None
			8.2.4 Confirmation of Updates Made Task	None
			8.2.5 Save Updated Project Line-Item List Task	Project Line-Item
			8.2.6 Notification of Update Task	None
8.3 Create Supplier Order	8.3	8.3 Create Supplier Order	8.3.1 Retrieve and Display Project Line-Item List Task	None
			8.3.2 Capture Supplier Purchase Order Task	None
			8.3.3 Confirmation of Supplier Purchase Order Task	None
			8.3.4 Save Supplier Purchase Order	Supplier Purchase Order
			8.3.5 Notification of Saved Supplier Purchase Order Task	None
8.4 Capture Supplier Quote	8.4	8.4 Capture Supplier Quote	8.4.1 Capture Supplier Quote Task	None
			8.4.2 Capture Supplier Quote Details Task	None

8. Supplier Order Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			8.4.3 Validate Captured Details Task	None
			8.4.4 Confirmation of Supplier Quote Task	None
			8.4.5 Save Supplier Quote	Supplier Quote
			8.4.6 Notification of Supplier Quote Captured Task	None

8.1.9 Supplier Subsystem

9. Supplier Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
9.1 Add Supplier	9.1	Add Supplier	9.1.1 Capture Supplier details	None
			9.1.2 Validate Captured details	None
			9.1.3 Confirmation of details	None
			9.1.4 Save Supplier details	
9.2 Search Supplier	9.2	Search Supplier	9.2.1 Capture Supplier search parameter	
			9.2.2 Validate search parameter	None
			9.2.3 Retrieve Supplier search parameter	None
			9.2.4 Return Supplier search results	None
			9.2.5 Return Selected Supplier information	None
9.3 Update Supplier	9.3	Update Supplier	9.3.1 Retrieve and display Supplier details	Construction Site Team
			9.3.2 Request and capture edited Supplier info	None
			9.3.3 Validate Captured Supplier details	None
			9.3.4 Confirmation of updated Supplier info	None
			9.3.5 Update Supplier info	Construction Site Team
9.4 Upload supplier documents	9.4	Upload supplier documents	9.4.1 Capture Supplier documents details	None
			9.4.2 Confirmation of details	None

9. Supplier Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			9.4.3 Save Supplier document details	Compliance Document

8.1.10 Inventory Management Subsystem

10. Inventory Management				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
10.1 Add Line-Item	10.1	Add Line-Item	10.1.1 Capture Line-Item details	None
			10.1.2 Validate Captured details	None
			10.1.3 Confirmation of details	None
			10.1.4 Save Line-Item details	Line-Item
10.2 Search Line-Item	10.2	Search Line-Item	10.2.1 Capture Line-Item search parameter	None
			10.2.2 Validate search parameter	None
			10.2.3 Retrieve Line-Item search parameter	Line-Item
			10.2.4 Return Line-Item search results	None
			10.2.5 Return Selected Line-Item information	None
10.3 Update Line-Item	10.3	Update Line-Item	10.3.1 Retrieve and display Line-Item details	Line-Item
			10.3.2 Request and capture edited Line-Item info	None
			10.3.3 Validate Captured Line-Item details	None
			10.3.4 Confirmation of updated Line-Item info	None
			10.3.5 Update Line-Item info	Line-Item

8.1.11 Report Subsystem

11. Reporting Subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
11.1 Generate Site Progress Report	11.1	Generate Site Progress Report	11.1.1 Retrieve Construction Site Details Task	Construction Site
			11.1.2 Retrieve Project Details Task	Project
			11.1.3 Generate and Save Report Task	Report
			11.1.4 Display Report Task	None
			11.1.5 Send Report Task	Report
11.2 Generate Site Type Report	11.2	Generate Site Type Report	11.2.1 Retrieve Construction Site Details Task	Construction Site
			11.2.2 Retrieve Project Details Task	Project
			11.2.3 Generate and Save Report Task	Report
			11.2.4 Display Report Task	None
			11.2.5 Send Report Task	Report
11.3 Generate Team Site Completed Report	11.3	Generate Team Site Completed Report	11.3.1 Capture Date Range Details Task	None
			11.3.2 Validate Captured Date Details Task	None
			11.3.3 Retrieve Team Details Task	Team
			11.3.4 Retrieve Employee Details Task	Employee
			11.3.5 Retrieve Construction Site Details Task	Construction Site
			11.3.6 Retrieve Project Details Task	Project
			11.3.7 Generate and Save Report Task	Report
			11.3.8 Display Report Task	None

11. Reporting Subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			11.3.9 Send Report Task	Report
11.4 Generate Employee Document Expiry Report	11.4	Generate Employee Document Expiry Report	11.4.1 Retrieve Employee Details Task	Employee
			11.4.2 Retrieve Employee Compliance Document Details Task	Employee Compliance Document
			11.4.3 Generate and Save Report Task	Report
			11.4.4 Send Report Task	Report
11.5 Generate Site Acceptance Document	11.5	Generate Site Acceptance Document	11.5.1 Retrieve Project details task	Project
			11.5.2 Retrieve Site details Task	Construction Site
			11.5.3 Generate Site acceptance document task	None
			11.5.4 Site acceptance document confirmation task	None
			11.5.5 Retrieve Client quote details task	Client Quote
			11.5.5 ALT Capture and update Site and project details task	Project Construction Site
			11.5.6 Save site acceptance document task	Acceptance Document
			11.5.7 Send site acceptance document task	Acceptance Document

8.1.12 User Management Subsystem

12. User management subsystem				
Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
12.1 Login	12.1	Login	12.1.1 Login request	None
			12.1.2 prompt to enter login information	None
			12.1.3 Enter login information	None
			12.1.4 Capture and Validate login information	User
			12.1.5 Logged in	None
12.2 Logout	12.2	Logout	12.2.1 Logout	None
			12.2.2 Logout Prompt logout confirmation	None
			12.2.3 User logout confirmation	None
			12.2.4 Logged out	None
12.3 Reset password	12.3	Reset password	12.3.1 Forgotten password	None
			12.3.2 Prompt forgot password	None
			12.3.3 Confirm forgot password prompt	None
			12.3.4 Prompt reset password	None
			12.3.5 Confirm reset password	None
			12.3.6 Prompt answer for security question	User
			12.3.7 Security question answer	None
			12.3.8 Capture and Validate security answer	User

12. User management subsystem

Requirement	Use Case No.	Use Case Title	Processes from Primitive Data Flow Diagram	Entities from ERD
			12.3.9 Prompt new password	None
			12.3.10 New password	None
			12.3.11 Capture and Validate new password	None
			12.3.12 Prompts confirm new password	None
			12.3.13 Confirm new password	None
			12.3.14 Update new password	User
			12.3.15 Password reset	None

Conclusions

This section of the validation tables on each functional requirement and the relevant data flows within the functional requirement.

9. Sign-off

Introduction

This section serves as proof that the client has read through the deliverable presented and agrees with the content and work that has been provided

9.1 Sign-off by the client

X



Michael Van Der Walt
Director

By signing this document, the client verifies that the deliverable 2 and content provided within are acceptable, up to standard and in relates to the business solution proposed from the Project proposal.

Conclusion

This concludes the Client sign off section and the client signature is present indicating that the work is acceptable and relates to the business solution that was proposed.

10. Complexity requirements

Introduction

The complexity marks document indicates the level of complexity the proposed system for Gohvan construction will have and feature. All the required complexity marks listed must achieve a total score of above 150 points for a five-man team and must be maintained throughout the project lifecycle and finished product.

Complexity Marks

Topic	Level	Marks	MAX
1. Special GUI	For online applications: Responsive web design For desktop applications: Form design according to design principles (Schneiderman's golden rule on navigation applies here)	3	42
	Appropriate use of grids/tables	3	
	Appropriate use of tabs/links	3	
	Use of graphs in an appropriate business context	4	
	The storage and display of graphical information, like photos with a good business reason	3	
	Working e-mail automatically generated from the database in an appropriate business context	2	
	SMS messages automatically generated from the system in an appropriate business context	2	
	Extensive user-friendly search facility	3	
	At least one use of a tree to display data from the database	3	
	Able to dynamically modify a data tree structure and in doing so adjusting the data in the database	4	
	At least one use of a calendar view of data (not a date/time picker; not a plug-in such as Google calendar)	3	
	Uploading a file into the system with appropriate business reason	3	
	The use of audio/video in an appropriate business context	3	
	At least one use of an administrator configurable timer in an appropriate business context	3	
2. Database access	At least 30 tables used (4 member groups) or 40 tables used (5 member groups)	6	15
	Full referential integrity on all tables	6	
	At least one use of master-detail table relationships (Schneiderman's golden rule on system status applies here)	3	
3. Reports	At least 3 simple list reports in a reporting tool (no control breaks, no graphs, single table)	3	15
	At least 2 transactional report with 2 or more control breaks (with heading and calculated values/totals, multiple tables)	6	
	At least 1 report with adjustable criteria	3	
	At least 1 management report using a graph	3	

4. Flexibility	All data that can change in future should not be hard coded but maintained in a sub-module of the system (e.g. Lookup tables)	6	12
	Some business rules are not hard coded but maintained in a sub-module of the system.	6	
5. Error handling	All system-generated errors are trapped, and consistent, user-friendly error messages are displayed	6	12
	Appropriate data validation on all input fields	6	
6. Help	At least one menu item or other control that opens up a complete help document (HTML, PDF, Help-file)	3	15
	Extensive context-sensitive help. E.g. calling Help on a specific screen/function will automatically open the specific help for that screen/function.	6	
	Search Facility on Help	3	
	Extensive use of hints	3	
7. Security	Logon screen with user ID and password and fixed user profiles	3	13
	Applying two factor authentication with applicable business reason.	3	
	Encrypted passwords in database	* 1	
	Flexible user profiles (i.e. you can dynamically add user profiles that will enable/disable access to certain parts of the system)	6	
8. Audit Trail	An audit trail of all transactions in the system showing at least date, time, user, transaction type, critical data (such as amount and quantity of transaction)	6	9
	Able to search the audit trail on any of the following: date, user, transaction type	3	
9. Deployment	For a desktop application: Fully functional installation disks that take care of application installation requirements (install and uninstall)	3	15
	For an online application: Deployment of application to a publicly accessible web server	3	
	For a mobile application: Deployment to an App Market place (such as the PlayStore or the AppStore)	6	
	Deployment of the database to a remote database server	3	
10. Backup and Restore	A backup and restore subsystem exists that backup/restore all data (system may exit during restore)	3	3
11. Import/Export Data	Able to open Word or Excel and automatically place data in it based on the parameters provided (with a good business reason)	6	9
	XML or JSON: At least 1 XML or JSON file for Importing or Exporting of data (with good business reason)	3	
External INPUT device	Simple Link to an external INPUT device using plug-and-play technology, such as a swipe card reader, bar code reader, etc. or a native component such as a QR reader, a GPS component, etc.	3	18

	Loose Link to an external INPUT device using device specific software. Data or images must seamlessly be stored in the database, but device specific software is visible to the user. (This could include a digital camera, scanner, voice recording device, thump print reader, etc.)	6	
	Tight Link to an external INPUT device using device specific software. Data or images must seamlessly be stored in the database, but device specific software is not visible to the user. (This could include a digital camera, scanner, voice recording device, thump print reader, etc.)	9	
External APPLICATION / Services	Integrate an existing web service into your application (with good business reason)	3	9
	A fully functional link to an installed external application system exists and the interface must be shown to work on the external system. Note that this excludes Microsoft Office Applications	6	
Multiplatform processing for an appropriate business reason	Appropriate business use of static views on an alternative platform.	3	27
	Appropriate use of dynamic views on an alternative platform (i.e. data is displayed from the system's database)	3	
	Appropriate use of substantial dynamic views on an alternative platform (i.e. both reading and writing data from the system's database)	9	
	Uploading a file through an alternative platform onto the system's database.	3	
	Substantial processing on a third platform (i.e. both reading and writing data from the system's database)	9	
Programming Principles	The use of a data layer to facilitate interaction between your database and your business layer	3	12
	The use of an API to facilitate interaction between your business layer and your presentation layer	6	
	Comprehensive use of stored procedures and/or triggers and/or jobs.	3	
Innovative addition to the system	Any very advanced innovative addition to the system (e.g. machine learning, AI, block chain, text mining, IOT, etc.)	1 - 9	9

Maximum Complexity Marks 222

Total Calculated Complexity Marks 171

Conclusions

This concludes the complexity mark section for Team 7 which has been filled out as to the sections we can complete with this current system design.

11. Team sign-off

Introduction

This section includes the sign off by all team members indicating that this is their own work

X

Matthew Veltman
u19050608

X

Michael Vosloo
u19031174

X

Tshepang Mashao
u19293675

X

Vincent Yu
u15195059

X

Amore Rossouw
u19052864

Conclusions

By signing this document, the Team Paralinear Solutions acknowledges the document as a whole and signs off that all work presented is their own.

12. Deliverable Conclusion

Paralinear solutions has created this document containing, a use case diagram, use case narratives, data dictionary, Data flow diagrams, activity diagrams, entity relationship model, input descriptions, output descriptions and validation and hands it over as the final submission for the INF 370 deliverable 2 submission.