

ALTEAN SYSTEM NAME: PROCION PROCUREMENT SYSTEM



THE TEAM: TEAM 11



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PROJECT REQUEST: ITERATION 1

THIS DOCUMENT OUTLINES THE PROJECT PROPOSAL FOR OUR CLIENT (MOYO BUSINESS ADVISORY). THE DETAILS STIPULATED IN THIS DOCUMENT INCLUDE: OUR CLIENT INFORMATION, OUR PROJECT REQUEST, PRELIMINARY INVESTIGATION, PROBLEM ANALYSIS, OUR RESEARCH ON THE EXISTING SYSTEM AND SIMILAR SYSTEMS AND FINALLY OUR TEAM AND CLIENT SIGN-OFF. WE HAVE FORMULATED A SOLUTION TO EACH INDIVIDUAL BUSINESS PROBLEM THE CLIENT IS FACING. WE WILL BE OUTLINING WHY THIS IS THE BEST CURRENT SOLUTION FOR THE CLIENT IN ORDER TO GREATLY INCREASE THEIR EFFICIENCY AS WELL AS ELIMINATING REDUNDANCY IN THE PROCESS OF PROCUREMENT.

MOYO

Driving Significance Together



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1. DOCUMENT INTRODUCTION

Moyo Business advisory is a business that specializes in business consultancy as well as a multitude of other services. Procion (our procurement system) will allow the user to track their consumable inventory, assist in the process of vendor onboarding and the procurement process, create effective reports that will help to make effective business decision, the user-friendly system will allow users to view their budgets in order to manage and track them efficiently. We will provide the reasons why our system will be the best and most effective business solution.

2. CLIENT INFORMATION

2.1 INTRODUCTION

This section describes the history and background of the organization, the organization description, the organizational structure, the organization's area of business, the organization's business environment as well as the contact details of our client (Moyo Business advisory).

2.2 HISTORY AND BACKGROUND OF THE ORGANISATION

Moyo was formed in 2007 by the current managing director Pierre Le Roux. It started off as a business consulting company which remains its core business function as to this day. Under business consulting they provided services such as business analysis, project management and enterprise architecture. It then expanded into services such as MTS, business ventures which includes buying smaller businesses and growing them in order to sell the business or the product that they have built through the venture, engineering and also talent solutions. Moyo operates in various industries such as Mining, financial services, Retail, Utilities, FMCG and many more. These business decisions have resulted in Moyo to be one of the leading Business consulting companies in South-Africa.

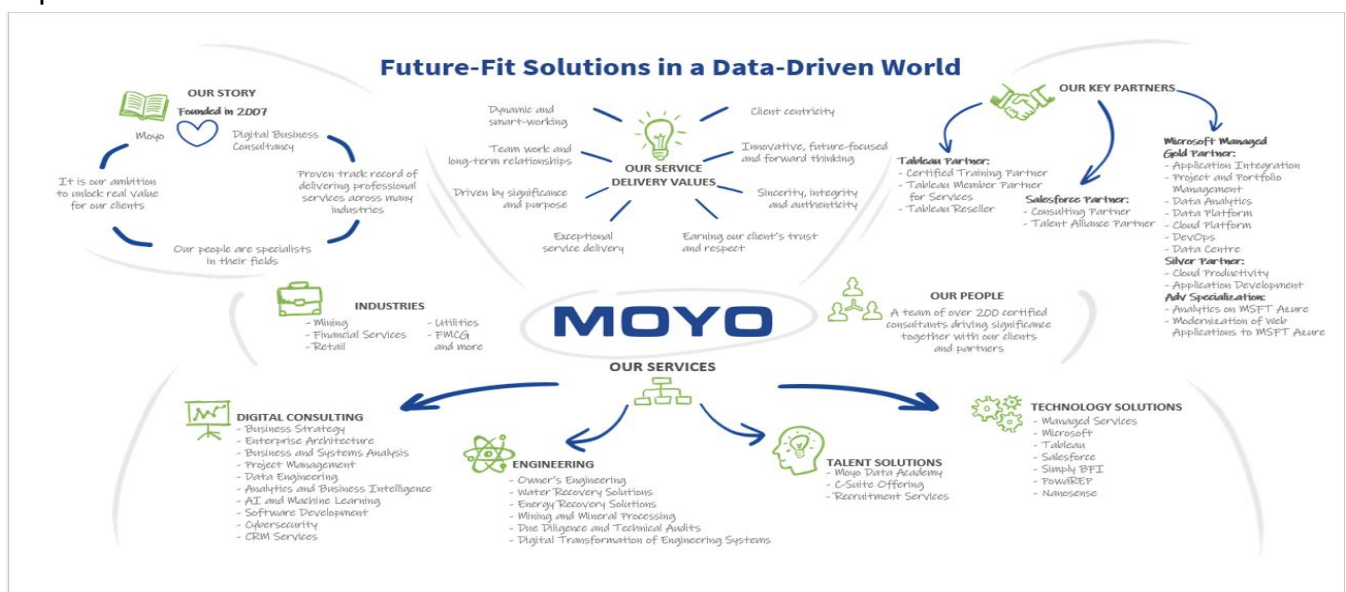


Figure 1: Moyo Summary

OUR JOURNEY

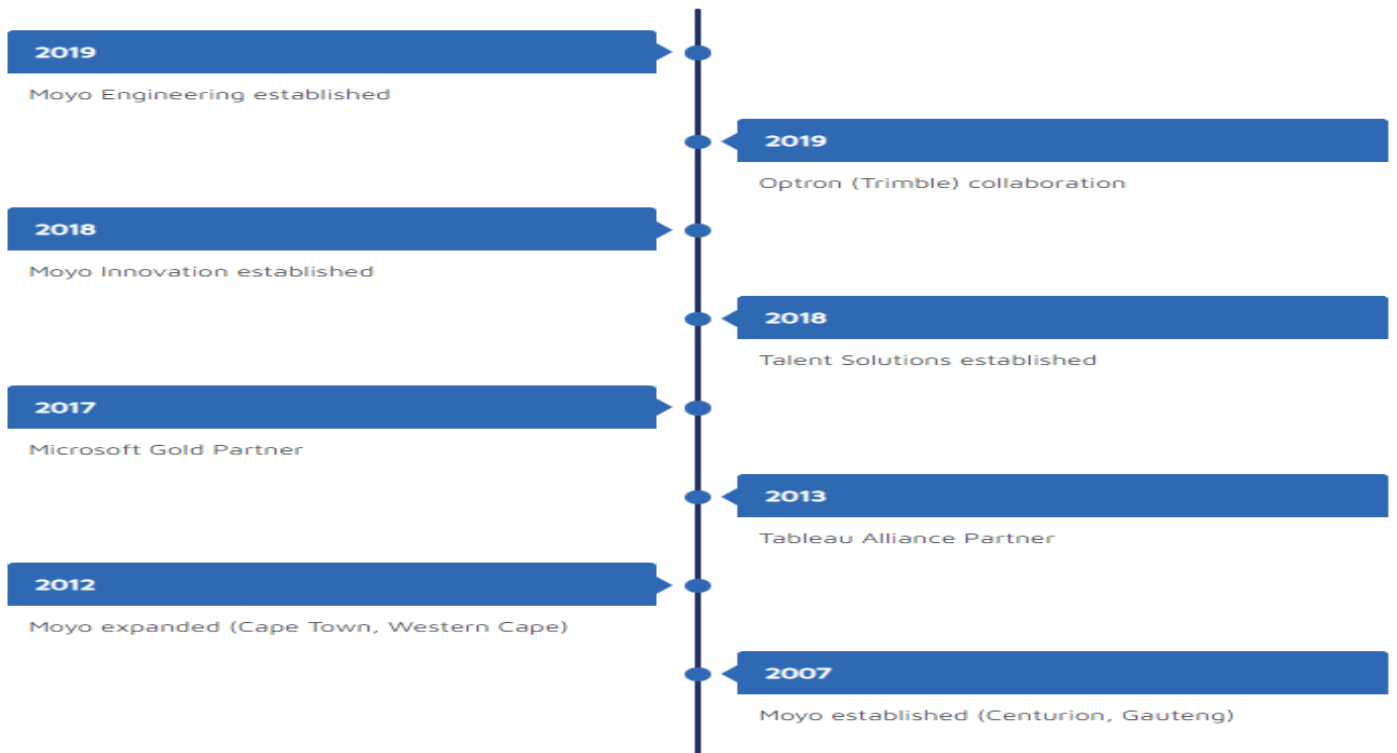


Figure 2: Moyo's Journey

2.3 ORGANISATION DESCRIPTION

2.3.1 ORGANISATIONAL STRUCTURE

Moyo uses a hierarchical business structure which is based on their relevant business function and department.

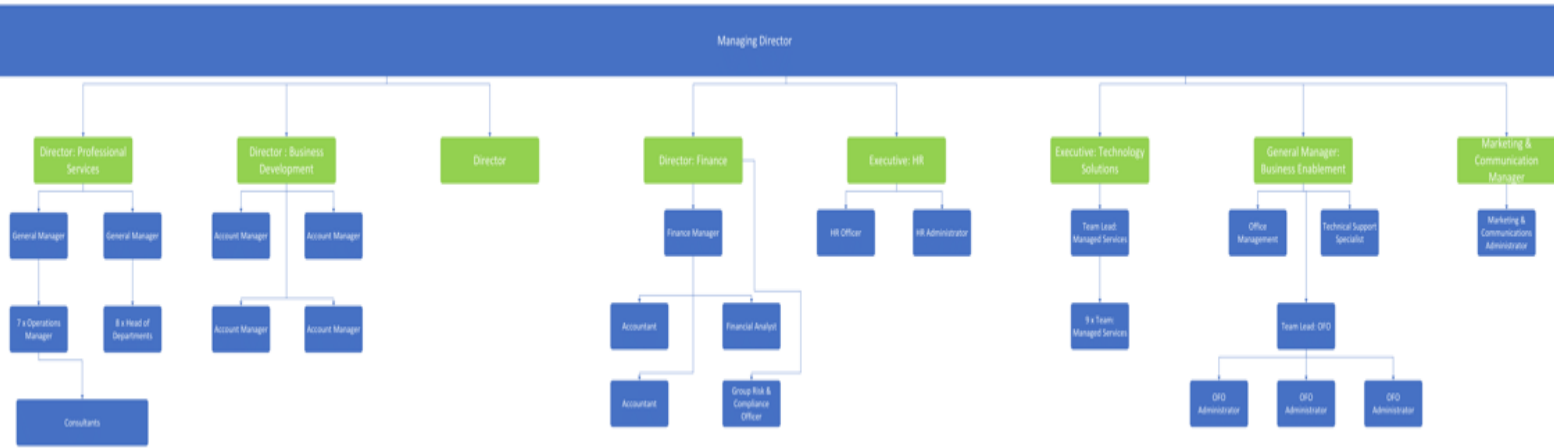


Figure 3: Organizational Structure

2.3.2 AREA OF BUSINESS

Moyo Business Consultancy has branches in Pretoria, Centurion as well as Cape Town.



Head Office
242 on Jean Office Park, Building D, 242
Jean Avenue, Die Hoewes, Centurion,
0157

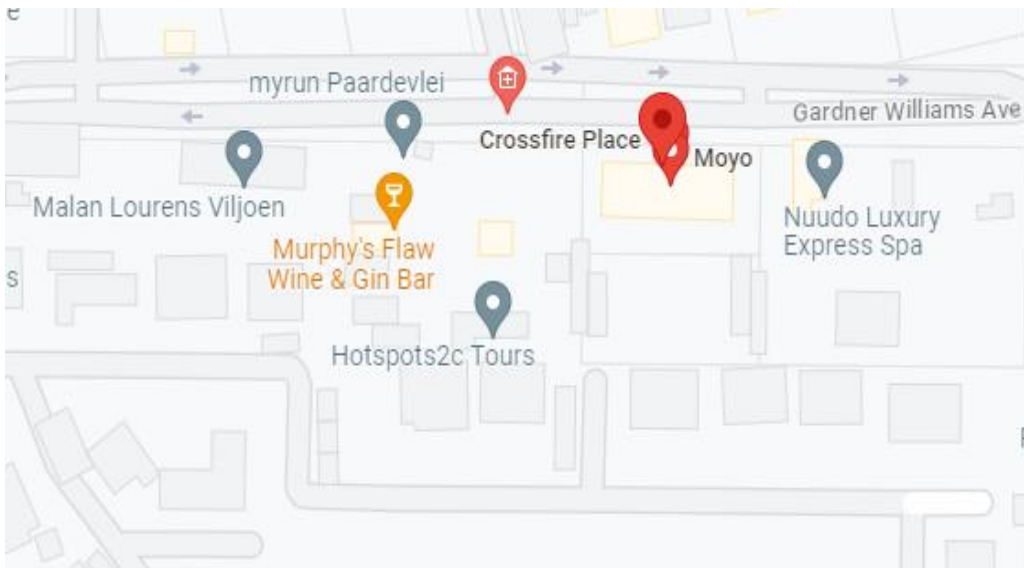
+27 (0) 12 664 1392

hello@moyoafrika.com

2.3.2.1 HEAD OFFICE LOCATION

Figure 4: Head office location

2.3.2.2 WESTERN CAPE OFFICE



Western Cape Regional Office
103 Crossfire Place, 15 Gardner Williams
Avenue, Paardevlei, Somerset West,
Cape Town, 7130

+27 (0) 21 300 5851

hello@moyoafrika.com

Figure 5: Western Cape Office

2.3.3 BUSINESS ENVIRONMENT

Moyo Business Advisory operates in a highly competitive market which is influenced by technological advancements and digital transformation. Moyo manages these barriers by remaining agile by implementing dynamic- smart working, establishing effective teamwork, long and fruitful relationships, being driven by significance and purpose and delivering exceptional service delivery, focusing on achieving clients trust and respect and having a future based forward-thinking mentality. All their employees are exceptionally skilled in their line of work and passionate about the roles that they play within the organization.

2.4 DESCRIPTION OF THE GENERAL CONTACT PARTICULARS



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Company: Moyo Business Advisory (PTY) Ltd.**Name of Contact person:** Vumile Gumbi**Email:** Vumile.gumbi@moyoafrika.com**Cell- Phone number:** [072 533 8204](tel:0725338204)**Position:** General manager for Business Enablement

Background of contact person: Vumile has been working in business analysis and business consultancy for fourteen years of which nine years are with Moyo, one year at Sanlam, almost two years at UTi Worldwide Inc. and finally two years at Momentum.

Vumile also possesses the following qualifications:

- BCom in Information Technology (University of Kwazulu-Natal)
- Postgraduate diploma in business management and administration (UNISA)

2.5 CONCLUSION

This concludes the section which exclaimed the background in the history and background of the organization, the organization description, the organizational structure, the organization's area of business, the organization's business environment as well as the contact details of our client.

3. PROJECT REQUEST

3.1 INTRODUCTION

The project request section will illustrate the current business problem the client is experiencing with their current system as well as how our proposed system will be able to solve this set of business problems.

3.2 DETAILS OF THE SYSTEM THAT THE CLIENT WANTS TO DEVELOP

Moyo has been managing their procurement process through a third-party application (SharePoint) and this has been causing them problems and many inefficiencies in the procurement process.

A current issue they are experiencing is with regards to security and integrity of the procurement process. It has been outlined that their current system allows it to be possible to almost bypass supplier vetting completely which results in: The issue of conflict of interest where it is possible for an employee to buy consumable stock from a vendor and get personal kickbacks and the issue of inadequate due diligence on suppliers which ensures that their moral and ethical values and norms between both parties are aligned. It is also possible for values and invoices to be swapped out in the procurement request process which results in the issue of possible misuse of funds which will affect each business units budget allocation. It is also possible to pay a vendor which was not meant to be paid due to this security issue. These issues result in ineffective time allocation due to the fact that it requires extra time to ensure that the information provided was correct, the correct person was paid as well as selecting the correct person who needs to approve the specific procurement request.

Moyo Business Advisory also has the issue of email overload. The stakeholders stated that they need to attach 5 – 6 attachments to each purchase made which creates an extremely long email conversation which they said to be an extremely long and tedious process. Currently SharePoint sends notifications to the user that made a specific request, and it can get lost in the massive number of emails that the stakeholders receive every day. They also have a problem with the users being unable to search for specific procurement items which wastes time since it takes a while to filter through all of the records at any given point in time. This makes it hard for the stakeholders to manage and track how much everyone are spending and what procurement items they are spending it on.

Moyo Business advisory is currently experiencing issues in accurately managing and tracking their own budget as it takes time for a payment to be manually deducted from their budget. It takes MOYO longer to make informed business decisions due to their current system not having any reports. They will need to manually gather their own data and set up manual reports to see their BEE spend report, Vendor Spend Report, Inventory management, Business Unit Spend Report and Budget Variance Report.

MOYO uses an asset management system for assets such as computers and computer parts however they do not have a consumable inventory tracking system (pens, whiteboard wipes, water bottles etc.). This can cause a problem which relates to procurement of these items not being done in adequate time which will render them without the product and successfully managing this situation is more tedious.

We will solve these problems with our procurement system by implementing strict procedures and guidelines to enforce security and integrity of supplier vetting and invoice uploading. This will be done through validation where the system enforces the user to upload two quotes otherwise it will not be able to proceed with the vendor onboarding request. We will implement more validation where only the correct designated people will be able to approve vendors and purchase requests of procurement items. This eliminates the issue of security, integrity, misused funds as well as conflict of interest as it ensures that the vendor vetting process is followed.

Our system will solve the issue of email overload by using a user specific “portal page” which is designed in a user friendly manner that will show all of the procurement tasks that need to be done. The system will also provide timely notifications to the users in order to ensure that they stay up to date with all of the information that comes through.

Our system will also provide accurate reporting for the business in order to ensure that they will be able to make accurate business decisions which will relate to the procurement process. The reports can be done on a specified time basis (monthly/ annually) or on an ad hoc basis. The reports will be aesthetically pleasing and professional in design.

Our system will also incorporate a consumable inventory tracking system. This will allow stock to be added onto the system, deducted with stock takes and it will allow the system to send notifications to re-order consumables based on their minimum or maximum re-ordering points.

Our user-friendly system will ensure that the process of procurement is effective, efficient and less tedious to complete. This will allow MOYO to spend more time on more important business matters by eliminating intense procurement related tasks.

3.3 CONCLUSION

In conclusion the project request section will highlight the current problems that MOYO is experiencing and how our solution will be able to solve these problems.

4. PRELIMINARY INVESTIGATION

4.1 INTRODUCTION

The preliminary investigation will investigate the challenges, opportunities, and directives, as well as the business goals and objectives, that our team has gathered from our interviews and brainstorm with our MOYO Client and the stakeholders of the procurement system. In this part, we will discuss our findings as well as the elicitation procedures that we used to obtain this information.

4.2 PROBLEM STATEMENT

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|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The problem of | MOYO is they currently have a procurement system in place that does not really function in the way they want it to function. They are using platforms like SharePoint to document what product or item they want to buy; this is then added to the list of procurement items within a specific budget allocation section. Then there is a request to approve the procurement status of this purchase where the budget owner of that specific section must approve the procurement status before an invoice can be sent. The problem comes in where there is no restriction/security for vendor onboarding like to whom can change the procurement status thus there can be situations where anybody with lack of authority can change the procurement status. There is also a problem with the lack of restricting access to people being able to cross over their allocated budget lines to try and save money on their budget section. There is also a lack of search function for the inventory procurement items list, this makes it hard for budget managers to manage their allocated budgets. They also are currently using an email process to buy procurement items, but this is very tedious and time consuming as the attachments can stack up and easily accrue gaps like paying somebody twice for one item or paying the wrong person for an item. There can also be human error due to having to manually check these email orders and invoices. The current system also bypasses due diligence completely, this creates risk factors for the company because it is hard to see if everybody followed the correct procedures for the procurement process. |
| Affects | Business enablement department, Finance department, Governance & Compliance department, and senior leaders with company credit cards. |
| The impact of which is | MOYO can have financial losses due to payments errors accruing because of the lack of security, due diligence, and functional processes. The processes that are in place are also disrupted on a weekly basis because of corrections needing to be made due to faulty procedures. Thus, these corrections are every time consuming and irritable tasks that need to be manually fixed. When in time crunches these corrections could also be rushed causing incorrect |

| | |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>information and approval holding the financial department liable. Process efficiency and budget allocation is also impacted due to these previous stated problem because of the time consumption of these processes to be completed and budgets needing to be change due to unauthorized procurement item approvals and budget lines within budget sections being crossed.</p> |
| A successful solution would | <p>to the current system would be to create a new system free from SharePoint. The system would allow Vender onboarding with security and authorization features; A search procurement items list process ;an approval request and approval authorization process; A purchasing system with each product connected to the supplier that MOYO buys from; Business unit budget allocation; Inventory management and consumable inventory management; Invoicing allocation process e.g. pay with credit card or EFT or Cash; Quality inspection; A reporting process with the following reports: BEE spend report, Vendor Spend Report, Inventory management report (in trend form), Business Unit Spend Report, Budget Variance Report.</p> |

Table 1: Problem Statement

4.3 BUSINESS GOALS AND OBJECTIVES

4.3.1 SECURITY GOAL

| SMART Goal | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific | Barriers should be set in place regarding the approval of procurement items in a certain budget line so that only the budget manager of their respective budget line can approve or deny procurement item requests. |
| Measurable | Once the goal is achieved, people will no longer be able to approve or deny procurement item request if they do not have the proper authority. People will also no longer be able to sneak in procurement items in other budget lines. |
| Achievable | An authorisation system would be implemented that separates people into their respective budget lines and then also only budget managers will be provided with full functionality that will allow them to approve/deny procurement items whilst other will have that function restricted to them |
| Relevant | This will greatly decrease the risk taken by the company. This will save money for the company. This will save time for the budget managers, the financial team and the governance team. |
| Timely | The implementation of the system and achievement of the goal must be achieved by the end of November 2023. |

Table 2: Smart Security Goal

4.3.2 SEARCH GOAL

| SMART Goal | |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific | The budget managers must be able to search for procurement items within the procurement items list within their specific budget line to be able to keep track of their current budget. They must be able to search by dates, items, budget lines and by owners. |
| Measurable | Once the goal is achieved, budget managers will be able to keep track of their budget line more effectively. |
| Achievable | A search functionality will be implemented that allows for searching by dates, items, budget lines and owners. Then display the list of results on the Procurement list page. |
| Relevant | This improves the quality of life for the budget managers as it saves them a lot of time and human error. This also ensures budget lines are not passed. |
| Timely | The implementation of the system and achievement of the goal must be achieved by the end of November 2023. |

Table 3: Smart Search Goal

4.3.3 EFFICIENCY AND AUTOMATION/REDUCE EMAIL PAPER TRAIL GOAL.

| SMART Goal | |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific | Administration work like sending an email for procurement item requests should be stopped as the system will now be able to automatically send emails/notifications to budget managers when they need to approve a procurement item as well as an email/notification will be automatically sent to the financial department when they need it comes the purchasing of the procurement item when that item has been approved. |
| Measurable | Once the goal is achieved, there will be less confusion and human errors that occur due to simply missing/forgetting procurement items that were listed. This process of approval to payment would be much more fluent and clutter free. |
| Achievable | An implementation of the Creating of automation email generations that will be sent when email/notifications to budget managers to approve a procurement item when an item is requested. Then once approved and automatic email/notification will be generated to the financial department that will prompt them to make a payment. |
| Relevant | This improves the flow of the procurement process and reduces clutter that was created by sending email on top of email. |
| Timely | The implementation of the system and achievement of the goal must be achieved by the end of November 2023. |

Table 4: Smart Efficiency and Automation Goal

4.3.4 REPORTING GOAL.

| SMART Goal | |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific | Reports regarding BEE spending, vender spending, inventory management, Business Unit Spending and Budget Variance must be created. |
| Measurable | Once the goal is achieved, managers form the governance compliance, financial and business will be able to make better decisions based on the data that is provided in the reports. |
| Achievable | By creating reports that automatically generate when it is requested or at a certain time of day, or week, or month, or year. |
| Relevant | The current procurement system does not have any reports that can auto generate at the moment. These reports will greatly increase the efficiency of the processes since valuable data can be easily gathered and reviewed. |
| Timely | The implementation of the system and achievement of the goal must be achieved by the end of November 2023. |

Table 5: Smart Reporting Goal

4.3.5 ALIGN PROCUREMENT POLICY WITH SYSTEM GOAL.

| SMART Goal | |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific | The new system will take the procurement procedure from the handbook at MOYO into careful consideration and implement the required procedure and processes when it comes to the procurement process. |
| Measurable | Once the goal is achieved, the procurement policy at MOYO will be aligned with the new system. |
| Achievable | By implementing every procedure and policy from the handbook into the new system of operations. |
| Relevant | This ensures that everybody at MOYO who plans on buying a procurement item will follow the current outlined procedures. In doing so, we reduce the risk that the company may face. |
| Timely | The implementation of the system and achievement of the goal must be achieved by the end of November 2023. |

Table 6: Smart Align Procurement Policy with System

4.4 PROBLEMS, OPPORTUNITIES AND DIRECTIVES.

| | |
|-----------------------------------|---------------------------------------------|
| PROJECT: Procion System | PROJECT MANAGER: Jason van der Merwe |
| CREATED BY: Leon Combrinck | LAST UPDATED BY: Leon Combrinck |
| DATE CREATED: 03/04/2023 | DATE LAST UPDATED: 03/08/2023 |

| Brief Statement of Problem | The impact the problem is causing | Expected benefits from any potential solution | How quickly can it be resolved | What is the underlying source of the problem? | What will it cost to solve the problem? |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1. Create a new web based procurement system that with all the functionality and processes followed from the procurement procured a policy from the MOYO handbook. | This impacts the entire flow of the procurement process since the current process is error prone and time consuming. This is used to the current system lacking the clear required process needed for procurement. | This will free up precious time for all parties involved. This will also solve most problems and errors that are currently occurring in the system. Shifting the current system to an independent web-based system catered towards MOYO's needs will ensure effectiveness and efficiency of the procurement process. | 4 months | MOYO has a system now, but it does not operate in the way they want it to operate. The current system has short coming s regarding the security, due diligence aspects, reports and to align the procurement policy of the company with the new system. Due the lack of security, automation and due diligence in the current system that is implemented. | There is no budget set aside for this project. The work will be done with hard work and dedication. |

| | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <p>2. Create an authority hierarchy with different budget lines/sections and one budget manager oversees their respective budget lines. This creates access restrictions on certain functions that people who are not budget managers do not have. This creates security for those who would for example be able to approve a procurement request.</p> | <p>Due to those problem users who are not authorised to approve a procurement request are able to do it. Also, users who are part of one budget line can sneak procurement met items into another budget line for them to save money on their budget line.</p> | <p>This will be one by giving the admins of the system full access to the system and will be protected by a username and password whiles procurement users will have restricted access to make sure only budget manager can approve procurement requests.</p> <p>The budget lines will also be split up so users and the budget manager of that line will be place within the section of that budget line that they are assigned to ensure that users cannot cross budget lines.</p> | <p>4 months</p> | <p>MOYO has a system now, but it does not operate in the way they want it to operate. The current system has short coming s regarding the security, due diligence aspects, reports and to align the procurement policy of the company with the new system.</p> <p>The underlying problem comes in where users are now approving their own requests then costing the company money by sending procurement items that would otherwise not be approve in the first place to be bought.</p> <p>Another problem would be users sneaking budget line items into other budget line in order for them to save on their budget line causing that budget their budget line being able to spend more money the other budget line potentially going over their budget.</p> | <p>There is no budget set aside for this project. The work will be done with hard work and dedication.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|

| | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 3. Create a search function that will be used by the people who will make use of the system to search for a listed item or items within the current procurement item list. This search function should allow for search by dates, items, budget lines and owners. | Due to these issues budget managers and heads of departments need to manually collect the data that they need. This is error prone due to thing that could easily be missed and is also takes a lot of time | <p>The current system needed the implementation search function that will be able to search by owner, budget line, dates, and budget line items.</p> <p>This will help the budget managers to keep track of their respective budgets and also make editing procurement requests much easier.</p> | 4 months | MOYO has a system now, but it does not operate in the way they want it to operate. The current system has short coming s regarding the security, due diligence aspects, reports and to align the procurement policy of the company with the new system. The underlying problem is that with no search function it is hard for budget managers to keep track of their budget. This causes them to go over their budget allocation and causes the company to lose money. | There is no budget set aside for this project. The work will be done with hard work and dedication. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|

| | | | | | |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 4. The manual completion of reports by That is required regarding the procurement system. | <p>People like heads of departments and budget managers can lose track of the data since it's very unorganised and can thus be prone to errors.</p> <p>This can lead to budget managers making inaccurate decisions.</p> | A complete report will help budget manager to and heads of departments to clearly see the data from the system in a clearly formatted way. This allows for better decision making regarding that data. | 4 months | <p>MOYO has a system now, but it does not operate in the way they want it to operate. The current system has short coming s regarding the security, due diligence aspects, reports and to align the procurement policy of the company with the new system.</p> <p>The Current system has no reports at all thus, the new system needs a report system that generates all the required reports.</p> | There is no budget set aside for this project. The work will be done with hard work and dedication. |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|

Table 7: The Problem

| Brief Statements of Opportunity | Urgency | Visibility | Annual Benefits | Priority or Rank | Proposed Solution |
|---------------------------------------------------------------------------------------------------------|---------|------------|-----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Reduce current email system paper trail with an automated system for the vendor onboarding system. | High | High | Unknown | 3 | Create a new system that operates an implements vendor onboarding system with a dropdown list and automated email reports. |
| 2. Implementing a search function for procurement items list. | High | High | Unknown | 2 | Create a search function and page within the new system that allow to search by keywords or dates within specific budget lines. |
| 3. Transforming the current SharePoint system into a completely new and independent procurement system. | High | High | Unknown | 1 | Replacing the current SharePoint system with an efficient independent system that can do all the functions that is needed for the procurement system in the form a web-based system. |
| 4. Having a task portal interface of important tasks that need to be completed. | Medium | High | Unknown | 5 | Creating a portal to see the specific task for each person and being able to mark them off as you complete then. |
| 5. Having inventory stock take for a purchase scheduling process. | Medium | High | Unknown | 4 | Create a notification that notifies budget owner when it is time to reorder before stock gets to 0. (Dealing with a lack of stock before it happens rather than when it happens) |

| | | | | | |
|----------------------------------------|--------|------|---------|---|------------------------------------------------------------------------------------|
| 6. Having a vender audit alert system. | Medium | High | Unknown | 6 | Create an annual alert that checks verification for the vendor onboarding process. |
|----------------------------------------|--------|------|---------|---|------------------------------------------------------------------------------------|

Table 8: The opportunity

| Brief Statements of Directive | Urgency | Visibility | Annual Benefits | Priority or Rank | Proposed Solution |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|-----------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. MOYO requires that we adhere to the POPI act to ensure privacy and security of customers information is not taken lightly. | High | High | Unknown | 2 | We will diligently follow the terms as stated in the POPI right. |
| 1. MOYO requires that the system must allow only specific user (Budget managers) to perform certain task (approve procurement items in their associated budget line) | High | High | Unknown | 1 | The system will assign each budget manager to their specific budget line to create authority on what task they can performed by what budget manager and the respective budget line they are representing. |

Table 9: The Directive

4.5 PRELIMINARY ASSUMPTIONS AND CONSTRAINTS

| Assumptions | Constraints |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Budget managers keeps within their allocated budget. | <ul style="list-style-type: none"> All the requirements of the procurement system are met within the limited time period. |
| <ul style="list-style-type: none"> Only the budget manager can approve a procurement item within their specific budget line. | <ul style="list-style-type: none"> The coding barrier of the procurement system needs to meet the requirements since we still need to learn angular and Microsoft stack. |
| <ul style="list-style-type: none"> Can only make use of the new procurement system to be able to buy procurement items. | <ul style="list-style-type: none"> There is no budget for creating the procurement system, but rather. |
| <ul style="list-style-type: none"> Have of stable internet when making use of the procurement system. | <ul style="list-style-type: none"> Not all the users of the system will be able to make use and understand the new procurement system in its entirety. |
| <ul style="list-style-type: none"> Procurement items will only be invoice once they have been approved by their respective budget manager. | <ul style="list-style-type: none"> Getting everybody to move from the emailing process to the new procurement system. |
| <ul style="list-style-type: none"> The user of the system knows that the system operates and how to properly use the system. | <ul style="list-style-type: none"> Getting People accept and comply with the new changes of the system and making use of the new system and its processes. |
| <ul style="list-style-type: none"> The supplier of the procurement item has stock of the item being purchased. | |

Table 10: Preliminary Assumptions and Constraints

4.6 ELICITATION TECHNIQUES.

| Elicitation Technique | Motivation for Elicitation technique |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interview | <ul style="list-style-type: none"> The interview process is our first and main form as elicitation technique used to gather information from our client MOYO regarding the procurement system. The Interviews would also be held virtually as it is most convenient for the client and the stakeholders. The interview is used since it's one of the most effective and efficient ways of gathering mass amount of information in a short amount of time. This is especially important since our client is extremely busy, and we do not want to waste any time. By making use of the interview elicitation technique each member of our team can ask insightful questions regarding the function of the procurement system we are expected to create. This gives us a greater understanding of the system but also the business and how it functions. The interview also helps us as a team to get to know our client and the stakeholders which would not be possible with something like questionnaires or prototyping. |
| Brainstorming | <ul style="list-style-type: none"> The brainstorming process was used as the second elicitation technique as this allows the team to gather our thoughts on the procurement system and how we will implement and create the system. Brainstorming also helps us as a team come up with creative solutions to the complex problems we face with the procurement system. Brainstorming is the best way to effectively and efficiently gather new ideas from everybody and then find the most feasible and suitable one for our situation. Thus, it helps us find possible problems and constraints as well as creative ways on how these problems and constraints can be solved or worked around. Brainstorming also creates an opportunity for all team members to contribute their ideas freely. Most Importantly the brainstorming session allows us to talk about and evaluate the information that we received from the interview with our client MOYO. |

Table 11: Requirements elicitation techniques

4.7 PROOF OF ELICITATION.

4.7.1 INTERVIEWS

4.7.1.1 INTERVIEW 1: FIRST INTERVIEW WITH MS VUMILE GUMBI AND THE STAKEHOLDERS.

| Preparation checklist | | |
|-----------------------|-------------------------------------------|-------------------------------------|
| No | Task | Done |
| 1 | Decide which type of interview | <input checked="" type="checkbox"/> |
| 2 | Decide on interview goal | <input checked="" type="checkbox"/> |
| 3 | Create list of questions | <input checked="" type="checkbox"/> |
| 4 | Identify potential interviewees | <input checked="" type="checkbox"/> |
| 5 | Decide on location for interview | <input checked="" type="checkbox"/> |
| 6 | Invite interviewees | <input checked="" type="checkbox"/> |
| 7 | Send questions to interviewees (optional) | <input type="checkbox"/> |

Table 12: Preparation for Interview checklist

DETAILED EXPLANATION OF THE PREPARATION CHECKLIST

5. DECIDE WHICH TYPE OF INTERVIEW.

- a. This will be a semi-formal interview that we will be conducted online on the Teams platform. The people who we will be meeting with is Vumile Gumbi and the stakeholders of the procurement system. We have set up questions that we will ask during the interview.

6. DECIDE ON THE INTERVIEW GOAL.

- a. The Team would like to have the interview with the client and the stakeholders where we can ask all the questions regarding the procurement system that we are currently designing for MOYO. This is to get an understanding of how this specific system should function and what exactly they want to achieve from this system. This gives the team a good stance on how we are going to approach this problem and ultimately how we are going to solve it.

7. CREATE LIST OF QUESTIONS.

General Questions:

- a. What is the Background_of each stakeholder?
- b. Current documentation_used in the business (is it part of the procurement document already sent, BEE template or reports)
- c. Is there an existing procurement system, if so, how does the views of each page look like?
- d. What capabilities does the current system have in place and what are some shortcomings?
- e. Who does this affect_the most like for example specific individuals or departments?
- f. What are the Impacts_of these problems and affects (How does the issue of your system impact the department, organization, financial and time wise)?
- g. How would you benefit_from this system?
- h. What opportunities_and directives_does this new/future system create?

8.1 Should some systems/functions be combined?

8.2 Are their paper-based processes that should be automated?

8.3 We are aware about certain things needing to be kept private. What else should we know about?

8.4 Are their specific users that should be performing specific tasks?

- i. What business assumptions_and constraints_should we be aware of?

- j. Each user on the system needs their own login, should there be access levels to restrict the view of certain data.
- k. How would you like to implement the system? (Mention of azure, website? mobile?)
- l. As seen, it looks like emails/ written documents are sent to different stakeholders (finance, procurement, requisition etc.) Which would be the best implementation of this system wise (Prepopulated document sent, automatic notification on “portal” and once approval is made a document is ready for download?)
- m. In the procurement process, what is the most iterative task that needs to be complete.
- n. Regarding the automation of the system, how should that be implemented and how should it function? Like the automatic reordering for example Making use of the calendar to calculate when usually certain supplies should be ordered
- o. How is the process of faulty supplies handling a quality inspection?
- p. Would it be beneficial to you if the rest of the company (e.g.: procurement, requisition and finances) have access to the system in order to streamline the procurement process?
- q. What are the goals for any of the systems?

8. IDENTIFY POTENTIAL INTERVIEWEES.

- A. WE WILL BE CONDUCTING THIS INTERVIEW WITH –
- B. VUMILE GUMBI - GENERAL BUSINESS MANAGER MOYO.
- C. ARINA VAN DER MERWE - GOVERNANCE AND SUPPLY CHAIN OFFICER.
- D. LIZELLE SMIT - FINANCIAL MANAGER.
- E. FRANS GLOY – TECHNICAL SUPPORT SPECIALIST.

9. DECIDE ON LOCATION FOR INTERVIEW.

- Vumile Gumbi decided that the meeting will be held on Teams.

10. INVITE INTERVIEWEES.

- Vumile Gumbi, Arina van der Merwe, Lizelle Smit, Frans Gloy was invited to the interview using Teams.

11. SEND QUESTIONS TO INTERVIEWEES (OPTIONAL)

- We did not send our questions to Vumile Gumbi beforehand.

| During Elicitation checklist | | |
|------------------------------|-------------------------------------------------------|-------------------------------------|
| No | Task | Done |
| | 1 Describe purpose of interview | <input checked="" type="checkbox"/> |
| | 2 Confirm interviewees' roles | <input checked="" type="checkbox"/> |
| | 3 Address any concerns | <input checked="" type="checkbox"/> |
| | 4 Explain how information will be recorded and shared | <input checked="" type="checkbox"/> |
| | 5 Ask predefined questions | <input checked="" type="checkbox"/> |
| | 6 Summarize the session | <input checked="" type="checkbox"/> |

Table 13: During Interview checklist

DETAILED EXPLANATION OF THE DURING ELICITATION CHECKLIST

1. **Describe the purpose of the interview.**
 - This meeting will discuss the requirements gathering for our procurement system that will be developed. We will talk about reports, requirements, specifications, business rules and other business information which relates to procurement process.
2. **Confirm interviewees' roles.**
 - Vumile Gumbi will serve as our organizational contact and General manager. Arina van der Merwe will serve as Procurement governance and requirements provider that oversees procurement processes. Lizelle Smit will serve as financial manager as well as financial requirements provider. Frans Gloy will serve as the technical support specialist; however, he could not attend the meeting.
3. **Address any concerns.**
 - All the concerns that the team and client had regarding the procurement system and processes was addressed in the meeting. More information is provided in the interview writeup.
4. **Explain how information will be recorded and shared.**
 - The information gathered during the meeting was done so by making use of recording since the meeting was virtual. The client was aware of this and agreed to this arrangement.

5. Ask predefined questions.

General Questions:

- What is the Background of each stakeholder?

A:

Vumile: “We started off in 2007 as a consultant company in where we had business analysis, project management, enterprise architecture etc.... Under digital consulting is the core of the business and that is ultimately where we started and since then we expanded the core of the business and that is where you will see now, we have MTS (Recruitment and training) where we Have technology services, ventures where we have smaller business that we build and sell the tech and product that we built there. Thus, the core of the business is still in consultation and providing IT consulting professional services, it’s just that we expanded as we have grown in the market to include other services as well.”

- Current documentation used in the business (is it part of the procurement document already sent, BEE template or reports)

A:

Lizelle: “No not that I know of at the moment”

Vumile:” There is no existing stuff, but these are the things that we would like implemented within the system. The reason for this is because there is no data being saved any ware so we cannot compile those reports. SharePoint does not store anything about the vender or has any BEE connections, only the list. So, we don’t have anything, but we would like to have that.”

Arina:” I can probably only give you a excel spreadsheet on the BEE spend report to show how that is made up.”

- Is there an existing procurement system, if so, how does the views of each page look like?

A:

Vumile: “We don’t have a proper system or the system that we really want, but we do have now is that we make use of Microsoft free tool SharePoint that creates lists and that is where you can go and capture what you want to buy and select the budget line for that item then you can submit it then it goes to the line manager to be approved and then it sends an email to finance.”

Arina: “Regarding the view, I’ll make a note in sending that to you guys form the procurement procedure handbook.”

- What capabilities does the current system have in place and what are some shortcomings?

A:

Lizelle: “So the short comings are that with the email process some people use it some people does not use it at all, so we have a mixture between emails and the schedule.

Vumile: “Ok I can demo you what we have right now. So basically, we use SharePoint and let’s assume I want to buy something: on the top right conner I will click on new for new procurement request, then it will open up a side view where we are going to enter our information. So first is item description where I can for example say I want to buy a laptop, then owner where I will add my name. Then there is an auto notify finance checkbox which I click yes. Then the next is requisition status I enter approval required, and afterword the budget owner would come in here to approve or deny. Then we have source where we would enter invoice/quote followed up by quotation where you put the amount quoted for the product you want to buy in this example the laptop. Then next is asset number and serial number but I ignore both. Then we have provider which is a set list of people we buy from, so for the example I will select axis for laptop. Next is deposit due date that you can fill in if you have one along with deposit amount and amount outstanding. Then we have full payment date Which you most likely going to fill in along with total amount. Then we have pay on field that would mostly be if you buy something with credit card for example then you upload the invoice of that purchase. Then budget allocation where you choose what budget the purchase is coming from. Then you have payment method like cash or credit etc. Next is invoices that you can upload and attach

when you like. Then payment status, this is where you need to select what is going to happen like deposit only, allocation made, total payment required, paid total, partially paid etc. Then we have cc providers and sign-up status field. Then we have Providers email where you provide the email of the provider you are using that send email directly to them. Then lastly attachments that could be any attachment you want to add like a quote or invoice. Then you click create that will create a new procurement item within the procurement list. Then a person then can go to the item they added and comment @Vumile for example and that will send an email to me to ask to approve the item. Then I will change the status to approved and mention the person who requested and the finance team so that they can then move on the buy that product. The challenge however come in that it's easy to create a new procurement item, but I can't easily find one because there is no search functionality. So, it's hard to see and track how people are spending and what they are spending on. This means nobody can manage their budget. There is also not many securities and controls on this process because anybody can go into any item and approve that item even if they don't have the authority. That the current process or people also just use email."

Arina: "Yes so, another shortcoming is that this current system is bypassing due diligence completely so if a person has three supplies if need to do due diligence on those suppliers to minimize risk on our side. So, there is no way for me to know which clients we have done due diligence on or not, because that process is completely missed."

- **Who does this affect the most like for example specific individuals or departments?**

A:

Lizelle:” That would be us and Frans Gloy. So, Vumile Gumbi business enablement department, Arina van der Merwe governance and compliance department, Lizelle Smit finance department and Frans Gloy technical support.”

Vumile:” Yes me especially since I am the biggest spender but also any senior members with company credit cards that needs to buy anything using the company credit card, since now they will have to follow the procurement procedures when they do buy something.”

- **What are the Impacts of these problems and affects (How does the issue of your system impact the department, organization, financial and time wise)?**

A:

Lizelle:” So there are a couple things that happen firstly we have financial losses because we are paying somebody we are not supposed to be paying. Secondly it disrupts our processing each week, because every week we do payments(Wednesdays and Thursdays), so that takes a while to get the right information and get the right person to approve that information, because we can see its wrong so we send it back and we need the payment now so we are pressed for time so we just do it and then it's wrong then my head is on the block because I am the head of finance.”

Vumile:” So on my side is the company is big on driving process efficiency and governance, so when the company started there was only four guys with on office, but now as the company is getting bigger with more people it is very important for us to focus on the appropriate controls and governance that is required within internal processing. We never really focus on the company internally because we are so pressured time wise. The impact of capitalizing on BEE spending as well.”

Arina:” This is also a very high-risk procedure and there are so many places that we are at risk”

- **How would you benefit from this system?**

A:

Vumile:” Cost reduction and fraud reduction.”

Arina:” risk reduction.”

- **What opportunities and directives does this new/future system create?**

8.1 Should some systems/functions be combined?

8.2 Are their paper-based processes that should be automated?

8.3 We are aware about certain things needing to be kept private. What else should we know about?

8.4 Are their specific users that should be performing specific tasks?

A:

Lizelle: “We will need that last point. So, lots of people can make a request but only one person has the authority to approve that Procurement item. But also budget managers can only approve what is in their budget line for example Vumile cannot approve my budget lines, since she does not have authority over mine only I can a same way around.”

Arina:” Regarding opportunities of the current email paper trail to be changed and completely implemented within the new system. Integration wise probably implement the reports back into xero.”

Lizelle:” Currently what we are doing is on every single expense we attach an email this creates a tedious and long invoice with 5-6 attachments of emails going back and forth so and automation on that process would help.”

- **What business assumptions and constraints should we be aware of?**

A:

Vumile:” the only constraint that I can think of is getting people to align with the procurement process. Because some people are using email, and some are using the SharePoint so for us the constraint would be getting people of the email and start making use of the system that follows the procurement processes and procedures. Another constraint would be that you can’t just go and buy from anybody there must be a process where we get the three quotes from the different providers that then goes to Arina that checks the governance and compliance before you buy an item.”

- Each user on the system needs their own login, should there be access levels to restrict the view of certain data.

A:

Lizelle:” I would like for the finance department to still see all the reports and data since we need to check if the budget agrees with the financial side.”

Arina:” Yes I agree, but for example the governance department would only need to see the Bee spending report and not the budget report where HR department does not need to see the BEE spent report.”

Vumile:” So yes access restrictions would be beneficial.”

- How would you like to implement the system? (Mention of azure, website? mobile?)

A:

Vumile:” Yes so, this question is for business enablement. I’m not entirely sure about azure, but Microsoft stack is preferred so although we do use azure, we don’t use anything on there. Regarding the integration you guys would most likely be using Xero for the financial side. Regarding the Implementation we prefer website base because we love using the cloud.”

Arina:” We don’t necessarily need a mobile app as that would probably be redundant.”

Lizelle:” We had people asking for a mobile app, but we prefer Xero. The only thing we can think of where a mobile app would be useful is for scanning purposes and when you are for example at a restaurant and want to scan something or take a photo to send to the system for a creation of a draft.”

- As seen, it looks like emails/ written documents are sent to different stakeholders (finance, procurement, requisition etc.) Which would be the best implementation of this system wise (Prepopulated document sent, automatic notification on “portal” and once approval is made a document is ready for download?)

A:

Lizelle: “Yes that will be beneficial, and I think that would be a great think for anybody to see when they need to do or submit work. I am just not sure how the receipt would work since we must manually approve a payment and that the payment system is setup from the beginning with the bank and the owner of the proof of payment. However, if that can be automated that would be great.”

Arina: “I just don’t want us to spend so much time on automating that process that we lose sight of the real problem. So that would be beneficial but it’s not a main focus feature.

- In the procurement process, what is the most irritative task that needs to be complete.

A:

Lizelle: “So my most irritation thing is sending payments back that is not approved by the correct person or did not follow the due diligent steps, because it need to be approved now but if it’s not correct it can’t be approved so it puts us in a time crunch then everybody is angry with each other.”

Arina: “For me it would be the fact that the current system that we are using is not in line with the current company procurement policy, because our policy in theory is great, it covers everything and has correct controls in place. But the fact of the matter is that that is just not happening right now and creates a waterfall effect with nothing in place.”

- Regarding the automation of the system, how should that be implemented and how should it function? Like the automatic reordering for example Making use of the calendar to calculate when usually certain supplies should be ordered

A:

Arina: “If I think about it this way, I don’t think we have a massive need for automation. The biggest thing I can think of is automated notifications that notifies Vumile when stock is low, and she needs to reorder.”

Lizelle: “I Think automation of emails from the payment section will also be needed.”

Arina: “Yes like for example an email notification automation that notifies Andre that is in payments to notify him of his portal where he needs to approve payment requests. “

Vumile: “It’s a short process but automation is going to be a little difficult. The automation we can do is a verification process that takes place annually that check if everything is still the same with the vendor after vender onboarding. So, like a vender audit alert maybe. Everything else would be too risky to automate, like automatic ordering would not fly.”

- **How is the process of faulty supplies handled and quality inspection?**

A:

Vumile: “fantastic question. So, what should happen is we pay for something then we get the goods if the goods have a defect, we should have an ability to send it back. Most time we already paid and then we get faulty goods then the provider needs to handle the situation with the person who ordered the item.”

Arina: “Yes so that person then sends finance department an email stating the problem and tells them they are going to get a payment back.”

Vumile: “yes so we need a process for that tells finance we are waiting to get money back.”

Lizelle: “Yes because currently we just get an email says the goods have been sent back and we are waiting for the credit note. But then we also easily lose track.”

Vumile: “Yes so we don’t have such a system in place, but it looks like we need one.”

- **How does the current inventory management of the procurement system work?**

A:

Vumile: “We have an asset management system that is in place and is used for example when I resign, I give my MOYO laptop back so they can check it off my name. but that system is purely for IT assets we don’t have anything we can put our consumables on.”

Lizelle: “So we have a little inventory database system for jets and pies that we keep but that’s not part of the asset management system.”

Arina: “This then now begs the question of it that something we need in the procurement system so that would be beneficial, but it falls outside the scope of the procurement system.”

- **What are the goals for any of the systems?**

A:

Arina: “So the security and authorization goal would be one. Due diligence goal. Reduce the email paper trail goal. Alline procurement policy with system goal. Finally, automation of certain processes goal.

6. **Summarize the session.**

- The session summarized what we learned from the client, stakeholders and ultimately the procurement system at the end of the meeting.

| After Elicitation checklist | | |
|-----------------------------|------------------------------------------|-------------------------------------|
| No | Task | Done |
| | 1 Organize information | <input checked="" type="checkbox"/> |
| | 2 Confirm results with interviewees | <input checked="" type="checkbox"/> |
| | 3 Share information with stakeholders | <input checked="" type="checkbox"/> |
| | 4 Schedule follow-up interview if needed | <input checked="" type="checkbox"/> |

Table 14: After Elicitation Interview Checklist

DETAILED EXPLANATION OF THE AFTER-ELICITATION CHECKLIST

1. **Organize information.**

- The entire group took a recording of the whole meeting and wrote up the questions and the answers of the meeting afterward after reviewing the recording. The recording and the questions were posted the google drive.

2. **Confirm results with interviewees.**

- The results of the interview were reviewed and confirmed by the team, the client and respective stakeholders.

3. **Share information with stakeholders.**

- Predefined questions were formulated before the meeting to ensure clarity of the meeting. The information that was learned from this meeting will also be shared with client and stakeholders in the following meetings.

4. **Schedule follow-up interview if needed.**

- No follow up interview was needed as we collected all the information we needed. As well as for the sake of not wasting the time of our client and stakeholders as they are very busy.

INTERVIEW WRITEUP

This is the first interview that was held with MOYO after we decided to design and build a system for them. Vumile Gumbi served as the General business manager with the highest stake in the procurement system compared to the other stakeholders, while Lizelle Smit served as the financial manager within the procurement system, Arina van der Merwe served as the Governance and supply chain officer and the final stakeholder who unfortunately could not attend the meeting, Frans Gloy who will serve the technical support specialist in the upcoming meetings.

During the interview we asked the client and stakeholders the questions that we had set up beforehand. Any uncertainties by us or the client were addressed as we went through the questions. The meeting was recorded and uploaded to the google drive.

The current system that they are making use of is SharePoint and emailing. This is however extremely problematic thus a new system is required. The new system will be made specifically for MOYO and the procurement system that they are making use of. The new system will be entirely independent from the SharePoint system.

How the current system operates is a person within a budget section with their respective budget line requests to buy a procurement item that falls in their category. The specific item is provided along with the supplier and the price as well as the dates of payment, then the payment method is also provided. The budget manager then goes to the budget line that they oversee and reject or approves the request that was sent.

The purpose of this interview was to discuss the requirements and processes of the procurement system and how the system will function and ultimately be developed. We talked about the current system a what underlining problem they stakeholders are facing regarding the current system, for example the lack of security due the unauthorized personal being able to approve procurement items as well as personal being able to sneak procurement items into other budget section that they do not represent in order to save money on their budget section. Thus, the way to solve this problem is to create a system that only gives budget managers the authority to approve procurement items and create section dividing each budget line thus splitting them from one another then add the budget managers to their respective section along with the people they manage to make it impossible for other people to access their budget lines.

During the interview we discovered that there is currently no search functionality thus it makes it very difficult, time consuming and error prone for budget managers to keep track of the current

budget due to not being able to clearly view past procurement items that was bought and approved/denied.

We asked the client and stakeholders if they could benefit from the system automating the emails that would be sent to and from procurement item requests based on certain due diligent criteria. This was well received as it is one of the more irritable tasks of the procurement system and takes a lot of time to complete manually.

We asked the client and the stakeholders if they think that the Procurement system would benefit from a mobile app. They said that a mobile app would not be helpful since the system would need to be desktop based due to the manner of how the system would function and the privacy and risk of the procedures.

Vumile Gumbi also stated that it is important for her to be able to read the data for what inventory is in stock and how many is in stock, as well as how many inventories is being consumed at a certain rate, for her to be able to predict when she must restock/Buy more through the procurement process and how much she needs to buy. This is so there will always be stock and never run out of stock when it is suddenly needed.

There is also a problem that arise due to the returns of faulty goods and the credit of those goods. There needs to be a system in place that better keeps track of those altercations since human error is prone to take place within trying to keep track of those return and crediting emails.

4.7.2 BRAINSTORMING

4.7.2.1 BRAINSTORMING 1: BRAINSTORMING SESSION WITH ALTEAN TEAM AND MRS. VUMILE GUMBI.

| Preparation checklist | | |
|-----------------------|------------------------------------------------|-------------------------------------|
| No | Task | Done |
| 1 | Determine area of interest | <input checked="" type="checkbox"/> |
| 2 | Define time limit | <input checked="" type="checkbox"/> |
| 3 | Identify participants | <input checked="" type="checkbox"/> |
| 4 | Identify facilitator | <input checked="" type="checkbox"/> |
| 5 | Invite participants | <input checked="" type="checkbox"/> |
| 6 | Invite facilitators | <input checked="" type="checkbox"/> |
| 7 | Meet with participants to explain expectations | <input checked="" type="checkbox"/> |
| 8 | Establish evaluation criteria | <input checked="" type="checkbox"/> |
| 9 | Book venue/meeting room | <input checked="" type="checkbox"/> |

Table 15: Brainstorming preparation checklist

DETAILED EXPLANATION FROM ABOVE CHECKLIST

1. **Define area of interest**
 - To identify certain issues regarding the functional requirements list. To clear up confusion regarding the procurement process flow of the system. Lastly gather all require documentation of the current system.
2. **Define time limit.**
 - The time limit is two hours for the brainstorming session.
 - All group members will be present as well as Vumile Gumbi the general manager of MOYO.
3. **Identify participants.**
 - The entire Altean team and Mrs. Vumile Gumbi will be participating.
4. **Identify facilitator.**
 - Mrs. Vumile Gumbi.
5. **Invite participants.**
 - Only the Altean members and Mrs. Vumile Gumbi are in attendance.
6. **Invite facilitator.**
 - Mrs. Vumile was invited to the brainstorming session.
7. **Meet with participants to explain expectations.**
 - Information regarding the procurement system will be assessed and the Altean team will discuss some Important information, issues and confusion regarding the procurement system an ultimately solve these issues and confusions.

8. **Establish evaluation criteria.**

- All unclear functional requirements and user roles will be determined based on what the system should be able to do.

9. **Book venue/meeting room**

- Brainstorming session will take place at MOYO's head office, Centurion Jean Avenue.

| During Elicitation checklist | | |
|------------------------------|----------------------------------|-------------------------------------|
| No | Task | Done |
| 1 | Share new ideas | <input checked="" type="checkbox"/> |
| 2 | Record all ideas | <input checked="" type="checkbox"/> |
| 3 | Build on ideas | <input checked="" type="checkbox"/> |
| 4 | Elicit as many ideas as possible | <input checked="" type="checkbox"/> |

Table 16: Brainstorming During Elicitation Checklist

DETAILED EXPLANATION FROM ABOVE CHECKLIST

1. **Share new ideas.**
 - The types of roles and functions that we had in mind were discussed with Mrs. Vumile Gumbi and she brought to light some issues that we were having. Confusions regarding how the procurement system should function were discussed and Mrs. Vumile Gumbi Helped us get back on track when we got lost. The documentation was gathered.
2. **Record all ideas.**
 - The new findings were recorded and the functionalities per roles were identified.
3. **Build on ideas.**
 - The ideas were recorded and expanded upon by the team. The reasons for these ideas were also debate on and recorded.
4. **Elicit as many ideas as possible.**
 - Every idea shared by the participants were noted and investigated.

| After Elicitation checklist | | |
|-----------------------------|--------------------------------|-------------------------------------|
| No | Task | Done |
| 1 | Discuss and evaluate ideas | <input checked="" type="checkbox"/> |
| 2 | Create list of ideas | <input checked="" type="checkbox"/> |
| 3 | Rate ideas | <input checked="" type="checkbox"/> |
| 4 | Distribute final list of ideas | <input checked="" type="checkbox"/> |
| 5 | Schedule follow-up if needed | <input checked="" type="checkbox"/> |

Table 17: Brainstorming After Elicitation checklist.

DETAILED EXPLANATION FROM ABOVE CHECKLIST

1 Discuss and evaluate ideas.

- All members participated in the discussion of the ideas. The team thus discussed each idea in detail and provided their views on the matter.

2 Create a list of ideas.

• List was created as follows:

- User roles of Admin, users and governance and compliances, budget owners, buyers, and finance and the functional requirements regarding those roles.
- Flow of the procurement process.
- Notifications on high purchase amount procurement items or high financial amount- on procurement items and what needs then the go ahead from the owner or GM.
- Budget line deviations and structures.
- Delegation of authority.
- Documentation regarding procurement policy and BEE spending reports.

4. Rate ideas

- Ideas were unbiasedly categorized most important to least important.

5. Distribute a final list of ideas.

• Final Ideas:

- User roles of Admin, users and governance and compliances, budget owners, buyers, and finance and the functional requirements regarding those roles.
- Flow of the procurement process.
- Notifications on high purchase amount procurement items or high financial amount- on procurement items and what needs then the go ahead from the owner or GM.
- Budget line deviations and structures.
- Delegation of authority.
- Documentation regarding procurement policy and BEE spending reports.

6. Schedule follow-up if needed.

- A follow-up brainstorming session is not needed.

BRAINSTORM WRITE-UP:

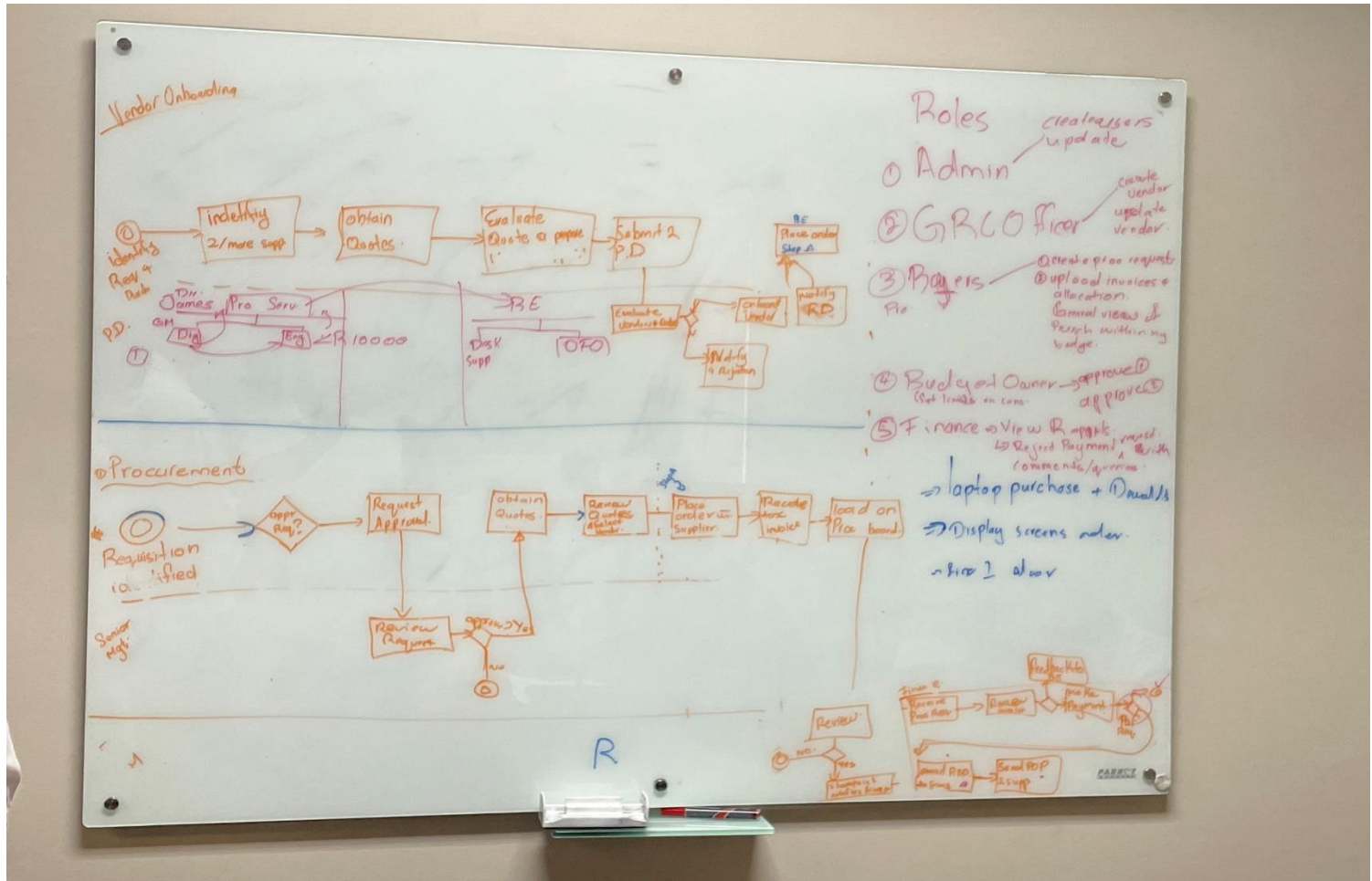


Figure 3: Procurement process flow brainstorm

4.8 CONCLUSION

In conclusion, the problems, opportunities, directives and business goals and objectives have been analyzed and the requirements have been identified as well as explored. Thus, the preliminary investigation is completed and has provided us valuable insight within the not only current system but the future system. This will help us in creating and completing the future procurement system for our client MOYO.

12. PROBLEM ANALYSIS

5.1 INTRODUCTION

In this section, the problem will clearly be defined by providing an overview of the current system, an analysis of the system's capabilities, the required system's capabilities, as well as the gaps between capabilities and recommendations by the Altean team to resolve these gaps.

5.2 OVERVIEW OF CURRENT SYSTEM

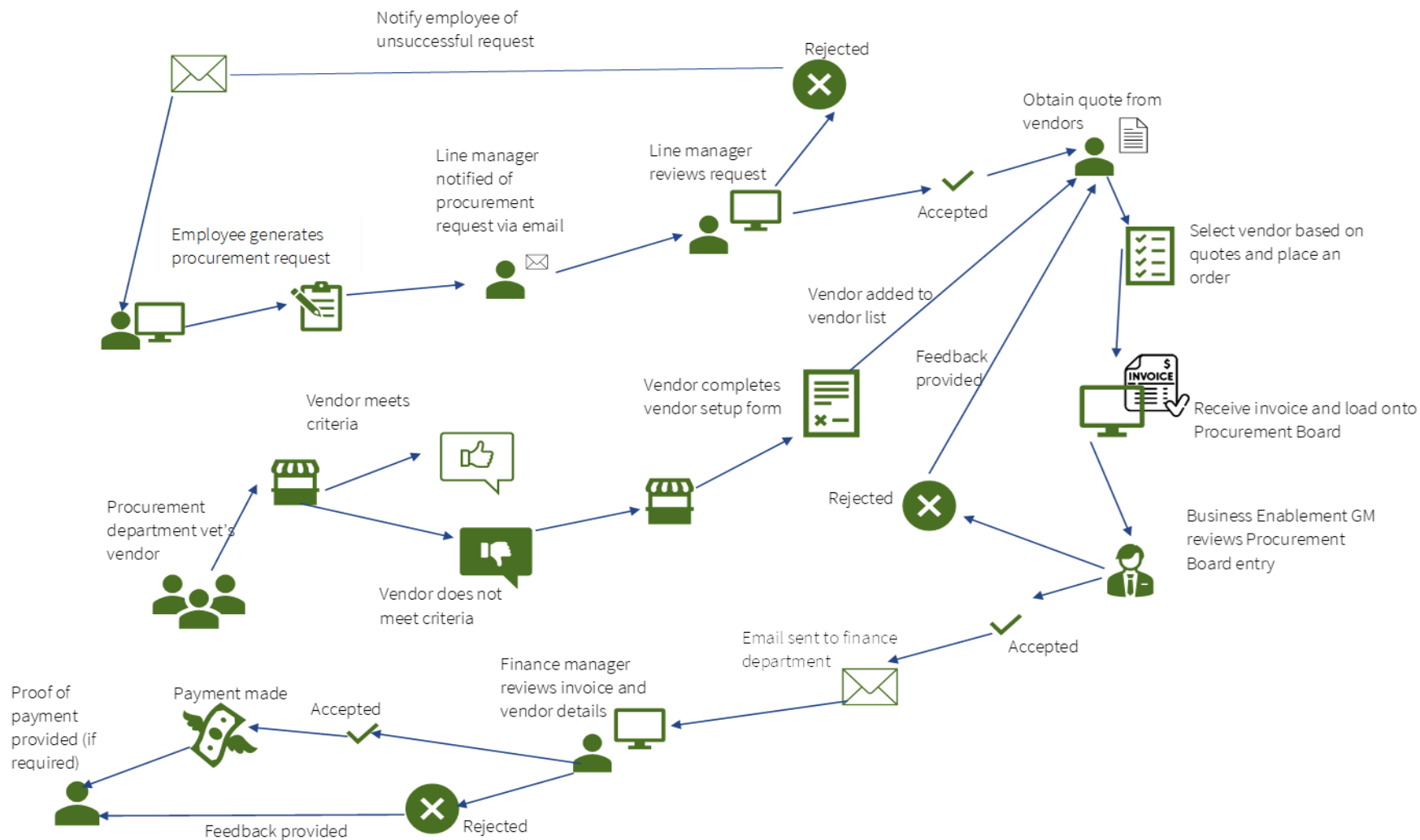


Figure 4: Overview of current system rich picture

5.2 SYSTEM'S CAPABILITIES

| | Current System Capabilities | Required System Capabilities | Capability Gaps | Recommendations |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vendor Onboarding | <p>Current system requires vendors to be manually vetted by the procurement department.</p> <p>Vetting is performed by making use of the Vendor Due Diligence Checklist.</p> <p>Vendors that meet criteria for vendor selection must complete a vendor setup form.</p> <p>When required, evaluation is conducted by selecting the best value match vendor from multiple bidding vendors.</p> | <p>The system should be able to assist the procurement department in vetting vendors by centralizing and streamlining the vetting procedures and processes.</p> <p>The procurement department should be able to directly vet vendors through the system.</p> | <p>The management of vendors during the onboarding process can be disorderly, as the process mainly takes place via email, and this form of communication can be easy to lose track of for repetitive tasks like vendor onboarding.</p> | <p>The system should make use of the Vendor Due Diligence Checklist to ensure that the process is in line with the procedures laid out by the company Procurement Policy.</p> <p>The procurement department should be able to export the completed Due Diligence Checklist from the system.</p> <p>The procurement department should be able to send out vendor setup forms through the system.</p> |
| Purchasing process | <p>Employee generates procurement request through SharePoint or via email.</p> <p>Procurement request is reviewed by a line manager</p> | <p>All prospective buyers (employees) should be able to generate procurement requests through the system.</p> | <p>Some employees use email while some use SharePoint. There is no singular platform which every employee uses, which creates</p> | <p>Review of procurement requests and invoices should be able to be delegated to other managers in cases where the direct line manager is not able to review them themselves.</p> |

| | | | | |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>and either accepted or rejected.</p> <p>Quotes are obtained from vendors, and then the most suitable vendor is selected.</p> <p>An order is placed with this vendor and a tax invoice is received and placed on the procurement board.</p> <p>Invoice reviewed by the Finance department and paid for, after which proof of purchase is received.</p> | <p>Procurement requests should be reviewed and either approved or rejected by the relevant line manager.</p> <p>Multiple quotes from different vendors must mandatorily be obtained before they are reviewed, and a vendor is selected.</p> | <p>confusion among employees.</p> <p>There is no way to easily track procurement requests.</p> <p>An adequate number of quotes is not always received before items are purchased.</p> <p>Due diligence is being bypassed.</p> | <p>Procurement requests will have to conform to the company Procurement Policy.</p> |
| Consumable Inventory Management | N/A | <p>Consumable inventory should be managed using the required system.</p> <p>It should be possible to have a read on the inventory levels of all consumables through the system.</p> <p>A notification should be</p> | <p>Current system does not have an inventory management system specifically for consumables.</p> <p>Restock may at times only take place when a consumable has already run out of stock.</p> | <p>Forecasting should be used to forecast when consumables will be low in stock, and a relevant notification should be generated accordingly.</p> <p>The system should display the numbers of different consumables in stock, and it should be possible to search for the stock levels of specific</p> |

| | | | | |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| | | sent when an inventory item is low on stock, indicating that a restock is required. | | consumables. |
| Business Unit Budget Allocation | In the current system, the budget for each business unit is kept track of manually by budget owners. | <p>It should be possible to maintain a read on each business unit's budget by making use of reports.</p> <p>It should not be possible for a procurement request with invalid information to be completed.</p> | <p>Difficult to manage budgets due to difficulty locating different procurement requests.</p> <p>Weekly processing is disrupted due to incorrect information being present, thus time is wasted going back and forth getting the correct information.</p> <p>Employees can sneak items into the inappropriate procurement request, which will negatively impact the wrong unit's budget.</p> | The system should have search functionality which allows items forming a budget to easily be located. |
| Invoice Allocation Process | <p>Requestor uploads invoice and selects budget line after a purchase has been made.</p> <p>The invoice is submitted to the budget owner for approval.</p> | The system should support the review of invoices to allow the Finance department to allocate payments or invoices as needed in a more efficient | The current system requires invoices to be manually reviewed via email, which can lead to some invoices being lost due to high email volume, or the approval | Strict access control should be present on the ability to review and approve invoices to ensure security and integrity. |

| | | | | |
|--|----------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------------------|--|
| | The budget owner reviews the request, and if approved the payment or invoice is allocated accordingly by the Finance department. | manner. | process being slowed down which represent critical inefficiencies in the current invoice allocation process. | |
|--|----------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------------------|--|

Table 18: System Capabilities

5.3 OVERVIEW OF PROPOSED SYSTEM

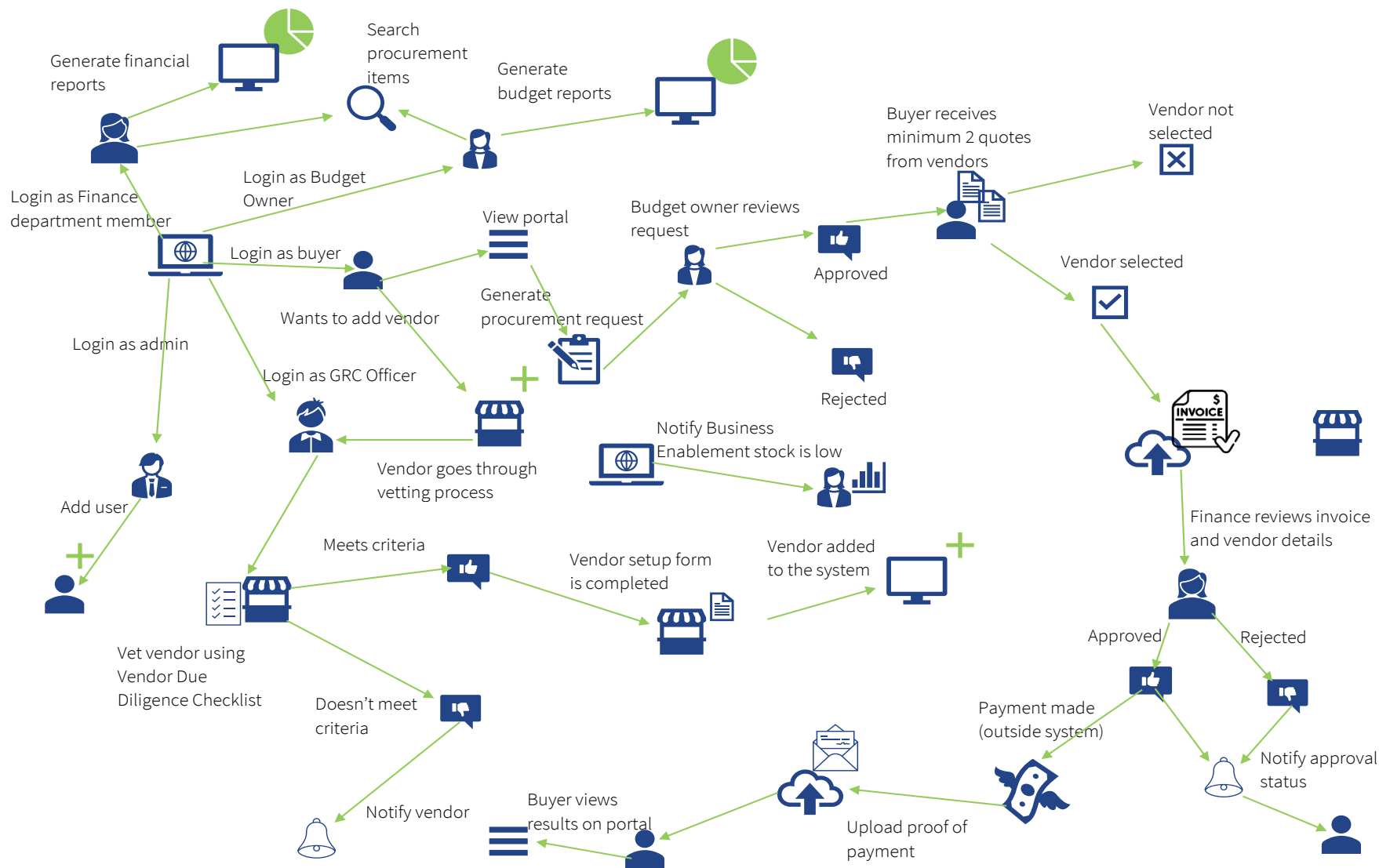


Figure 5: Proposed system rich picture

5.4 CONCLUSION

In conclusion, the analysis of the current system and the problems presented by it serve to create a deeper understanding of the types of problems Moyo is vulnerable to, which will aid in generating future-proof solutions for the business.

6. FUNCTIONAL REQUIRMENTS

6.1 INTRODUCTION

In this section a list of functional and non-functional requirements will be listed for our proposed system Procion. The functional requirements are grouped into the following sub-systems: The user sub-system, Admin sub-system, Procurement sub-system, Finance sub-system, Inventory sub-system, Inventory sub-system, Vendor sub-system and a Report sub-system.

6.2 FUNCTIONAL REQUIREMENT LIST

SUBSYSTEM 1 – USER SUBSYSTEM

- 1.1 Login
- 1.2 Logout
- 1.3 Forgot password.
- 1.4 Update password
- 1.5 View profile.
- 1.6 Update profile
- 1.7 View user manual.

SUBSYSTEM 2 – ADMIN SUBSYSTEM

- 2.1 Create employee.
- 2.2 View employee
- 2.3 Update employee
- 2.4 Delete employee.
- 2.5 Create employee roles.
- 2.6 View employee roles
- 2.7 Update employee roles
- 2.8 Delete user roles.
- 2.9 Assigning delegation of authority.
- 2.10 Backup system data
- 2.11 Restore data to system.

SUBSYSTEM 3 – PROCUREMENT SUBSYSTEM

- 3.1 Create request items.
- 3.2 View request items
- 3.3 update request items
- 3.4 Delete request items.
- 3.5 Notify request approval.
- 3.6 View management procurement request
- 3.7 notify approval request.
- 3.8 Notify rejected request.
- 3.9 Upload quotes
- 3.10 View requisition request
- 3.11 Upload tax invoice
- 3.12 View final request.
- 3.13 Notify finance of approved request.
- 3.14 Notify rejected request.
- 3.15 Upload receipt
- 3.16 Upload credit card payment invoice

SUBSYSTEM 4 – FINANCE SUBSYSTEM

- 4.1 View invoice
- 4.2 Reject payment
- 4.3 Upload proof of payments
- 4.4 Create budget allocation.
- 4.5 View budget allocation
- 4.6 Update budget allocation
- 4.7 Delete budget allocation.

SUBSYSTEM 5 – INVENTORY SUBSYSTEM

- 5.1 Create inventory item.
- 5.2 Read inventory item.

- 5.3 Update inventory item
- 5.4 Delete Inventory Item
- 5.5 Create item category.
- 5.6 Read inventory item.
- 5.7 Update profile
- 5.8 Delete Item Category
- 5.9 Search item inventory
- 5.10 View employee
- 5.11 Export inventory details
- 5.12 Generate reorder stock notification.

SUBSYSTEM 6 – VENDOR SUBSYSTEM

- 6.1 Upload Quotes
- 6.2 Prepare Memo for approval.
- 6.3 Send Approval request.
- 6.4 Create Approval request.
- 6.5 Edit Approval request.
- 6.6 Delete Approval request.
- 6.7 View Approval request
- 6.8 View Vendor
- 6.9 Create Vendor
- 6.10 Edit Vendor
- 6.11 Delete Vendor
- 6.12 Accept vendors.
- 6.13 Reject vendors
- 6.14 Export Due Diligence Vendor Checklist
- 6.15 View Quotes

SUBSYSTEM 7 – REPORT SUBSYSTEM

7.1 Generate approved vendor Report.

7.2 Generate BEE spend report.

7.3 Generate Vendor Spend Report

7.4 Generate Consumable Inventory management report.

7.5 Generate Business Unit Report

7.6 Generate Budget Variance Report

6.3 FUNCTIONAL REQUIREMENTS DESCRIPTION

SUBSYSTEM 1 – USER SUBSYSTEM

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.1 |
| Requirement name (use case name): | Login |
| Requirement short description: | The system should allow the user to log on the system |
| Requirement detailed description and constraints: | <p>Description: Each user will log on to the system with their username and password. The information is then validated using the system's database and will end either by providing user access to what their authority level allows or by display an error message for provided details being incorrect.</p> <p>Constraint(s): None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> All passwords must be encrypted and hashed. The administrative must have added user into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 18: 1.1 Login Functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.2 |
| Requirement name (use case name): | Logout |
| Requirement short description: | The system should allow the user to log out of the system |
| Requirement detailed description and constraints: | <p>Description: The user should be able to log out of the system any time they want on any screen when they request it which will take them back to the login page of the system.</p> <p>Constraint(s): None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must be able to log out from any page of the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 19: 1.2 Logout functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.3 |
| Requirement name (use case name): | Forgot password |
| Requirement short description: | The system should allow the user to reset their password in case they forget their password. |
| Requirement detailed description and constraints: | <p>Description: The user should be able to request a new password should they forget their password. The user will then need to provide their email address which is verified by the system and sends an email with a link that brings them back to the system where they can provide their new password to replace their old password.</p> <p>Constraint(s): Previous passwords cannot be read from the system, because all the passwords in the database will be hashed.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged out of the system. The user must be registered on the system. The new password cannot be the same as any previous passwords set by the user. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 20: 1.3 Forgot password functional requirement.

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.4 |
| Requirement name (use case name): | Update password |
| Requirement short description: | The system should allow the user to reset their password in case they want to change their password. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user should be able to request a new password should they want to change their password. The user will request to change password in which the system will request their username, previous password, new password. The first two provided details will be validated using the system database if the validation is correct password will be replaced otherwise it will display an error message for incorrect details for the user.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> • User must be logged out of the system. • The user details must be verified before any changes are made. • The new password cannot be the same as any previous passwords set by the user. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 21: 1.4 Update password functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.5 |
| Requirement name (use case name): | View profile |
| Requirement short description: | The system should allow the user to view their own profile. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user should be able to view their own profile that display some of their personal details and the option to edit limited parts of those details.</p> <p>Constraint(s):</p> <p>None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> • User must be logged in to the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 22: 1.5 View profile functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.6 |
| Requirement name (use case name): | Update profile |
| Requirement short description: | Users should be able to view their own profile and edit some parts of their details. |
| Requirement detailed description and constraints: | <p>Description: Users viewing their own profile should be allowed request to edit their own information. System will request updated details from the user where the user will provide details. The system will then do basic validation on provided details to ensure it won't cause errors for the system. It will provide a message that the details have been either failed or successfully updated their details.</p> <p>Constraint(s): Only some parts may be updated some details can only be edited by those authorized.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged in to the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 21: 1.6 Update profile functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1.7 |
| Requirement name (use case name): | View user manual |
| Requirement short description: | The system should allow users to view the user manual. |
| Requirement detailed description and constraints: | <p>Description: The user might want assistance. The user will navigate to the user manual using the system. This will provide users with the user manual that will help explain how parts of the system works and how work with them.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged in to the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 22: 1.7 View user manual functional requirement

SUBSYSTEM 2 – ADMIN SUBSYSTEM

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.1 |
| Requirement name (use case name): | Create employee |
| Requirement short description: | The system should allow a user with the right authority to create a new employee account. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user with the right authority should be able to create a new employee account. Where they will need to provide all the information such as username, password, email address, phone number, name, surname etc. (send email? For activating account). The details are then validated by the system and added to the database.</p> <p>Constraint(s):</p> <p>A duplicate account cannot be made.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. All needed details must be provided. A strong password should be given. |
| Revision date and revision Number: | 03/08/2023 |
| | Version 1.0 |
| Priority: | High |

Table 23: 2.1 Create employee functional requirement.

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.2 |
| Requirement name (use case name): | View employee |
| Requirement short description: | The system should allow a user with the right authority to view and search all employee account on the system. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user with the right authority will request to either search or view all employee accounts on the system. The user will select the employee account they would like to view. The system will then display all the related details for that account.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 |
| | Version 1.0 |
| Priority: | High |

Table 24: 2.2 View employee functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.3 |
| Requirement name (use case name): | Update employee |
| Requirement short description: | The system should allow a user with the right authority to update an employee account detail. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user with the right authority will request to view all employee accounts on the system. The user will select the employee account they would like to update. The system will then display all the related details for that account where the user can then edit any of the details. Once finished the system will validate the new details and either successfully updated the details in the system database or it will display an error message regarding the details.</p> <p>Constraint(s):</p> <p>The user must “view” the employee account first before they will be able to update it.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 25: 2.3 Update employee functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.4 |
| Requirement name (use case name): | Delete employee |
| Requirement short description: | The system should allow a user with the right authority to delete an employee account. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>Admin should be able to view employee accounts and delete a selected employee from the system. The system will confirm whether to continue with the deletion or not. All information for the employee will then be deleted. The system notifies that the employee has been successfully removed.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. The employee must not be with the company anymore. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 26: 2.4 Delete employee functional requirement.

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.5 |
| Requirement name (use case name): | Create employee roles |
| Requirement short description: | The system should allow a user with the right authority to add new employee roles |
| Requirement detailed description and constraints: | <p>Description: Admin should be able to create new employee roles to the system. The admin will request to create new employee role. The system will request all relevant details. The admin will provide the details and it will then be validated by the system. The system will notify the user if successfully added.</p> <p>Constraint(s): No duplication of roles will be allowed</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 27: 2.5 Create employee roles functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.6 |
| Requirement name (use case name): | View employee roles |
| Requirement short description: | The system should allow the admin to view all employee roles |
| Requirement detailed description and constraints: | <p>Description: The admin will request to view all employee roles on the system. The user will select the employee role they would like to view. The system will then display all the related details for that role.</p> <p>Constraint(s): None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 28: 2.6 View employee roles functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.7 |
| Requirement name (use case name): | Update employee roles |
| Requirement short description: | The system should allow the admin to update an employee's roles. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The admin will request to view all employee roles on the system. The user will select the employee role they would like to update. The system will then display all the related details for that account where the user can then edit any of the details. Once finished the system will validate the new details and either successfully updated the details in the system database or it will display an error message regarding the details.</p> <p>Constraint(s):</p> <p>The user must "view" the employee role first before they will be able to update it.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 29: 2.7 Update employee roles functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.8 |
| Requirement name (use case name): | Delete user roles |
| Requirement short description: | The system should allow an admin to delete an employee role. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>Admin should be able to view employee roles and delete a selected employee roles from the system. The system will confirm whether to continue with the deletion or not. All information for the employee role will then be deleted. The system notifies that the employee role has been successfully removed.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 30: 2.8 Delete user roles functional requirement.

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.9 |
| Requirement name (use case name): | Assigning delegation of authority |
| Requirement short description: | The admin should be able to setup a delegation of authority |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The admin should be able to setup a delegation of authority. the admin will provide the details of when it will start and end, who is giving authority and who will receive the authority. They system will then notify the required employee provide their digital signature and approval.</p> <p>Constraint(s):</p> <p>Must be approved before anything authority is given.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. The required users must provide the needed information |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 31: 2.9 Assigning Delegation of authority functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.10 |
| Requirement name (use case name): | Backup system data |
| Requirement short description: | The admin should be able to make a backup of all the data on the system. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The admin should be following a scheduled time for making a backup of the system data.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 32: 2.10 Backup system data functional requirement

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2.11 |
| Requirement name (use case name): | Restore data to system |
| Requirement short description: | The admin should be able to restore all data to the system using a backup. |
| Requirement detailed description and constraints: | <p>Description: The admin request to restore system to a previous version. The system will then restore all data to the point that it was last backed up.</p> <p>Constraint(s): None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 33: 2.11 Restore data to system functional requirement

SUBSYSTEM 3 – PROCUREMENT SUBSYSTEM

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.1 |
| Requirement name (use case name): | Create request items |
| Requirement short description: | Allows user to make a new request for procurement. |
| Requirement detailed description and constraints: | <p>Description: The user can request to make a new request for procurement. The system will request that the user provide details like from which vendor, what items, total quantity etc. The user provides the needed details, and the system validates the provided details. The request is then stored in the database and given the status “Submitted”.</p> <p>Constraint(s): None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 34: 3.1 Create request items.

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.2 |
| Requirement name (use case name): | View request items |
| Requirement short description: | User will be able to view all request for procurement made. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user request to view all request for procurement. The system will retrieve all the request that have yet been given the status “Approved” or “Rejected”.</p> <p>Constraint(s):</p> <p>Only display those with a specific status</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 35: 3.2 View request items

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.3 |
| Requirement name (use case name): | Update request items |
| Requirement short description: | The user should be able to update a request for procurement that has yet been approved or rejected. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user will request to view all request for procurement on the system. The user will select the request they would like to update. The system will then display all the related details for that account where the user can then edit any of the details. Once finished the system will validate the new details and either successfully updated the details in the system database or it will display an error message regarding the details.</p> <p>Constraint(s):</p> <p>The user must “view” the employee role first before they will be able to update it. The request for procurement should be temporary disabled from being rejected or approved.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 36: 3.3 Update request items

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.4 |
| Requirement name (use case name): | Delete request items |
| Requirement short description: | The user should be able to delete a request for procurement that has yet been approved or rejected. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user will request to view all request for procurement on the system. The user will select the request they would like to delete. The system will confirm whether to continue with the deletion or not. All information for the request will then be deleted. The system notifies that the request has been successfully removed.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 37: 3.4 Delete request items.

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.5 |
| Requirement name (use case name): | Notify Request approval |
| Requirement short description: | The system sends a notification to the required senior manager user. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system sends a notification detailing that the required user needs to review a request for approval.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The request must have a cost of more than R10 000. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 38: 3.5 Notify Request Approval

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.6 |
| Requirement name (use case name): | View management procurement request |
| Requirement short description: | A user with a senior manager role wants to review a request for procurement. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user will request to view the required request for procurement. The system will display the details and request for user to provide approval or rejection details.</p> <p>Constraint(s):</p> <p>The request for procurement should be temporary disabled from being accessed by other users.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 39: 3.6 View management procurement request

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.7 |
| Requirement name (use case name): | Notify approved request |
| Requirement short description: | The system notifies the required user that the request has been approved |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system sends a notification detailing that the required user can progress with the procurement process for this specific request.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The request must have an approved status |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 40: 3.7 Notify approved request.

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.8 |
| Requirement name (use case name): | Notify rejected request |
| Requirement short description: | The system notifies the required user that the request has been rejected. |
| Requirement detailed description and constraints: | <p>Description: The system sends a notification detailing that the required user cannot progress with the procurement process for this specific request.</p> <p>Constraint(s): The request for procurement should be temporary disabled from being accessed by other users.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 41: 3.8 Notify rejected request.

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.9 |
| Requirement name (use case name): | Upload Quotes |
| Requirement short description: | The user can upload a quote from the approved vendor to a specific request |
| Requirement detailed description and constraints: | <p>Description: The user will be able to view the approved request. The system will request the upload of a quote. The user will upload the quote of the approved vendor.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The request must be approved. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 42: 3.9 Upload Quotes

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.10 |
| Requirement name (use case name): | View requisition Request |
| Requirement short description: | The required user will be able to view the request. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user request to view the updated approved request. The system displays the request with the loaded quotes. The user will be able to select the supplier for the request.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> • User must be logged into the system. • The request must be approved. • Quotes must be uploaded. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 43: 3.10 View requisition request

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.11 |
| Requirement name (use case name): | Upload tax invoice |
| Requirement short description: | The required user will be able to upload the tax invoice. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user will be able to view the approved request. The system will request the upload of a tax invoice. The user will upload the tax invoice.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> • User must be logged into the system. • The request must be approved. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 44: 3.11 Upload tax invoice

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.12 |
| Requirement name (use case name): | View final request |
| Requirement short description: | The user with the GM employee role will be able to view request. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user request to view the request for procurement. The system will display the details and request for user to provide approval or rejection details.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The request must be approved. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 45: 3.12 View final request

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.13 |
| Requirement name (use case name): | Notify finance of approved request |
| Requirement short description: | The system notifies the required user in the financial department that the request has been approved |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system sends a notification detailing that the required user can progress with the procurement process for this specific request.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The request must have been approved status |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 46: 3.13 Notify finance of approved request.

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.14 |
| Requirement name (use case name): | Notify rejected request |
| Requirement short description: | The system notifies the required user that the request has been rejected. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system sends a notification detailing that the required user cannot progress with the procurement process for this specific request.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 47: 3.14 Notify rejected request.

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.15 |
| Requirement name (use case name): | Upload receipt |
| Requirement short description: | The user should be able to upload a receipt |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the user to upload a receipt for a once-off request. The system should verify whether this is a once-off request or whether such request was made previously.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. User must have the authority to upload receipt |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 48: 3.15 Upload receipt

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3.16 |
| Requirement name (use case name): | Upload credit card payment invoice |
| Requirement short description: | The user should be able to upload an Upload credit card payment invoice |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the user to upload a credit card payment invoice for a once-off request. The system should verify whether this is a once-off request or whether such request was made previously.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. User must have the authority to upload credit card payment invoice |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 49: 3.16 Upload credit card payment invoice

SUBSYSTEM 4 - FINANCE SUBSYSTEM

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.1 |
| Requirement name (use case name): | View invoice |
| Requirement short description: | The user should be able to search or view all invoices on the system. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user request to either search or view the invoices of the system. The system displays all invoices.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must have the right authority to view invoices. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 50: 4.1 View invoice

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.2 |
| Requirement name (use case name): | Reject payments |
| Requirement short description: | The user should be able to reject payments made for a request of procurement. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user should be able to view an invoice. The system will request providing rejection detail and feedback on why payment was rejected. The provided details will be sent to the required user.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must have the right authority to view invoices. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 51: 4.2 Reject payments

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.3 |
| Requirement name (use case name): | Upload proof of payment |
| Requirement short description: | The user should be able upload proof of payment |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user should be able to upload a proof of payment of a specific invoice. The system will store the proof of payment on the system database.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must have the right authority to upload a POP. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 52: 4.3 Upload proof of payment

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.4 |
| Requirement name (use case name): | Create budget allocation |
| Requirement short description: | The user should be able to create a new budget allocation for a department. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user request to add a new budget allocation for a department. The system will prompt the user to provide details like what department and how much budget should be allocated. The user provides the needed details. The system stores it in the system database.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must have the right authority to access budget allocation. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 53: 4.4 Create budget allocation.

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.5 |
| Requirement name (use case name): | View budget allocation |
| Requirement short description: | The user should be able to view all budget allocation for the different departments. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user request to view all budget allocation for the different departments. The system will retrieve all the needed information and display it for the user. The user can select any one of the displayed information to view more relevant information.</p> <p>Constraint(s):</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must have the right authority to access budget allocation. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 54: 4.5 View budget allocation

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.6 |
| Requirement name (use case name): | Update budget allocation |
| Requirement short description: | The user should be able update the budget allocation |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user will request to view all budget allocation on the system. The user will select the request they would like to update. The system will then display all the related details for budget allocation where the user can then edit any of the details. Once finished the system will validate the new details and either successfully updated the details in the system database or it will display an error message regarding the details.</p> <p>Constraint(s):</p> <p>The user must “view” the budget allocation first before they will be able to update it.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. The user must have the right authority to access budget allocation. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 55: 4.6 Update budget allocation

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4.7 |
| Requirement name (use case name): | Delete budget allocation |
| Requirement short description: | The system should allow a user to delete a budget allocation. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>Admin should be able to view budget allocation and delete a selected budget allocation from the system. The system will confirm whether to continue with the deletion or not. All information for the budget allocation will then be deleted. The system notifies that the employee has been successfully removed.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user must be logged into the system. The user must have the right authority to access budget allocation. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 56: 4.7 Delete budget allocation.

SUBSYSTEM 5 – INVENTORY SUBSYSTEM

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.1 |
| Requirement name (use case name): | Create inventory item |
| Requirement short description: | The system should allow a procurement inventory item to be created |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where the user will want to create a new inventory item. The system will prompt the user to enter the product details. Once this is complete and the item is saved the item will be added to the system's database.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user must be logged in to the system. <p>Only users with the correct authority will be able to add a new procurement item onto the system.</p> |
| Revision date and revision Number: | 03/08/2023 |
| Priority: | High |

Table 57: 5.1 Create Inventory Item

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.2 |
| Requirement name (use case name): | Read inventory item |
| Requirement short description: | The system should allow the user to view a specific inventory item. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where a user would want to search for a specific inventory item. The system will search through all of the records in the database and retrieve the correct item and display it to the user based on their search criteria.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user must be logged in to the system |
| Revision date and revision Number: | 03/08/2023 |
| Priority: | High |

Table 58: 5.2 Read Inventory Item

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.3 |
| Requirement name (use case name): | Update inventory item |
| Requirement short description: | The system should allow the user to update procurement item details |
| Requirement detailed description and constraints: | <p>Description: The use case describes the event where a user would want to update certain procurement item details. The admin will update the details of the specific procurement item. The item will then be updated on the database.</p> <p>Constraint(s): There needs to be a booking made on the system</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The admin must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 59: 5.3 Update Inventory Item

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.4 |
| Requirement name (use case name): | Delete Inventory Item |
| Requirement short description: | The system should allow the user to delete an inventory item. |
| Requirement detailed description and constraints: | <p>Description: This use case describes the event where the user requests to delete an inventory item. The user will select the inventory item they want to delete. The system will ask the user for confirmation of deletion. The system removes the procurement inventory item from the system.</p> <p>Constraint(s): A booking needs to be on the system</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged in to the system. Only the admin will be able to delete inventory items. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 60: 5.4 Delete Inventory Item

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.5 |
| Requirement name (use case name): | Create item category |
| Requirement short description: | The system should allow a procurement inventory category must be created |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where a user wants to create a procurement item category on the system. The system will prompt the user to enter the category details. Once this is complete and the category is saved the category will be added to the system's database.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user must be logged in to the system. Only users with the correct authority will be able to add a new procurement item onto the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 61: 5.1 Create Inventory Category

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.6 |
| Requirement name (use case name): | Read inventory category |
| Requirement short description: | The system should allow the user to view a specific inventory category |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where a user would want to search for a specific inventory category. The system will search through all of the records in the database and retrieve the correct category and display it to the user based on their search criteria.</p> <p>Constraint(s):</p> <p>None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged in to the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 62: 5.6 Read Inventory Category

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.7 |
| Requirement name (use case name): | Update Inventory Category |
| Requirement short description: | The system should allow the user to update a specific inventory category |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where a user would want to update certain procurement category details. The admin will update the details of the specific procurement category. The category will then be updated on the database.</p> <p>Constraint(s):</p> <p>There needs to be a category made on the system</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged in to the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 63: 5.7 Update Inventory Category

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.8 |
| Requirement name (use case name): | Delete Item Category |
| Requirement short description: | The system should allow the user to delete a specific inventory category |
| Requirement detailed description and constraints: | <p>Description:</p> <p>This use case describes the event where the user requests to delete an inventory category. The user will select the inventory category they want to delete. The system will ask the user for confirmation of deletion. The system removes the procurement inventory category from the system.</p> <p>Constraint(s):</p> <p>A booking needs to be a category on the system</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged in to the system. Only the admin will be able to delete category items. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 64: 5.8 Delete Item Category

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.9 |
| Requirement name (use case name): | Search item inventory |
| Requirement short description: | The system should allow a user to view the inventory on hand for a specific procurement item. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event in which a user wishes to view the amount of procurement item stock on hand. The system will prompt the user to enter the procurement item details. The system will then display the procurement item along with the stock on hand at that specific point in time.</p> <p>Constraint(s):</p> <p>There has to be item inventory on the system</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 65: 5.9 Search item Inventory

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.10 |
| Requirement name (use case name): | View employee |
| Requirement short description: | The system should allow a user with the right authority to view all employee account on the system. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The user with the right authority will request to view all employee accounts on the system. The user will select the employee account they would like to view. The system will then display all the related details for that account.</p> <p>Constraint(s):</p> <p>None.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 66: 5.10 View Employee

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.11 |
| Requirement name (use case name): | Export inventory details |
| Requirement short description: | The system will allow the user to export the details of the procurement item inventory to a CSV file |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where the user would like to export the details contained in the procurement item inventory system (Item name, stock on hand) to a .csv file in Xero integration. The user will export the inventory list and the .csv will be generated as response.</p> <p>Constraint(s):</p> <p>There must be inventory loaded on the system.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> The user with the right authority must be logged into the system. |
| Revision date and revision Number: | 03/08/2023 |
| | Version 1.0 |
| Priority: | High |

Table 67: 5.11 Export Inventory Details

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5.12 |
| Requirement name (use case name): | Generate reorder stock notification |
| Requirement short description: | The system should notify the appropriate user when the inventory levels reach a designated minimum |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The use case describes the event where the system notifies the appropriate user of low stock levels and re-ordering is needed. The system will continuously compare the current stock level to the designated minimum stock level and if the two values are equal (at the minimum point) a notification will be sent to the appropriate user to notify them that stock will need to be re-ordered.</p> <p>Constraint(s):</p> <p>There must be inventory loaded on the system.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Only the appropriate users will be able to receive the notification |
| Revision date and revision Number: | 03/08/2023 |
| | Version 1.0 |
| Priority: | High |

Table 68: 5.12 Generate reorder stock notification.

SUBSYSTEM 6 – VENDOR SUBSYSTEM

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.1 |
| Requirement name (use case name): | Upload Quotes |
| Requirement short description: | The system should allow the user to upload 2 quote documents onto the system. |
| Requirement detailed description and constraints: | <p>Description: The user should be able to upload 2 quote documents to the system in a pdf format.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the “Buyers” user role will be able to upload quotes |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 69: 6.1 Upload quotes

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.2 |
| Requirement name (use case name): | Prepare Memo for approval |
| Requirement short description: | The system should allow the user to complete the memo for approval to be sent to the Purchasing department |
| Requirement detailed description and constraints: | <p>Description: The user should be able to complete the memo for approval to be sent to the Purchasing department. The user will need to upload 2 or more quote documents.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the “Buyers” user role will be able to upload quotes |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 70: 6.2 Prepare memo for approval.

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.3 |
| Requirement name (use case name): | Send Approval request |
| Requirement short description: | The system will send a notification to the Purchasing Department. |
| Requirement detailed description and constraints: | <p>Description: The system will send a notification to the Purchasing Department. The system notifies the Purchasing Department of a pending approval request.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> There has to be 2 or more quotes uploaded on the system for the notification to be sent. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 71: 6.3 Send approval request.

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.4 |
| Requirement name (use case name): | Create Approval request |
| Requirement short description: | The system should allow the user to complete the vendor due diligence checklist on the system or upload it onto the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to complete the vendor due diligence checklist or upload it onto the system.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to create an approval request. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 72: 6.4 Create approval request.

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.5 |
| Requirement name (use case name): | Edit Approval request |
| Requirement short description: | The system should allow the user to edit the vendor due diligence checklist on the system or upload the edited file onto the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to edit the vendor due diligence checklist on the system or upload the edited file onto the system.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to edit an approval request. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 73: 6.5 Edit approval request.

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.6 |
| Requirement name (use case name): | Delete Approval request |
| Requirement short description: | The system should allow the user to delete the vendor due diligence checklist from the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to delete the vendor due diligence checklist from the system.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to delete an approval request. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 74: 6.6 Delete approval request.

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.7 |
| Requirement name (use case name): | View Approval request |
| Requirement short description: | The system should allow the user to view the vendor due diligence checklist on the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to view the vendor due diligence checklist on the system. The user will select the approval request that they would like to view.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to view an approval request. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 75: 6.7 View approval request

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.8 |
| Requirement name (use case name): | View Vendor |
| Requirement short description: | The system should allow the user to view all vendor accounts |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to view all vendor accounts. The user will select the vendor account they would like to view. The system will then display all the related details for that account.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to view a vendor account. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 76: View Vendor

| Functional Requirement | Explanation |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.9 |
| Requirement name (use case name): | Create Vendor |
| Requirement short description: | The system should allow the user to add a new vendor to the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to add a new vendor to the system. Where they will provide all the information such as company name, telephone, fax, email, etc. The details are then validated by the system and added to the database.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> • User must be logged into the system. • Only users with the GRC Officer role will be able to add a vendor account. • All needed details must be provided. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 77: 6.9 Create Vendor

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.10 |
| Requirement name (use case name): | Edit Vendor |
| Requirement short description: | The system should allow the user to edit a vendor's information. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to edit a vendor account. Where they will provide all the information such as company name, telephone, fax, email, etc. The details are then validated by the system and updated on the database.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> • User must be logged into the system. • Only users with the GRC Officer role will be able to edit a vendor account. • All needed details must be provided. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 78: Edit Vendor

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.11 |
| Requirement name (use case name): | Delete Vendor |
| Requirement short description: | The system should allow the user to remove vendor from the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to remove vendor from the system. The user selects the vendor from the list of vendors. The system confirms the delete action and removes the vendor from the database.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to remove a vendor account. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 79: 6.11 Delete Vendor

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.12 |
| Requirement name (use case name): | Accept vendors |
| Requirement short description: | The system should allow the user to send a notification to the Requisition Department that a vendor has been accepted and added to the system. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to send a notification to the Requisition Department that a vendor has been accepted and added to the system.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to accept a vendor to the system. |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 80: 6.12 Accept Vendors

| Functional Requirement | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.13 |
| Requirement name (use case name): | Reject vendors |
| Requirement short description: | The system should allow the user to send a notification to the Requisition Department that a vendor has been rejected. |
| Requirement detailed description and constraints: | <p>Description: The system should allow the user to send a notification to the Requisition Department that a vendor has been rejected.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User must be logged into the system. Only users with the GRC Officer role will be able to reject a vendor. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 81: 6.13 Reject Vendors

| Functional Requirement | Explanation |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.14 |
| Requirement name (use case name): | Export Due Diligence Vendor Checklist |
| Requirement short description: | The system should be able to export a due diligence vendor checklist. |
| Requirement detailed description and constraints: | <p>Description: The system should allow a due diligence vendor checklist to be exported by the GRC Officer after a vendor has successfully passed the vetting process in order to ensure compliance.</p> <p>Constraint(s): None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> User should be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 82: 6.14 Export vendor due diligence checklist

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6.15 |
| Requirement name (use case name): | View Quotes |
| Requirement short description: | The system should allow the user to view quotes provided by vendors. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>Before a procurement can take place, a minimum of two quotes needs to be obtained. This use case allows the quotes to be viewed by the GRC Officer and the Business Enablement General Manager in order for the quotes to be reviewed.</p> <p>Constraint(s):</p> <p>None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Stakeholders must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 83:6.15 View Quotes

SUBSYSTEM 7 – REPORT SUBSYSTEM

| Functional Requirement | | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Requirement number: | 7.1 | |
| Requirement name (use case name): | Generate approved vendor Report | |
| Requirement short description: | The system should allow the user to generate the list of the approved vendors. | |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the Governance and compliance head of department (Arina van der Merwe) to click on a button to generate an entire list of vendors that the business buys form with the procurement items that each vendor sells. The head of governance (Arina van der Merwe) should be able to download and view the PDF version of this report.</p> <p>Constraint(s):</p> <p>There must be at one vendor with at least one procurement item they sell on the system.</p> | |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Head of governance and compliance (Arina van er Merwe) must be logged into the system. Only Head of governance and compliance (Arina van er Merwe) can generate this report. | |
| Revision date and revision Number: | 03/08/2023 Version 1.0 | |
| Priority: | High | |

Table 84: 7.1 Generate approved vendor report.

| Functional Requirement | Explanation |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 7.2 |
| Requirement name (use case name): | Generate BEE spend report |
| Requirement short description: | The system should allow to generate a BEE spending report. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should be allowing the owner, financial department, business enablement department and governance and compliance department to click on a button that will generate a table with the following columns with the respective information in each column: Paid to, Amount paid, amount paid for, Budget owner, Account code, BEE level, Cert on file, requested and comments. All The Previously mentioned stakeholders should be able to download and view the PDF version of this report.</p> <p>Constraint(s):</p> <p>None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Stakeholders must be logged into the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 85: 7.2 Generate BEE spend report

| Functional Requirement | | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Requirement number: | 7.3 | |
| Requirement name (use case name): | Generate Vendor Spend Report | |
| Requirement short description: | The system should allow to generate a vendor spending report. | |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the financial department and governance and compliance department to click on a button that will generate a list of the vendors and how much has been spent on each procurement item of that vendor as well as the total spent on that vendor. All The Previously mentioned stakeholders should be able to download and view the PDF version of this report.</p> <p>Constraint(s):</p> <p>Business enablement department will not be able to generate this report.</p> | |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Users of the financial department and governance and compliance department must be logged out of the system. | |
| Revision date and revision Number: | 03/08/2023 | Version 1.0 |
| Priority: | High | |

Table 86: 7.3 Generate Vendor Spend Report

| Functional Requirement | Explanation |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 7.4 |
| Requirement name (use case name): | Generate Consumable Inventory management report |
| Requirement short description: | The system should allow to generate a consumable inventory management report. |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the financial department and Business enablement department to click on a button that will generate a table with the following columns with the respective information in each column: Item number, item name, item category, quantity on hand, usual order quantity, unit price. All The Previously mentioned stakeholders should be able to download and view the PDF version of this report.</p> <p>Constraint(s):</p> <p>The governance and compliances department will not be able to see this report.</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Users of the financial department and Business enablement department must be logged out of the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 87: 7.4 Generate Consumable Inventory management report.

| Functional Requirement | Explanation |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 7.5 |
| Requirement name (use case name): | Generate Business Unit Report |
| Requirement short description: | The system should allow to generate a business unit spend report |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the financial department and Business enablement department and governance and compliance to click on a button that will generate a plotted trend graph that clearly indicates a return to vendor cost and vendor rejection/defect rate and supplier quantity rating and spend under management. All The Previously mentioned stakeholders should be able to download and view the PDF version of this report.</p> <p>Constraint(s):</p> <p>None</p> |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Users of the financial department and Business enablement department and governance and compliance department must be logged out of the system. |
| Revision date and revision Number: | <p>03/08/2023</p> <p>Version 1.0</p> |
| Priority: | High |

Table 88: 7.5 Generate Business Unit Report

| Functional Requirement | | Explanation |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Requirement number: | 7.6 | |
| Requirement name (use case name): | Generate Budget Variance Report | |
| Requirement short description: | The system should allow to generate budget variance report. | |
| Requirement detailed description and constraints: | <p>Description:</p> <p>The system should allow the financial department and Business enablement department to click on a button that will generate a table with the following columns with the respective information in each column: Item, budget, actual, variance favorable/unfavorable. All The Previously mentioned stakeholders should be able to download and view the PDF version of this report.</p> <p>Constraint(s):</p> <p>Governance and compliances will not be able to view this report.</p> | |
| Business rules applicable to this Requirement: | <ul style="list-style-type: none"> Users of the financial department and Business enablement department must be logged out of the system. | |
| Revision date and revision Number: | 03/08/2023 | |
| | Version 1.0 | |
| Priority: | High | |

Table 89: 7.6 Generate Budget Variance Report

6.4 NON-FUNCTIONAL REQUIREMENTS

PERFORMANCE:

| Non-Functional Requirement | Explanation |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 1. Response time |
| Requirement text | The system should be able to react regarding processes and function in a timely manner. The system should be able to display data- an interface within timely manner. |
| Requirement Description | Non-Functional |
| Details and Constraints: | <p>Description:</p> <ul style="list-style-type: none"> Multiple users should be able to use the system at the same time without performance issues. System should make use of good coding structure and standards in such a manner that there is no loss in performance and response time in the system. System should not lag when conduction operations and interfaces should not wait for data to load. <p>Constraint(s): None</p> |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 90: Performance Non-Functional requirement

CONTROL AND SECURITY:

| Non-Functional Requirement | Explanation |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 2. Security |
| Requirement text | System should not have any data breaches due to cyber security threats and all information in the system should always be protected. |
| Requirement Description | Non-Functional |
| Details and Constraints: | Description: <ul style="list-style-type: none"> Different levels of authority should be implemented to restrict private data from certain users. Passwords must be used to be able to sign in and passwords must be hidden when typed in. Only admin should be able to add users to the system to be able to use the system. System must comply with the POPI act. Constraint(s): None |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 91: Security non- functional requirement

| Non-Functional Requirement | Explanation |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 3. Due diligence |
| Requirement text | The system must perform all necessary reasonable steps to ensure there is no offence that takes place. |
| Requirement Description | Non-Functional |
| Details and Constraints: | Description: <ul style="list-style-type: none"> All vendors and users of the system may only be added once the correct due diligent procedure was followed to ensure their will be no offense taken towards the company or the system. Constraint(s): None |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 92: Due diligence non- functional requirement

EFFICIENCY:

| Non-Functional Requirement | Explanation |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 4. User Friendliness |
| Requirement text | Users of the system should be able to navigate the system with ease and the process of learning how the new system functions should be fast and fun. |
| Requirement Description | Non-Functional |
| Details and Constraints: | <p>Description:</p> <ul style="list-style-type: none"> The interface of the system should be logical in design and follow design standards. The screens should all look uniform in design and be formal regarding the information presented. The system should have popups that has a short explanation when hovering over certain objects. <p>Constraint(s): None</p> |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 93: Efficiency non- functional requirement

| Non-Functional Requirement | Explanation |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 5. Reliability |
| Requirement text | The data within the system must be trustworthy regarding data as well as functionality and processes. |
| Requirement Description | Non-Functional |
| Details and Constraints: | <p>Description:</p> <ul style="list-style-type: none"> The system should not experience crashes or show any error messages if it was not human errors. All the information within the system is correct and all information that is provided to the users of the system is correct. They should be no redundant information or information being lost on the system. <p>Constraint(s): None</p> |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 94: Reliability non- functional requirement

ECONOMICS:

| Non-Functional Requirement | Explanation |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 6. Cost |
| Requirement text | The system should strive toward minimization of the financial resources. |
| Requirement Description | Non-Functional |
| Details and Constraints: | Description: <ul style="list-style-type: none"> The cost regarding the production, website, servers and databases should be zero. The cost of maintenance should be zero. Constraint(s): None |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 95: Cost non- functional requirement.

INFORMATION:

| Non-Functional Requirement | Explanation |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Requirement number: | 7. Integrity |
| Requirement text | Data within the system should be accurate, flexible, consistent and complete at all times. |
| Requirement Description | Non-Functional |
| Details and Constraints: | Description: <ul style="list-style-type: none"> The system should make use of validation techniques to ensure correct data is being inputted in the fields. The databases the data inside the databases should always withhold referential integrity. The systems data and databases should be accurate complete and consistent. Constraint(s): None |
| Revision date and revision Number: | 03/08/2023 Version 1.0 |
| Priority: | High |

Table 96: Integrity non- functional requirement

SERVICE:

| Non-Functional Requirement | | Explanation |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Requirement number: | 8. Flexibility | |
| Requirement text | The system should be able to easily be adapted to different se circumstances and should be able to respond to changing conditions and requirements. | |
| Requirement Description | Non-Functional | |
| Details and Constraints: | Description: <ul style="list-style-type: none"> The system must be able to welcome change an adapt accordingly. When change is incorporated the system must still be able to function as effectively and efficiently as it did before the change. The system must be able to allow users to set changes into action according to their preferences whilst not influencing the core functions of the system. Constraint(s): None | |
| Revision date and revision Number: | 03/08/2023 Version 1.0 | |
| Priority: | High | |

Table 97: Flexibility non- functional requirement
6.5 CONCLUSION

In conclusion, this section has set out the functional and non-functional requirements for the Procion system and has elaborated on the manner in which the actors will interact with the system.

13. APPENDIX A

5.1.1 PROCUREMENT PROCESS:

Procurement page:

| ID | Modified | Modified By | Item Description | Owner | Requisition Status | Source | Quotations | Asset Number | Serial Number |
|-----|----------------|--------------------|----------------------------------------------|--------------------|--------------------|---------------------------------------------------------------------------|--------------------------------------------------|--------------|---------------|
| 621 | April 05, 2022 | Frans Gloy | Domains - Invoice DOM-1237940 | Frans Gloy | Approval required | Domain Renewal - moyoengineering.com & Domain Renewal - moyodigital.co.za | | | |
| 623 | April 11, 2022 | Johan van der Walt | Microsoft Azure Sponsorship (31st Dec 2022) | Johan van der Walt | Approval required | EFT - Approval required Pierre | | NA | NA |
| 626 | April 25, 2022 | Frans Gloy | Active Campaign 3/28/2022 | Frans Gloy | Approval required | Marketing | | | |
| 632 | May 03, 2022 | Frans Gloy | Tax Invoice #1546114 Domain Renewal - m... | Frans Gloy | Approval required | Domain Renewal - moyoafica.com, DA Email Hosting 10 - powarep.com | | | |
| 637 | May 24, 2022 | Frans Gloy | Domain Renewal - moyoamerica.com - 1 Yr... | Frans Gloy | Approval required | Domains Renewals | | | |
| 638 | May 24, 2022 | Frans Gloy | Invoice-DOM-1255172 - mail Hosting 10 - ... | Frans Gloy | Approval required | Domains Renewals - mail Hosting 10 - bimier.com (01/05/2022 - 31/05/2022) | | | |
| 646 | June 27, 2022 | Morné Nigrini | Quotation No. 787339 - Laptops for Engine... | Frans Gloy | Approval required | Engineering PCS | Quotation No. 787339 avatech.pdf | | |

Figure 6 Procurement request page

Step 1:

Navigate to your company division SharePoint page, the following list shows relevant requisition lists.

Step 2:

1. Create a new request by clicking on the “New” button, and populating the relevant information on the fly-out pane to the left where possible: (Please note, fields marked with an asterisk are compulsory)

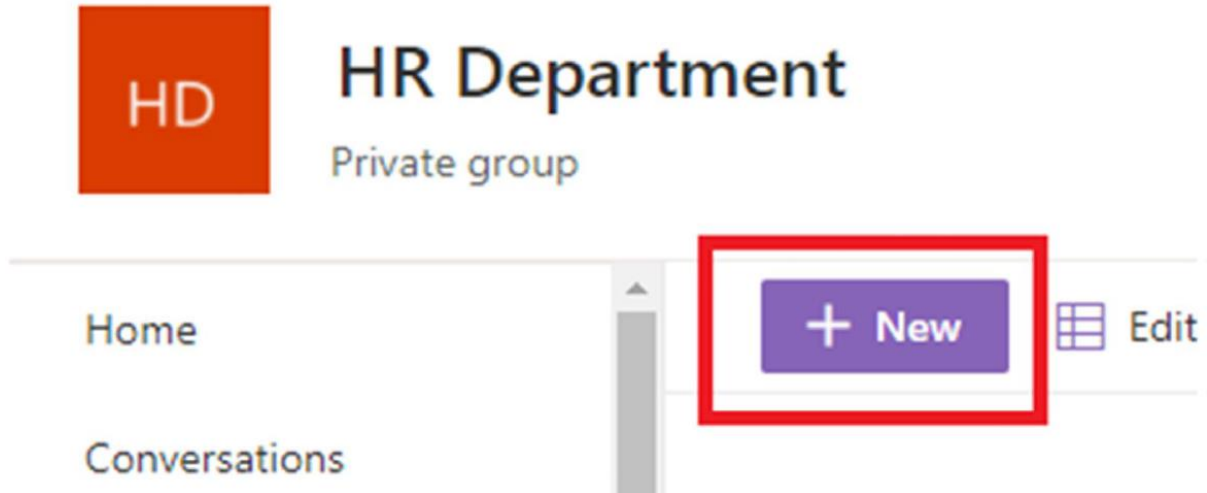


Figure 7 Create a new request.

2. Owner *:

This is a compulsory field used to identify who is raising the request, Put in your own name here:

 A screenshot of a form titled 'New item' in a large, bold, dark blue font. Below the title is a label 'Owner *' with a person icon to its left. Below the label is a text input field containing the name 'Carika'. Below the input field is a dropdown menu. The dropdown menu is open, showing a grey background. Inside the dropdown, there is a circular profile picture of a woman with dark hair. To the right of the picture is the text 'Carika Brugman' in a bold, dark grey font, with 'HR Administrator' in a smaller, lighter grey font below it. At the bottom of the dropdown menu, there is a checked checkbox followed by the text 'Auto Notify Finance Team when Approved' in a dark grey font.

Figure 8 Choosing an owner.

3. Switch off “Auto Notify Finance Team When Approved”:

To prevent sending irrelevant notifications to Finance, set this setting to “No” for now. This setting may be enabled by management on approval.

☒ Auto Notify Finance Team when Approved



Automatically notify the MBA Finance team when the "Requisition Status" is set to "Approved"

Figure 9 Auto Notification

4. Requisition status

Set “Requisition Status” * to “Approval Required”: This setting will be monitored by management and set to “approved” or “declined”, depending on the decision outcome. Note that this is a compulsory field.

☒ Requisition Status *

Approval required

Requisition Approval Status

Figure 10 Requisition Status

5. Source *:

This is another compulsory field, used to indicate where the approval request originates from, you can reference a person, Service Desk ticket number, e-mail subject line for example.

Source *

Enter value here

Ticket, Mail, etc.

Figure 11 Source

6. Quotations:

Although this field is not compulsory, the cost of the service or item that needs to be obtained, will need to be approved as indicated by point 1.3. as soon as you receive a quote upload it to SharePoint and copy the link to the file here. This will ensure the estimated cost of a service or item is accurate (see Point 1.)

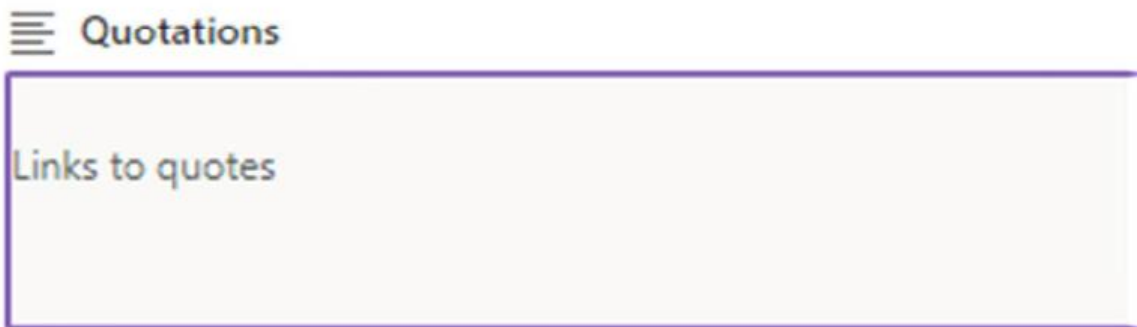


Figure 12 Quotations

7. Asset / Serial number:

this optional field is used to indicate the company asset number and serial number, respectively. This only pertains to items in general, these fields will not be known until delivery of the item. you can skip this section for now.

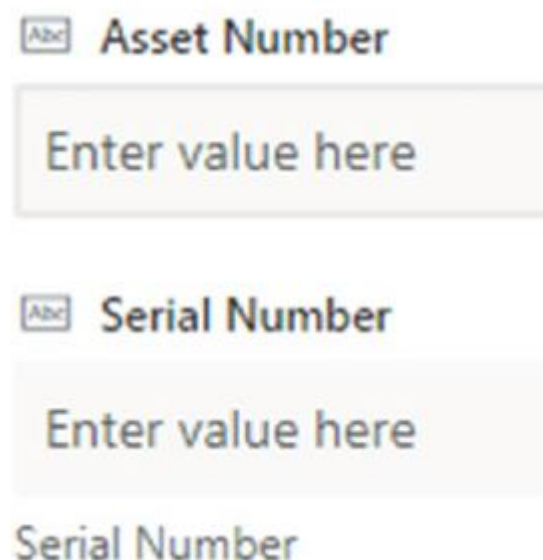


Figure 13 Asset number and serial number

8. Provider *:

This compulsory field is used to identify the service provider or retailer used when obtaining original quotations. You can select the relevant provider from the dropdown list provided. a pre-configured list of providers is already present.



✓ Provider *

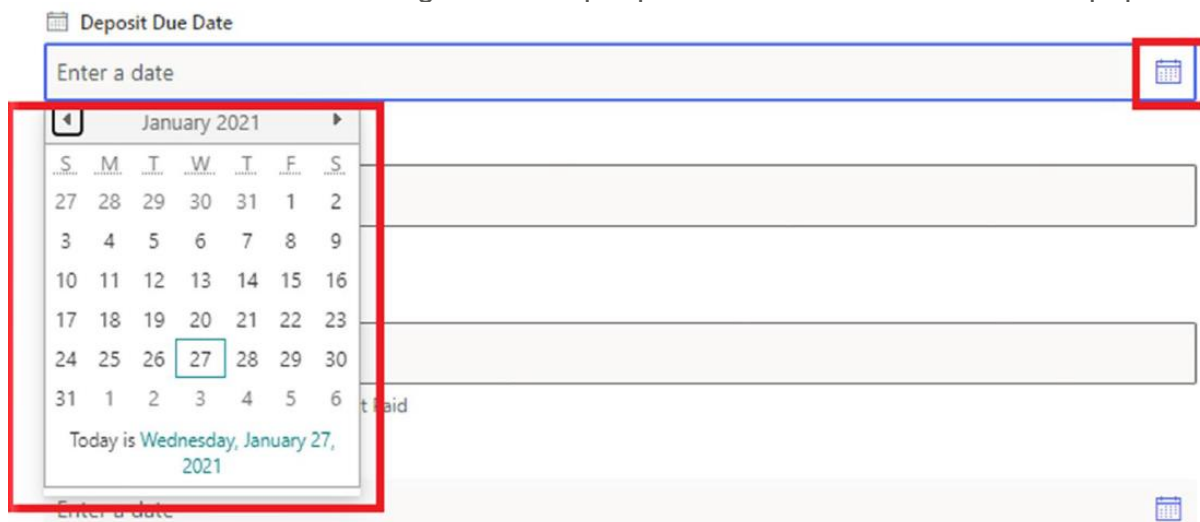
Google

Provider

Figure 14 Provider

9. Deposit Due Date:

This field is used to indicate to Finance when the deposit for a requisition item is due. this is an optional field and can be left empty if no deposit is to be paid. You can also click on the Calendar icon to the right of the input pane to choose a date from the pop-out calendar.



Deposit Due Date

Enter a date

January 2021

| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 27 | 28 | 29 | 30 | 31 | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 1 | 2 | 3 | 4 | 5 | 6 |

Today is Wednesday, January 27, 2021

Enter a date

Figure 15 Deposit Due Date

10. Deposit Amount:

Specify the amount due for the deposit to paid on the due date listed in point 1.8.

\$€ Deposit Amount

Enter a number

Deposit Amount

Figure 16 Deposit Amount

11. Amount Outstanding:

Specify the total amount due when subtracting the value listed in point 1.9.

\$€ Amount Outstanding

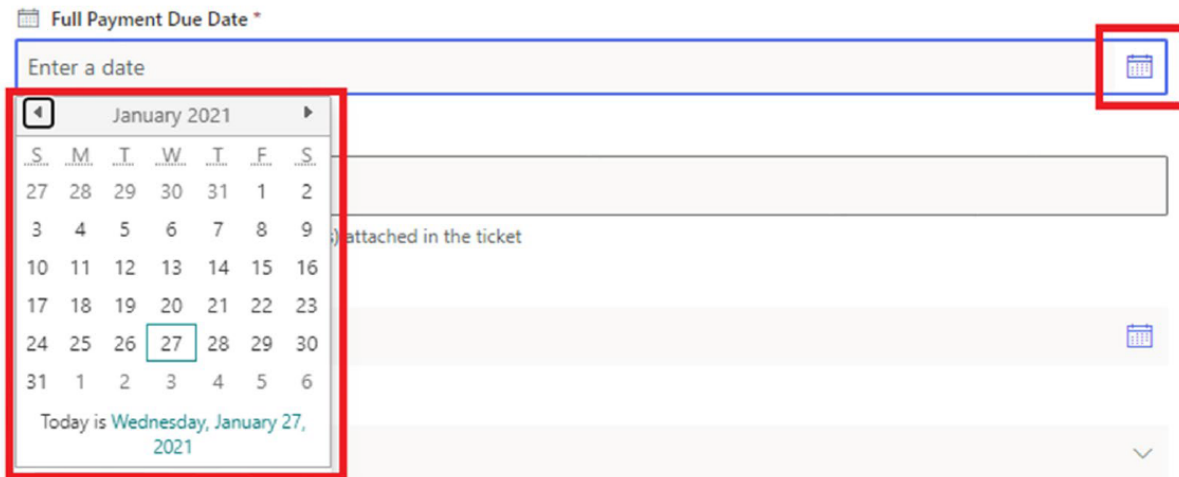
Enter a number

Amount Outstanding = Total - Deposit Paid

Figure 17 Amount Outstanding

12. Full Payment Due Date *:

Compulsory field. Specify the date when the full amount is to be paid. Click on the Calendar icon to the right of the input pane to choose a date from the pop-out calendar.



Full Payment Due Date *

Enter a date

January 2021

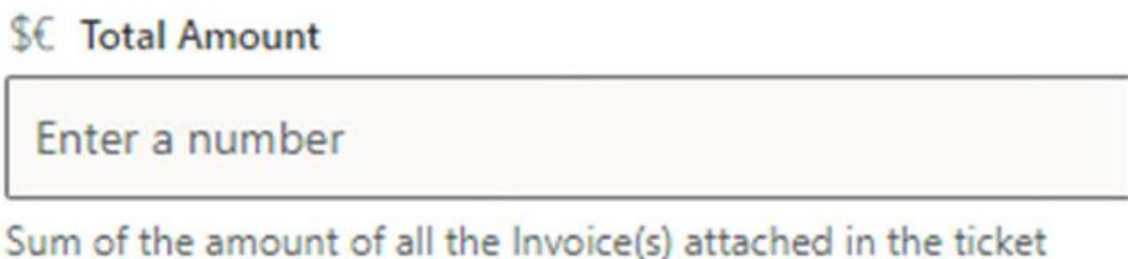
| S | M | T | W | T | F | S |
|----|----|----|----|----|----|----|
| 27 | 28 | 29 | 30 | 31 | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 1 | 2 | 3 | 4 | 5 | 6 |

Today is Wednesday, January 27, 2021

Figure 18 Full Payment Date

13. Total Amount:

Specify the amount due for payment in full on the date listed above. if no quotation or invoice is available in point 1.x an estimated cost will suffice for budget projections if the item or service is to be actioned in the future.



\$€ Total Amount

Enter a number

Sum of the amount of all the Invoice(s) attached in the ticket

Figure 19 Total Amount

14. Paid on:

When a payment has already been settled by credit card, EFT, or debit order, specify the date for the transaction here.

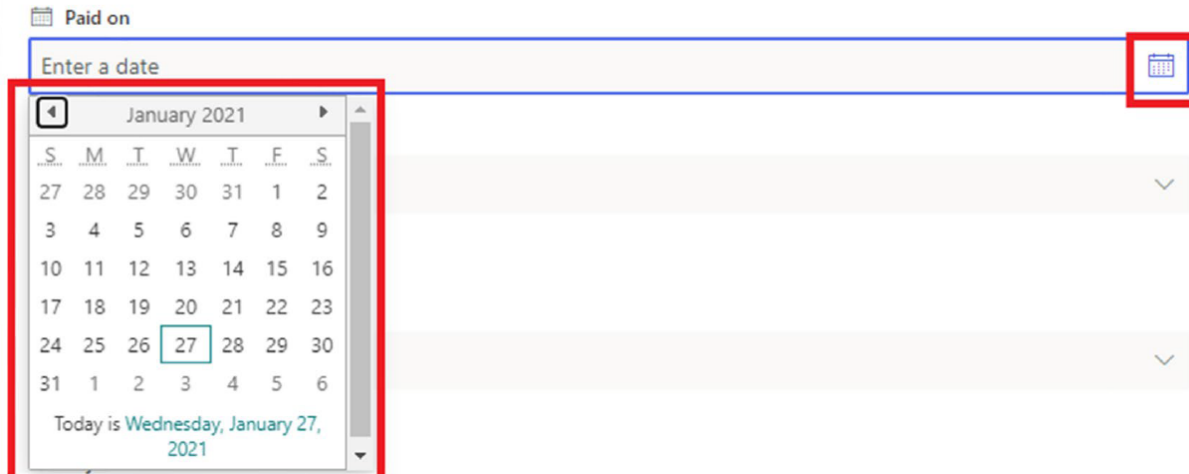


Figure 20 Paid On

15. Budget Allocation *:

A predefined list of Budget Allocation areas is available by clicking on “Select Options”. Please note that this field is especially important for Finance to know which budget a procurement task belongs to, so special care needs to be taken to ensure this field is correct.

This field is compulsory.

 **Budget Allocation ***

Select options

Budget Allocation

Figure 21 Budget Allocation

16. Procurement Status *:

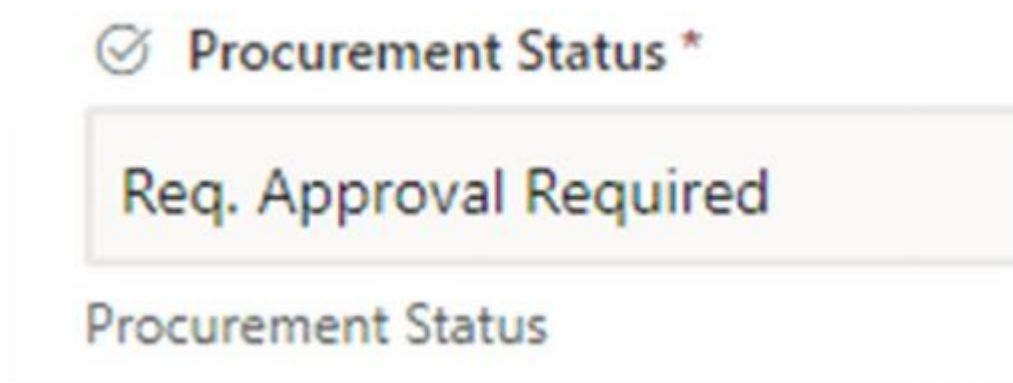
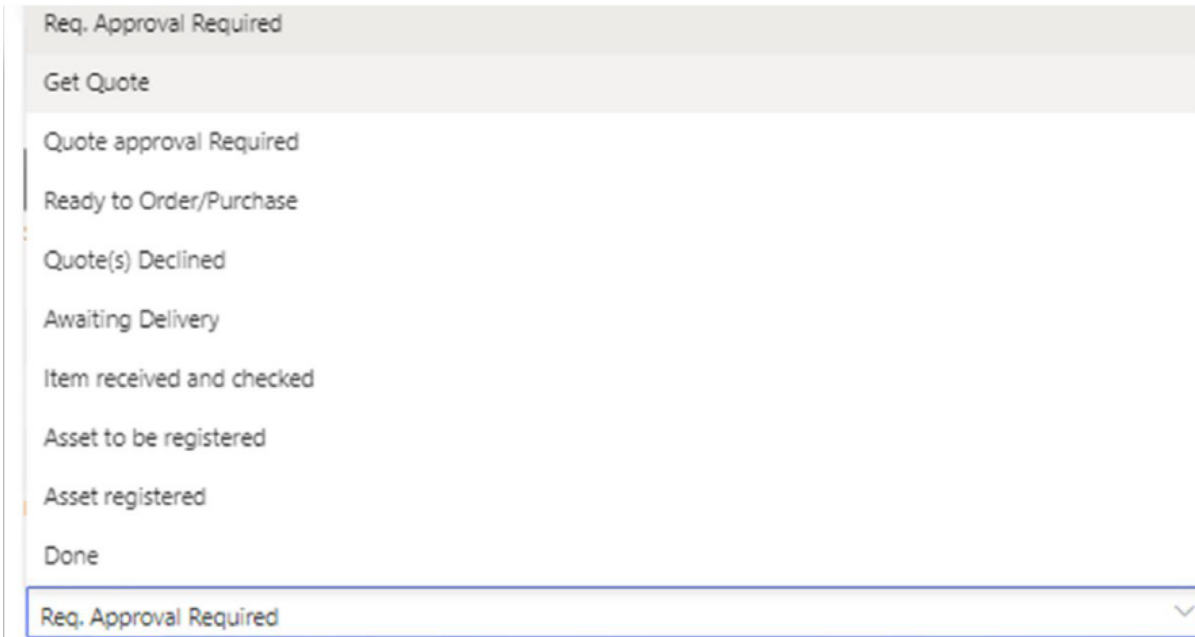


Figure 22 Procurement Status

This field is used to indicate the progress of the procurement task. Available options are as follows:

- **Requisition Approval required.**
 - Use this status to indicate the need.
- **Get Quote**
 - Use this status to indicate that a quote was requested from the supplier, but not yet received to attach to the procurement task.
- **Quote Approval Required**
 - Normal procurement procedure states that 3 different quotes should be obtained first, before any purchases can be made. This status field is used to indicate that the attached quotations need to be signed off on.
- **Ready to order/purchase.**
 - Management may set this status to indicate that procurement should proceed, once a quotation has been approved.
- **Quote Declined**
 - Management may set this status to indicate that the quotation was not sufficient, or that budget does not allow for the procurement item at this time.
- **Awaiting Delivery**
 - use this status when an order was placed, but items / services have not been delivered yet.
- **Item Received and checked.**
 - used to indicate on delivery of an item or a service, that the condition was satisfactory.
- **Asset to be registered.**
 - If an asset needs to be asset tagged, this status may be used to indicate that the asset number still needs to be listed with finance, or that Finance may need to generate one.
- **- Asset Registered**
 - indicates asset tagging has been completed.
- **- Done**
 - indicates that the procurement task has been completed.



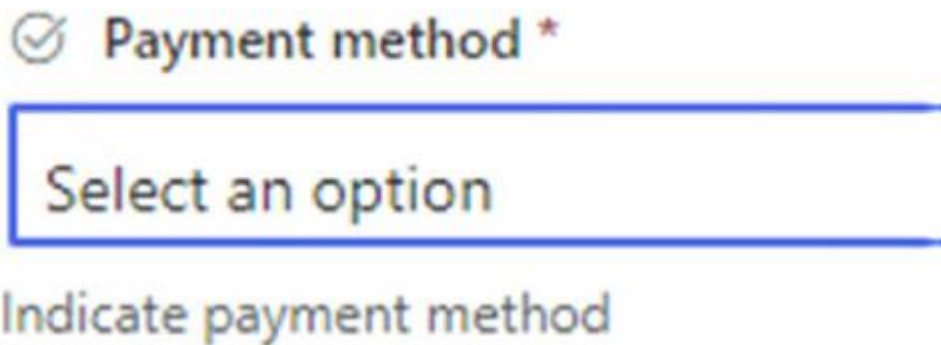
A screenshot of a dropdown menu titled 'Procurement Status Options'. The menu is open, showing a list of status options. The first option, 'Req. Approval Required', is highlighted in a light grey bar. Below it are 'Get Quote', 'Quote approval Required', 'Ready to Order/Purchase', 'Quote(s) Declined', 'Awaiting Delivery', 'Item received and checked', 'Asset to be registered', 'Asset registered', and 'Done'. At the bottom of the menu, there is a search bar containing the text 'Req. Approval Required' and a downward arrow icon.

Figure 23 Procurement Status Options

17. Payment Method *:

Can only be one of 3 different methods:

- **Credit Card** – used when the purchase was made using a card.
- **EFT** – Used when payment is to be manually made by Finance.
- **Cash Payment** – Used when a cash payment was made, attach the till slip together with the invoice in the next field.
- Please note this is another mandatory field.



A screenshot of a form field for 'Payment method *'. The field is a dropdown menu with a blue border and a blue outline. The text 'Select an option' is displayed inside the field. Below the field, the text 'Indicate payment method' is visible.

Figure 24 Payment Method

18. Invoices:

this field is used to attach the links to invoices, or to upload digital invoices directly on the list.



Figure 25 Invoices

19. Payment Status *:

Use the dropdown list to indicate the status of the payment:

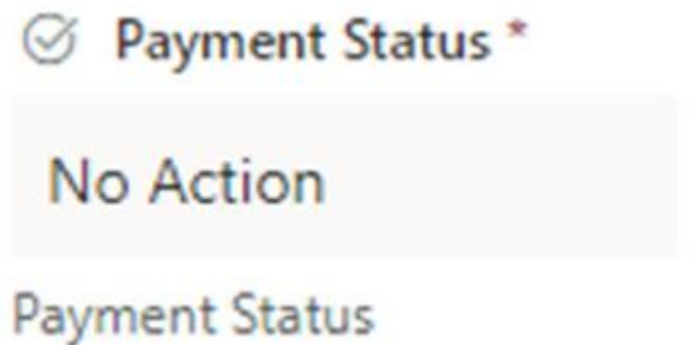


Figure 26 Payment status

20. For finance

- **No Action**
 - No Action Required.
- **Deposit Payment Required**
 - If the supplier requires a deposit this option needs to be selected.
- **Paid Deposit Only**
 - Once Finance has paid the Supplier the deposit this option should be selected.
- **Allocation required.**
 - Finance to Allocate / Load the item for payment.
- **Allocation Made**
 - If allocation was done by finance.
- **Total Payment required.**
 - If the total payment is needed this option should be selected.
- **Paid Total**
 - If the total amount was paid to the supplier.
- **Partially paid -see comments.**

- If only deposit was paid and still requires another payment. This needs to be added in the comments section.
- **Paid – Allocated to correct GL.**
 - If finance made the payment and allocated the payment to the correct GL “General ledger”.
- **Allocated to correct GL account.**
 - If finance allocated the payment to the correct GL account.
- **Allocation required.**
 - Finance to allocate the procurement item for payment.

No Action

Deposit Payment Required

Paid - Deposit Only

Allocation Required

Allocation made

Total Payment Required

Paid - Total

Partially paid - See comments

Paid - Allocate to correct GL Account

Allocated to correct GL Account

Allocation Required

Payment Status

Comments

Comments for approval, etc.

Figure 27 Finance Allocations

21. Comments:

Comments may be inserted here to indicate specific payment instructions, requests or notifications from Management, or reasons why procurement tasks are declined for example.

Comments

Comments for approval, etc.

Figure 28 Comments

22. CC Providers?

Yes/No field to indicate to finance that a copy of the proof of payment is required.

☒ CC Provider(s)?

☐ No

CC the provider(s) the proof of payment?

Figure 29 CC Provider

23. Sign-off Status:

This field is used by management to indicate that a task may be closed.

Sign-off status

Enter value here

Figure 30 Sign-off

24. Provider's e-Mail:

the suppliers e-mail address (not compulsory)

Provider's e-Mail

Enter value here

E-mail address of the provider to CC the proof of payment.

Figure 31 Providers E-mail

25. Attachments:

Any additional attachments may be added here. (Due to a recent update on SharePoint Online, this field may be the only possible way to upload invoices for now, when using the modern layout).



Figure 32 Attachments

* Documentation Required for Approver

26. Requisition Status:

The requisition status needs to be changed to approved. Finance will receive a notification once this item was approved to load the procurement item for payment. If the requisition status was set to decline by the approver, no action will be required.

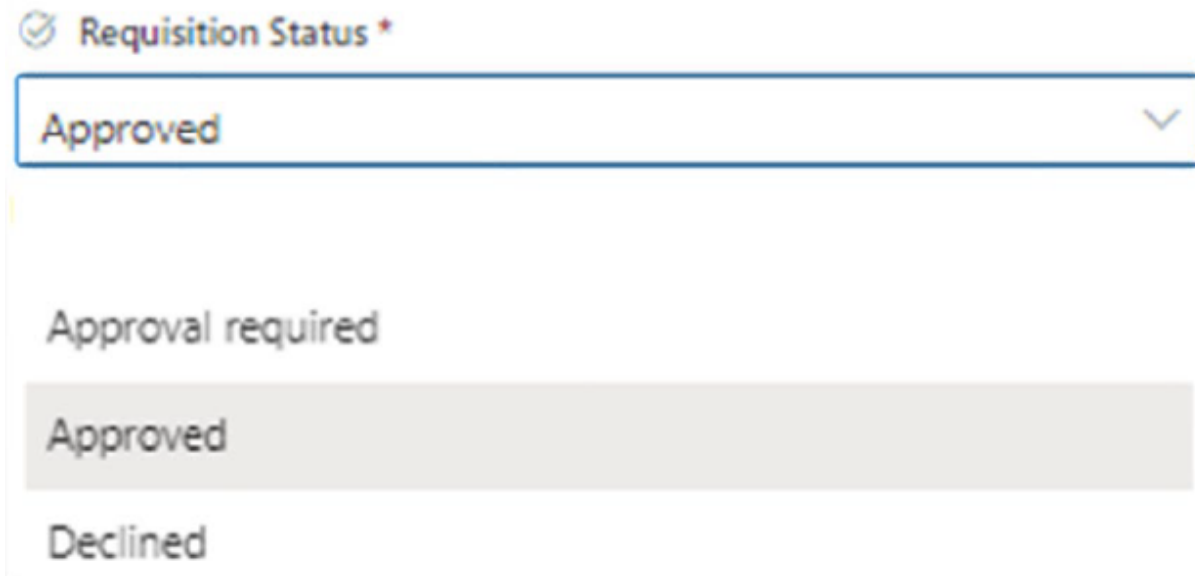


Figure 33 Requisition Status

PROCUREMENT POLICY

1. The objective of the Procurement policy

The role of the Procurement policy is to define standard methods and procedures for the Company to purchase products and services from different vendors.

This policy covers all expenses for the company including items like taxes, payroll payments, etc. Non-vendor payments are defined as exceptions in the policy and proper procedures to manage these payments are included in section 3.

The Services Partner procedure should be applied when making use of service partners or enrolling new service partners.

Compliance with this policy is mandatory for all employees. Non-compliance with this policy could lead to action including termination of employment.

The Procurement department, under leadership of the Commercial Finance Executive is responsible for maintaining and implementing the processes defined in this policy.

2. Role of the Procurement Department

The role of the Procurement department is to assist the organization get the best value for the product and services purchased, reduce cost, reduce supply risk, and enabling stakeholders to reach their business goals.

The Procurement department is responsible for running the vendor selection process by working with different stakeholders. The Procurement department would be the main point of contact for the suppliers during the vendor evaluation and selection process.

Procurement will coordinate the activities, schedule, and scoring of the vendor responses by working with both internal and external stakeholders.

3. Vendor setup and onboarding process

All new vendors will be vetted by the Procurement department to ensure that they meet criteria for vendor selection before completing the vendor setup form. Vetting will be done using the Vendor Due Diligence Checklist (Figure 35) and Protection of Personal Information Checklist (Figure 36).

If required, an evaluation should be conducted by inviting multiple vendors to bid and then selecting the best value match vendor for the company.

Procurement may only be done from approved vendors. Should urgent purchases be made with a non-accredited vendor, then approval should be obtained from the Managing Director in advance. This approval should accompany the order request sent to the Procurement department. This applies in exceptional circumstances and one-off purchases only. Should the same vendor be used again, then the vendor setup form should be completed, and the vendor should be added to the approved vendor list before purchases are made.

Please note that this process is applicable to standard vendors. There are exceptions that would not be vetted by the Procurement department. Those exceptions include:

1. Taxes
2. Interest and bank payments
3. Government payments.
4. Service partner selection (to follow the Service Partner Procedure)
5. Reimbursements

Once vetted, the approved Vendor Setup Request form must be submitted to the Accounts Payable Department with supporting documents.

The Vendor Setup Form should also be submitted when an existing vendor's details have changed.

Refer Figure 31 for the Vendor Setup Request form.

All Vendor Setup Requests must be approved by the relevant Executive and be accompanied by the Vendor Due Diligence Checklist and PPI Checklist.

Sole suppliers and preferred vendors

Where there is a need to make use of sole suppliers or preferred vendors, this should be indicated on the vendor setup request form.

All requests for sole suppliers and preferred vendors must be approved by the Managing Director.

Sole suppliers and preferred vendors should be reviewed at least once a year when supplier performance should be evaluated, and comparative quotes should be obtained. The renewal of a sole supplier or preferred vendor must be approved by the Managing Director. An e-mail containing the evaluation of supplier performance, comparative quotes as well as the motivation and approval for renewal should be submitted to the Procurement department annually. Failing to renew may result in orders not being placed with the sole supplier or preferred vendor and procurement being delayed as the mandatory two quotes will be required.

Ad-hoc purchases and sundry payments

Ad hoc purchases (e.g., credit card purchases or one-off purchases) and sundry payments relate to purchases or payments that cannot (due to specific circumstances) be processed using the formal procurement procedures and are therefore not linked to an official order. Payment shall be processed on receipt of an invoice (in the case of credit card purchases, the credit card slip should be submitted along with the invoice) from the relevant user department and approved by the relevant budget owner.

Notifications of ad-hoc purchases should be e-mailed to [procurement.underline](#)

Requests for sundry payments should be e-mailed, with the necessary supporting documentation and appropriate authorization to payments. The supporting documentation will include:

- Budget line allocation
- Bank stamped letter confirming banking details of the supplier (not required for credit card purchases)
- Confirmation of supplier VAT number (not required for credit card purchases)

For purposes of authorization of sundry payments, a Sundry Payment Approval Stamp will be implemented which should accompany the request for sundry payments (Refer Figure 34). Payments will be done weekly on Thursday.

4. **Contract signing Authority.**

The contract signing authority is regulated by the Moyo Business Advisory Group of Companies Delegation of Authority (DoA) as approved by the Board.

The DoA prescribes that all supplier agreements, excluding financing arrangements, must be approved jointly by the Managing Director and the Commercial Finance Executive.

5. **Procurement authority levels**

Procurement authority levels specify what amount is authorized at what level of the organization before the payment can be made to the supplier.

This is applicable to both purchase orders and other expenses / Invoice payments (without a purchase order).

All purchases must be approved at the appropriate level based on the total amount of the requisition. The following matrix provides authorization limits based on job titles as per the DoA.

6. **Delegation of authority**

This Delegation of authority section provides guidelines on how an approver can delegate their approval authority levels to someone else. A delegation of authority in this case is temporary – for example, when an approver goes on vacation.

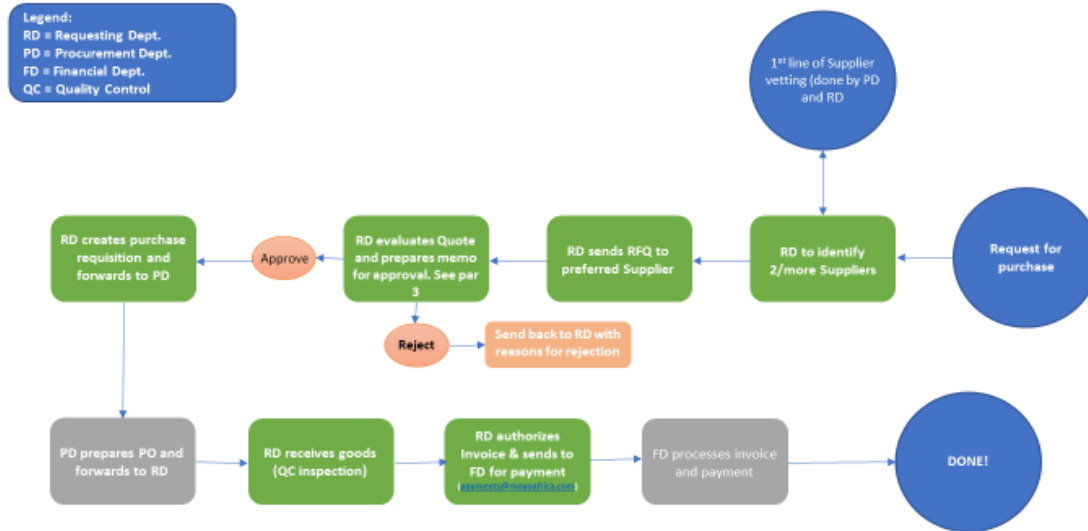
The standard Delegation of Authority form (Figure 32) should be completed when an approver temporarily delegates their approval authority. The delegation should be approved by the Managing Director.

A copy of the form should be sent to the Procurement and Accounts Payable departments as well as the HR department for record keeping.

7. Procurement process and accepted norms.

Process flow

The following diagram shows the high-level procure to pay process that is followed once a demand for products or services has been identified:



Procurement Process Flow

Figure 34 Procurement Process Flow

Requisition process

To purchase a product or service, the requester will create an entry for procurement in SharePoint.

Once the request to procure is approved by the budget owner, the requester needs to obtain at least 2 quotes from different vendors and upload with the request, unless a sole supplier or preferred vendor is selected (subject to sole supplier or preferred vendor approval process).

Approval process

Each requisition must be approved as per the Procurement authority levels defined in Section 5.

Purchase order process

Once the purchase order is confirmed, the Procurement Officer will send the purchase order to the vendor.

A Procurement Manual is available to explain the process for loading procurement requests in SharePoint.

8. Invoicing process and guidelines

This section outlines the process that vendors need to follow to submit invoices for payment as well as internal users needing to submit a request for payments or other invoices where a purchase order is not applicable.

Once goods or services have been received in good order, an invoice is provided by the vendor. The invoice should be approved by the relevant Budget Owner before submitting it, along with proof of receipt (in some cases this is included on the invoice), to the Accounts Payable department. The e-mail should include the supporting documents, the approval and the budget line item to be debited.

9. Competitive bidding

Budget Owners should secure their own competitive bids from multiple suppliers unless use is made of a sole supplier or preferred vendor as approved during the vendor setup process.

The budget owner has the discretion to select the appropriate vendor but should take into consideration the best value based on the quality of the product and the price quoted.

10. Ethical Procurement and conflict of Interest

A conflict of interest is a situation in which the concerns or aims of two different parties are incompatible. In other words, if the person making the Procurement decision is somehow going to benefit from the purchase transaction, then there is a conflict of interest.

In case of a real or perceived conflict of interest, the Budget Owner must adhere to the requirements contained in the Managing Conflicts of Interest Policy.

Moyo conducts all its business in an honest and ethical manner. Bribery is a criminal offence. Moyo takes a zero-tolerance approach to bribery and corruption in all its forms. All employees must consider the requirements of the Anti-Bribery and Anti-Corruption Policy when entering into supply agreements and procurement transactions.

Moyo will avoid the intent and appearance of unethical or compromising practice in relationships, actions and communications. Moyo will not permit impropriety at any time and employees will not use corporate assets or business relationships for personal use or gain. You are referred to Moyo's Ethics Policy in this regard.

11. Supplier diversity

As a good corporate citizen, Moyo is committed to promoting equitable procurement practices. Budget Owners are required to apply the Preferential Procurement Guidelines in this regard.

12. Compliance***Compliance Measurement***

The Procurement Department will monitor compliance to this policy on an ongoing basis.

Exceptions

Any exception to the policy must be approved by the Managing Director in advance.

Non-Compliance

Any employee found to have violated this policy may be subject to disciplinary action, up to and including termination of employment.

13. Related Standards, Policies and Procedures

Anti-Bribery and Anti-Corruption Policy.

Ethics Policy.

Managing Conflicts of Interest Policy.

Vendor Selection and Due Diligence Process

Preferential Procurement Guideline.

Service Partners Procedure.

Information and Document Retention Policy.

DELEGATION OF AUTHORITY LETTER

To Whom It May Concern:

I, [FULL NAME AND TITLE], hereby delegate the authority herein described to [FULL NAME, POSITION], on the following terms and conditions:

1. The effective date of this delegation will be from [START DATE] to [END DATE];
[if the end date is not determinable, then replace "to end date" with: and will remain in effect until revoked by delegating official or his/her successor].
2. The authority delegated cannot be further delegated without my prior and express written consent.
3. This delegation is made pursuant to the Moyo Business Advisory Group of Companies Delegation of Authority and is subject thereto.

[signature]

Name and Title [Delegating Party]

Date:

Acknowledged and agreed:

[signature]

Name and Title [Delegate]

Date:

Approved by:

[signature]

Pierre le Roux, Managing Director

Date:

Figure 35 Delegation of authority

VENDOR SETUP/UPDATE REQUEST

| | |
|--------|--|
| NEW | |
| UPDATE | |

COMPANY CONTACT INFORMATION

| | | | |
|-------------------------------|--|--------------------|--|
| COMPANY NAME | | REGISTERED ADDRESS | |
| TELEPHONE | | | |
| FAX | | | |
| EMAIL | | WEBSITE | |
| POINT OF CONTACT NAME & TITLE | | CONTACT EMAIL | |
| CONTACT PHONE 1 | | CONTACT PHONE 2 | |

COMPANY OVERVIEW (Attach proof of registrations)

| | | | |
|------------------------------------------------------------|--|-----------------------------------------------|--|
| DETAILS OF SERVICES / GOODS PROCURED | | | |
| SOLE SUPPLIER/PREFERRED VENDOR (attach MD approval) | | COMPANY REGISTRATION NUMBER (attach proof) | |
| VAT REGISTRATION NUMBER (attach VAT registration document) | | INCOME TAX NUMBER (tax clearance certificate) | |
| NDA SIGNED (attach copy) | | SIGNED AGREEMENT (attach copy if applicable) | |
| POPIA COMPLIANT (attach declaration) | | INSURANCE COVER (attach confirmation) | |
| PAYMENT TERMS | | LICENSE/ACCREDITATION NO. | |
| ADDITIONAL INFO | | | |

BANKING INFORMATION (Attach original bank stamped confirmation letter not older than 3 months)

| | | | |
|----------------|--|------------------------------------|--|
| BANK NAME | | BRANCH CODE | |
| ACCOUNT NAME | | ACCOUNT TYPE | |
| ACCOUNT NUMBER | | BANK CONTACT NAME AND PHONE NUMBER | |

CERTIFICATION

| | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| I hereby affirm that all information supplied is true and accurate to the best of my knowledge and belief, and I understand that this information will be considered material in the evaluation of quotations, bids, and proposals. Notice must be given of any change in status impacting the information provided within ten (10) days of said change. | | | |
| PRINTED / TYPED NAME (Moyo Executive) | | TITLE (Moyo Executive) | |
| SIGNATURE (Moyo Executive) | | DATE | |

Figure 36 Vendor Setup/Update

SUNDRY PAYMENT APPROVAL STAMP

| SUNDRY PAYMENT APPROVAL STAMP | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Budget Owner: | |
| Budget Line Allocation: | |
| Approval (digitally signed): | |
| Payment date: | |
| Supporting documents attached: • Bank stamped letter confirming banking details of the supplier (not required for credit card purchases) • Confirmation of supplier VAT number (not required for credit card purchases) | |

Figure 37 Sundry Payment approval stamp

Moyo Business Advisory Vendor Due Diligence Checklist

The checklist should be completed for all vendors where Moyo intends to enter into ongoing supply agreements. The checklist is not exhaustive but provides minimum requirements when onboarding new vendors. Questions may change depending on the company, industry, size, product or service requirements. This checklist, along with all supporting documentation, should be submitted to the Procurement department as part of the vendor evaluation process.

| FOUNDATIONAL DOCUMENTS | |
|-----------------------------------------------------------------------------------------------------------|--|
| Mutual Non-Disclosure Agreement or Confidentiality Agreement | |
| Basic Company Information (full legal name, address, physical location, website URL, trading name) | |
| Ownership structure and affiliated entities (Group structure) | |
| Income tax number | |
| VAT number | |
| Company registration document (CIPC) | |
| Letters of good standing COID | |
| B-BBEE certificate | |
| Directors details and ID's | |
| Company resolution authorising the counter-party to enter into an agreement with Moyo and bind the entity | |

| LICENSES OR PROFESSIONAL ACCREDITATION | |
|----------------------------------------------------------------|--|
| Licenses required - (specify and attach copies) | |
| Accreditation required - (specify and attach copies) | |
| Professional membership required - (specify and attach copies) | |

| INFORMATION SECURITY | |
|------------------------------------------------------------------|--|
| Business continuity plan | |
| Disaster recovery plan | |
| Protection of personal information by design (use PPI checklist) | |
| History of data breaches and security incidents | |
| Site visits to assess security controls (if required) | |

| FINANCIALS | |
|-------------------------------------------------------------------------------|--|
| VAT registration certificate | |
| Tax clearance certificate | |
| Bank stamped letter of proof of banking details (not older than three months) | |

| SUB-CONTRACTING | |
|--------------------------------------------------------------------------------------------------------|--|
| Name of sub-contractor (company or individual) | |
| In case of company, provide similar documents as for main supplier | |
| In case of individual, provide copy of ID, qualifications, accreditations and professional memberships | |

| POLICY REVIEW | |
|-----------------------------------------------|--|
| Information security / Data protection policy | |
| Privacy policy | |
| Data retention and destruction policy | |
| Anti-bribery and anti-corruption policy | |
| Ethics policy | |
| Conflict of interest policy | |
| Customer complaints policy | |

| BUSINESS REFERENCES | |
|------------------------------------------------|--|
| Details of at least two business references: | |
| Client name and address | |
| Contact person and role in client organisation | |
| Contact number | |
| E-mail address | |

| INSURANCE | |
|--------------------------------------------------------|--|
| General liability insurance | |
| Cyber insurance | |
| Professional indemnity insurance (if applicable) | |
| Other specific insurance required per service/industry | |

Figure 38 Vendor Due Diligence Checklist Part 1

| Moyo Business Advisory Protection of Personal Information Checklist | |
|---------------------------------------------------------------------------------------------------------------------------------------|--|
| Does the contract set out what personal data is used for what purpose? | |
| Is the contracted partner a controller (C), joint controller (JC), processor (P) or sub-processor (SP)? | |
| Depending on the controller/processor relationship, do you have a Data Processing Agreement or a Joint Controller Agreement in place? | |
| Does the contract highlight the importance of confidentiality? | |
| Does the contract provide for audits and inspections? | |
| Is it clear who is accountable and liable for different activities? | |
| Is there a provision to cover third party processing of data? | |
| Does a process exist for managing data when the contract ends? | |
| Is the personal data that's being processed detailed in your and their 'Record of Processing Activities'? | |
| Does the supplier hold any form of certification for their processing activities? | |

Figure 39 Vendor Due Diligence Checklist Part 2

PROCUREMENT EMAIL NOTIFICATIONS EXAMPLE

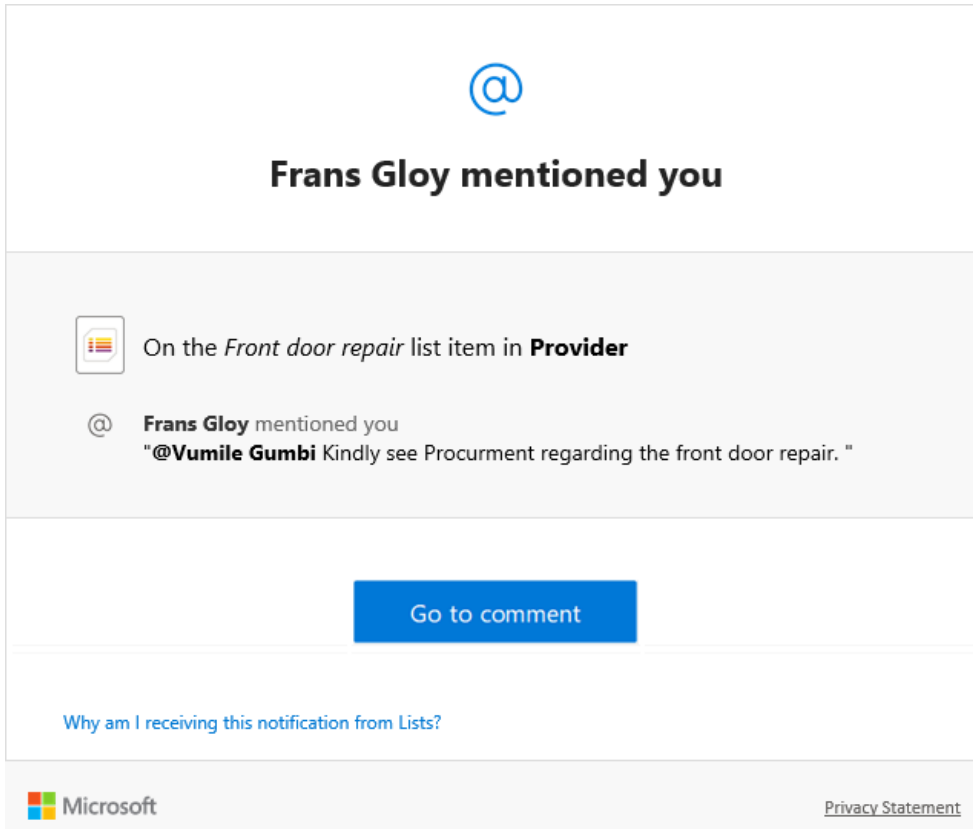


Figure 40 Procurement Email notification

OPERATIONS BUDGET ALLOCATION

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| | A | D | E | F | G | H | I | J | K | L | M | N | U | V | W | X | Y | Z | AA | AB | AC | AD | AE | AF | AG | AH | AI | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY | CZ | DA | DB | DC | DD | DE | DF | DG | DH | DI | DJ | DK | DL | DM | DN | DO | DP | DQ | DR | DS | DT | DU | DV | DW | DX | DY | DZ | EA | EB | EC | ED | EE | EF | EG | EH | EI | EJ | EL | EM | EN | EO | EP | EQ | ER | ES | ET | EU | EV | EW | EX | EY | EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GH | GI | GJ | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HI | HJ | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | JC | JD | JE | JF | JG | JH | JI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | KA | KB | KC | KD | KE | KF | KG | KH | KI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | LA | LB | LC | LD | LE | LF | LG | LH | LI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | MA | MB | MC | MD | ME | MF | MG | MH | MI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | NA | NB | NC | ND | NE | NF | NG | NH | NI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | OA | OB | OC | OD | OE | OF | OG | OH | OI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | PA | PB | PC | PD | PE | PF | PG | PH | PI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | QA | QB | QC | QD | QE | QF | QG | QH | QI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | RA | RB | RC | RD | RE | RF | RG | RH | RI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | SA | SB | SC | SD | SE | SF | SG | SH | SI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | TA | TB | TC | TD | TE | TF | TG | TH | TI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | UA | UB | UC | UD | UE | UF | UG | UH | UI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | VA | VB | VC | VD | VE | VF | VG | VH | VI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | WA | WB | WC | WD | WE | WF | WG | WH | WI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | XA | XB | XC | XD | XE | XF | XG | XH | XI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | YA | YB | YC | YD | YE | YF | YG | YH | YI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | ZA | ZB | ZC | ZD | ZE | ZF | ZG | ZH | ZI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | AA | AB | AC | AD | AE | AF | AG | AH | AI | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY | CZ | DA | DB | DC | DD | DE | DF | DG | DH | DI | DJ | DK | DL | DM | DN | DO | DP | DQ | DR | DS | DT | DU | DV | DW | DX | DY | DZ | EA | EB | EC | ED | EE | EF | EG | EH | EI | EJ | EL | EM | EN | EO | EP | EQ | ER | ES | ET | EU | EV | EW | EX | EY | EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GH | GI | GJ | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HI | HJ | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | JC | JD | JE | JF | JG | JH | JI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | KA | KB | KC | KD | KE | KF | KG | KH | KI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | LA | LB | LC | LD | LE | LF | LG | LH | LI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | MA | MB | MC | MD | ME | MF | MG | MH | MI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | NA | NB | NC | ND | NE | NF | NG | NH | NI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | OA | OB | OC | OD | OE | OF | OG | OH | OI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | PA | PB | PC | PD | PE | PF | PG | PH | PI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | QA | QB | QC | QD | QE | QF | QG | QH | QI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | RA | RB | RC | RD | RE | RF | RG | RH | RI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | SA | SB | SC | SD | SE | SF | SG | SH | SI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | TA | TB | TC | TD | TE | TF | TG | TH | TI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | UA | UB | UC | UD | UE | UF | UG | UH | UI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | VA | VB | VC | VD | VE | VF | VG | VH | VI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | WA | WB | WC | WD | WE | WF | WG | WH | WI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | XA | XB | XC | XD | XE | XF | XG | XH | XI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | YA | YB | YC | YD | YE | YF | YG | YH | YI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | ZA | ZB | ZC | ZD | ZE | ZF | ZG | ZH | ZI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | AA | AB | AC | AD | AE | AF | AG | AH | AI | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY | CZ | DA | DB | DC | DD | DE | DF | DG | DH | DI | DJ | DK | DL | DM | DN | DO | DP | DQ | DR | DS | DT | DU | DV | DW | DX | DY | DZ | EA | EB | EC | ED | EE | EF | EG | EH | EI | EJ | EL | EM | EN | EO | EP | EQ | ER | ES | ET | EU | EV | EW | EX | EY | EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GH | GI | GJ | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HI | HJ | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | JC | JD | JE | JF | JG | JH | JI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | KA | KB | KC | KD | KE | KF | KG | KH | KI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | LA | LB | LC | LD | LE | LF | LG | LH | LI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | MA | MB | MC | MD | ME | MF | MG | MH | MI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | NA | NB | NC | ND | NE | NF | NG | NH | NI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | OA | OB | OC | OD | OE | OF | OG | OH | OI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | PA | PB | PC | PD | PE | PF | PG | PH | PI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | QA | QB | QC | QD | QE | QF | QG | QH | QI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | RA | RB | RC | RD | RE | RF | RG | RH | RI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | SA | SB | SC | SD | SE | SF | SG | SH | SI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | TA | TB | TC | TD | TE | TF | TG | TH | TI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | UA | UB | UC | UD | UE | UF | UG | UH | UI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | VA | VB | VC | VD | VE | VF | VG | VH | VI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | WA | WB | WC | WD | WE | WF | WG | WH | WI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | XA | XB | XC | XD | XE | XF | XG | XH | XI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | YA | YB | YC | YD | YE | YF | YG | YH | YI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | ZA | ZB | ZC | ZD | ZE | ZF | ZG | ZH | ZI | IJ | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | AA | AB | AC | AD | AE | AF | AG | AH | AI | AL | AM | AN | AO | AP | AQ | AR | AS | AT | AV | AW | AX | AY | AZ | BA | BB | BC | BD | BE | BF | BG | BH | BI | BJ | BK | BL | BM | BN | BO | BP | BQ | BR | BS | BT | BU | BV | BW | BX | BY | BZ | CA | CB | CC | CD | CE | CF | CG | CH | CI | CJ | CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU | CV | CW | CX | CY |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----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14. APPENDIX B

ALTERNATIVE 1:



Oracle NetSuite

URL: <https://www.netsuite.com/portal/products/erp.shtml>

Oracle NetSuite is an integrated cloud-based software suite including ERP, Accounting, GBM, CRM, HRM, PSA, Commerce, Analytics & Reporting, Infrastructure, and Platform software.

Some functionalities include:

- Financial management
 - Planning and Budgeting
 - Financial Reporting
 - Financial Consolidation
- Inventory Management
 - Replenishment/procurement
 - Traceability
- Order Management
- Reporting & Dashboards

Advantages:

- Functionality covers all sections of the business processes.
- No maintenance of the software needs to be done, as the user rents a license for a set period of time.
- The procurement of items is made very efficient and done effectively by producing a single data source from the procurement information and by automating the order management process.
- Allows for resource management and forecasting with regards to inventory stock.

Disadvantages:

- The price of the software increases as the user adds more functionality/modules.
- The user can not freely customize the software and has to pay to have it customized.
- The user has to pay a large once-off implementation and integration fee, depending on how big the system is.
- Basic support is limited, and the user has to pay for additional support.

Verdict

Based on the information that was gathered, Oracle NetSuite is a perfect software that can be used and implemented into the company to address their issues. However, the financial costs needed to acquire and use the system might pose too much to the company as well as only being able to customize the software by paying for it. Our team aims to provide a system that will have the same type of usability but at a far greater and less cost.

ALTERNATIVE 2:



Acumatica

URL: <https://www.acumatica.com/>

Acumatica is a cloud-based ERP system with the ability to be implemented on mobile devices. Acumatica, like Oracle NetSuite, contains a number of different functionalities of which all can be used to address the business's needs.

Some functionalities include:

- Inventory replenishment/procurement
- Physical inventory management
- Vendor management
- Stock turnover
- Financial and inventory reporting
- Order management

Advantages:

- Provides an all-in-one system containing all the needed functionality.
- Optimizes stock monitoring and providing a fast stock ordering process.
- The dashboards that the users can make use of can be personally customized by them to fit their needs.

Disadvantages:

- The price of the system increases as the user adds more functionality and/or modules to the system.
- Implementation of the system can pose to be difficult due to the number of customization options and the various features it has.
- Integration of the system may cause conflict when trying to integrate with some legacy systems.

Verdict

Based on the information gathered, Acumatica, like Oracle NetSuite, provides the user with a number of functionalities to be implemented and which can be used to address the business problems that our client has. However, like with NetSuite the pricing of the system may discourage the user from acquiring this service as well as the problems faced with the implementation and integration of the system. Our team thus strives to provide a system that will greatly reduce the trouble faced with the integration and implementation of the system.

15. APPENDIX C: COMPLEXITY MATRIX

| Topic | Level | | Marks | Indicated by group | Marks given | MAX | Total |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------|--------------------|-------------|-----|-------|
| 1. Special GUI | For online applications: Responsive web design | * | 3 | 3 | | 42 | 0 |
| | For desktop applications: Form design according to design principles (Schneiderman's golden rule on navigation applies here) | | | | | | |
| | Appropriate use of grids/tables | | 3 | 3 | | | |
| | Appropriate use of tabs/links | | 3 | 3 | | | |
| | Use of graphs in an appropriate business context | | 4 | 4 | | | |
| | The storage and display of graphical information, like photos with a good business reason | | 3 | 3 | | | |
| | Working e-mail automatically generated from the database in an appropriate business context | | 2 | 2 | | | |
| | SMS messages automatically generated from the system in an appropriate business context | | 2 | | | | |
| | Extensive user-friendly search facility | | 3 | 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 | 3 | | | |
| | Uploading a file into the system with appropriate business reason | | 3 | 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 | 6 | | 15 | 0 |
| | Full referential integrity on all tables | * | 6 | 6 | | | |
| | At least one use of master-detail table relationships (Schneiderman's golden rule on system status applies here) | * | 3 | 3 | | | |
| 3. Reports | At least 3 simple list reports in a reporting tool (no control breaks, no graphs, single table) | * | 3 | 3 | | 15 | 0 |
| | At least 2 transactional report with 2 or more control breaks (with heading and calculated values/totals, multiple tables) | * | 6 | 6 | | | |
| | At least 1 report with adjustable criteria | | 3 | 3 | | | |
| | At least 1 management report using a graph | | 3 | 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 | 6 | | 12 | 0 |
| | Some business rules are not hard coded, but maintained in a sub-module of the system. | | 6 | 6 | | | |
| 5. Error handling | All system-generated errors are trapped and consistent, user-friendly error messages are displayed | | 6 | 6 | | 12 | 0 |
| | Appropriate data validation on all input fields | | 6 | 6 | | | |
| 6. Help | At least one menu item or other control that opens up a complete help document (HTML, PDF, Help-file) | | 3 | 3 | | 15 | 0 |
| | Extensive context-sensitive help. E.g. calling Help on a specific screen/function will automatically open the specific help for that screen/function. | | 6 | 6 | | | |
| | Search Facility on Help | | 3 | | | | |
| | Extensive use of hints | | 3 | 3 | | | |
| 7. Security | Logon screen with user ID and password and fixed user profiles | | 3 | 3 | | 13 | 0 |
| | Applying two factor authentication with applicable business reason. | | 3 | | | | |
| | Encrypted passwords in database | * | 1 | 1 | | | |
| | Flexible user profiles (i.e. you can dynamically add user profiles that will enable/disable access to certain parts of the system) | | 6 | 6 | | | |
| | | | | | | | |

Iteration 1: Project Proposal – Team 11

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|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|--------|--|----|-----|
| | 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 | 6 | | 9 | 0 |
| 8. Audit Trail | Able to search the audit trail on any of the following: date, user, transaction type | | 3 | 3 | | | |
| 9. Deployment | For a desktop application: Fully functional installation disks that take care of application installation requirements (install and uninstall) | | 3 | | | 15 | 0 |
| | For an online application: Deployment of application to a publicly accessible web server | | 3 | 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 | 3 | | | |
| | | | | | | | |
| 10. Backup and Restore | A backup and restore subsystem exists that backup/restore all data (system may exit during restore) | | 3 | | | 3 | 0 |
| 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 | 6 | | 9 | 0 |
| | XML or JSON: At least 1 XML or JSON file for Importing or Exporting of data (with good business reason) | | 3 | | | | |
| 12. 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 | 0 |
| | 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, thumb 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, thumb print reader, etc.) | | 9 | | | | |
| | | | | | | | |
| 13. External APPLICATION / Services | Integrate an existing web service into your application (with good business reason) | | 3 | | | 9 | 0 |
| | 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 | | | | |
| 14. Multiplatform processing for an appropriate business reason | Appropriate business use of static views on an alternative platform. | | 3 | 3 | | 27 | 0 |
| | Appropriate use of dynamic views on an alternative platform (i.e. data is displayed from the system's database) | | 3 | 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 | 3 | | | |
| | Substantial processing on a third platform (i.e. both reading and writing data from the system's database) | | 9 | 9 | | | |
| 15. Programming Principles | The use of a data layer to facilitate interaction between your database and your business layer | | 3 | | | 12 | 0 |
| | The use of an API to facilitate interaction between your business layer and your presentation layer | | 6 | 6 | | | |
| | Comprehensive use of stored procedures and/or triggers and/or jobs. | | 3 | 3 | | | |
| 16. 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 | 03 Jan | | 9 | 0 |
| Complexity Marks Obtained | | | | 154 | | 0 | 235 |
| Maximum Complexity Marks | | | 235 | | | | |
| Complexity Marks Required for Del 5 (5 members in team) | | | 130 | | | | |
| Complexity Marks Required for Del 5 (4 members in team) | | | 100 | | | | |

16. DOCUMENT CONCLUSION

This concludes the project proposal. We have discussed Client details, preliminary investigation, system requirements, feasibility analysis and current system along with alternatives have been investigated. We have conveyed this information to the client (Vumile Gumbi), and we are in agreement. The document is finalized and signed off by each team member and the client.






17. TEAM SIGN OFF

PROCION SYSTEM: Project Request

We, team 11, understand and acknowledge, have reviewed the information contained in the document (Project Proposal), and we confirm and understand the contents and that the information provided is true.

BY SIGNING BELOW, WE AGREE TO THE FOLLOWING:

1. We understand the goals and the objectives of the project, as well as the specific tasks and responsibilities assigned to us.
2. We agree that our assigned tasks have been completed and meet the required quality standards.
3. We agree that any issues, risks, and concerns have been appropriately addressed and resolved.
4. Acknowledge that any changes or revisions to the document have been made and agreed upon by the project team.
5. That each team member has contributed equally to the iteration

| Signed by: | | | | |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Name: Jason vd Merwe | Name: Leon Combrinck | Name: Bupe Chindongo | Name: Werner Schutte | Name: Emil Wonigkeit |
| Date: 2023-03-08 | Date: 2023-03-08 | Date: 2023-03-08 | Date: 2023-03-08 | Date: 2023-03-08 |
| Signature:  | Signature:  | Signature:  | Signature:  | Signature:  |

18. CLIENT SIGN OFF


PROCION SYSTEM: Project Request

Business Name: Moyo Business advisory

I, Vunile Gumbi, hereby confirm that I have read the document and agree that the information contained therein is complete, accurate and meets the requirements of the project.

BY SIGNING I CONFIRM THAT:

1. I have reviewed the deliverable as outlined in this project.
2. I accept the deliverable as complete and satisfactory.

| |
|----------------------------------------------------------------------------------------------------------|
| Signed by: |
| Name: Vunile Gumbi |
| Date: 13-03-2023 |
| Signature:  |