



YOUNG INNOVATORS OF IT SYSTEMS(YIITS)

GROUP MEMBERS

1. PALESA MASHABELA
2. AVHATAKALI MUNANYI
3. BATHABILE MJONO

Contents

Stakeholders of Young Innovators of IT Solutions	2
EXECUTIVE SUMMARY	3
Overview of group and Roles	4
Overview of Research Company	5
ROLES OF STAKEHOLDERS IN RESEARCH COMPANY	6
Rose and Shadrack Pty Ltd's Core Business functions:	7
IDENTIFIED BUSINESS PROCESSES TO IMPROVE	8
Statement of the problem	9
Proposed solutions	9
PROJECT CHARTER	10
WORK BREAKDOWN STRUCTURE	11
GANTT CHART	12
SWOT ANALYSIS	13
FEASIBILITY STUDY	14
RISK MANAGEMENT.....	15
FISHBONE Diagram	16
BPMN Diagram (Before and After)	17
USE CASE Diagram (Before and After)	18
FINDINGS AND RECOMMENDATIONS.....	20
CONCLUSION.....	21

Stakeholders of Young Innovators of IT Solutions

BUSINESS ANALYSTS

BATHABILE MJONO



AVHATAKALI MUNANYI



PROJECT MANAGER

PALESA MASHABELA



EXECUTIVE SUMMARY

Young innovators of IT Systems (YIITS) is a company that specializes in helping businesses solve problems related to their technology and day-to-day operations. Young innovators of IT systems is a dynamic and forward thinking company that provides innovative IT solutions. Our motto **“IT solutions made simple”** reflects our commitment to offering innovative technology that is tailored to specific needs of our clients. Our goal is to make a difference in the lives of our clients.

We have teamed up with a landscaping company called **Rose & Shadrack Pty Ltd**, known for their expertise in things like garden design, hardscaping and irrigation systems. We have discovered that Rose & Shadrack Pty Ltd is facing a major issue with high maintenance costs that are straining their budget and this could mean that the cost of materials and labour is higher than expected and the cost of maintaining existing landscapes is higher than expected.

After conducting thorough research, we have come up with solutions to tackle this problem and have developed plans to make sure these solutions are effective in the long run, helping the company manage their maintenance costs better.

We are proposing that we can implement a Billing system that will be tailored to the unique needs of the landscaping industry. This system will update financial processes, offering accurate invoicing, real-time expense tracking and automated payment reminders.

YIITS is committed to ensuring that the solutions we propose are not short-term fixes but are designed for long-term sustainability. By implementing IT solutions and adopting a proactive approach to cost management, Rose & Shadrack Pty Ltd can secure their financial health and future success in the landscaping industry.

Overview of group and Roles

BUSINESS ANALYST ROLE IN THE COMPANY

A business analyst at a landscaping company is critical to the company's ability to enhance its operations, procedures and systems. They collaborate closely with corporate stakeholders like sales, marketing, operations, and management to understand the organization's goals and objectives and to find chances for development.

PROJECT MANAGER ROLE IN THE COMPANY

A project manager's function at a landscaping company is to oversee the design, execution and completion of landscaping projects. This involves working with customers to understand their needs and goals, developing a project plan, managing the budget, collaborating with contractors and suppliers, and ensuring that the project is finished on time and within the budget.

Roles of Team members

Palesa Mashabela	Avhathakali Munanyi	Bathabile Mjono
Project Manager	Business Analyst	Business Analyst
<ul style="list-style-type: none">-BPMN(Before and After)-Stakeholders in research company-WBS-Proposed solutions-Overview of research company.-Identified business process/processes to improve.	<ul style="list-style-type: none">-Fishbone Diagram-Gantt Chart-Risk management-Statement of the problem-Conclusion-Findings and recommendations	<ul style="list-style-type: none">-Use Case(Before and After)-Project charter-Feasibility study-Executive summary-Business functions-SWOT

Overview of Research Company

Name: Rose and Shadrack Pty Ltd

Contact details: 0792482361

Address: 34 Mutlwa Road Extension 12, Mamelodi East Introduction

Company background

Rose and Shadrack is a professional landscaping company that specializes in creating and maintaining outdoor spaces that are both aesthetically pleasing and functional. **Rose and Shadrack Pty Ltd** is a family-owned landscaping company known for its innovative approach. Specializing in garden design, hardscaping, irrigation systems, plant installation and maintenance, the company has been creating captivating outdoor spaces since its founding in 2007. They offer a wide range of services including landscape design, installation, and maintenance. Rose and Shadrack Pty Ltd aims to enhance the natural beauty of spaces while meeting the unique preferences and needs of their clients. Rose and Shadrack Pty Ltd specializes in landscaping and irrigation system.

Services offered: Landscaping and irrigation systems services is for enhancing the aesthetics and usability of outside areas

ROLES OF STAKEHOLDERS IN RESEARCH COMPANY

CUSTOMER

In the landscaping company the customers are the clients who request for the services offered by the company, to fulfil their landscaping needs. The customers give the company the idea of what their vision and goals are for their landscaping projects.

ADMINISTRATOR

The administrator is very important in the company because they always make sure that everything in the company goes well, they are the ones who deal with financial planning, budgeting, and overall business strategy. They are the ones who are always scheduling landscaping projects, take care of the work crew, and always makes sure that each equipment and materials which are needed are available and organize each job.

PROJECT MANAGER

The role of a project manager in the landscaping company is to oversee the planning, design, and implementation of landscaping projects from start to finish. This includes working with clients to determine their needs and desires, creating a plan for how those needs will be met, and managing the landscaping crew to ensure that the project is completed on time and with budget.

MAINTENANCE

The maintenance team is very important for the success of the landscaping company. They have the duties of keeping the landscape of the customers look good.

Rose and Shadrack Pty Ltd's Core Business functions:

- **Landscape design and Project Management**

- Developing and executing landscaping plans, installing and maintaining irrigation systems and overseeing project coordination, scheduling, budgeting, procurement and labour management.

- **Customer Relationship Management**

- Communicating with clients to provide updates on ongoing projects and maintenance schedules.

- **Marketing and Sales**

- Providing estimates and quotes for potential projects.

- **Financial Management**

- Keeping track of expenses and revenue manually or through spreadsheets.

IDENTIFIED BUSINESS PROCESSES TO IMPROVE

Business processes (old)

- Manually recording of the customer's details and requirements.
- Estimation are prepared manually and that is time consuming and creates errors.
- When all the estimations are done and the customer agrees to them, service scheduling is done manually.
- Landscaping staff perform the services as scheduled. They use paper-based work orders or informal communication.
- Invoices are done manually and it usually takes a lot of time.
- Delays are experienced while generating and sending invoices to the customers.
- All the payments from the customers are done manually.
- Keeping track of outstanding payments and following up on overdue accounts is labor-intensive.
- Since everything is done manually, the information of customers which is sensitive can be at risk because it can get exposed to the wrong people.

New business processes

- Determine the company's billing requirements, including those for record-keeping, invoices, and payments monitoring.
- Research and select a billing system or software that fits the needs of the business and its budget.
- Transfer the existing customer financial data into the new billing system, making them sure it is accurate and complete.
- Come up with multiple payments methods, so that the preference of the customer is satisfied, include methods like bank transfers and credit cards.
- Notify the customers of the transition to the new billing system and give them clear instructions on how payments will be done.
- Provide customers service for any questions or problems that may come up about billing

Statement of the problem

The landscaping company, Rose and Shadrack Pty. Ltd is facing a multifaceted challenge that demands immediate attention. Primarily, the company is dealing with a high maintenance problem, in their existing landscape projects are proving to be excessively resource-intensive and demanding in terms of time, labor, and materials. This issue has resulted in increased operational costs, decreased profitability and a potential threat to customer satisfaction and retention.

Simultaneously, Rose and Shadrack Pty. Ltd. Is confronted with a pressing IT problem – the absence of an efficient billing system.

The lack of a efficient billing process obstructs their ability to accurately and timely bill clients, leading to cash flow issues, financial discrepancies and potential client dissatisfaction. Considering these intertwined challenges, it is imperative to create a comprehensive solution that addresses the landscaping maintenance problem while concurrently implementing an effective billing system to optimize operational efficiency and financial stability. This problem statement seeks to outline the critical issues facing Rose and Shadrack Pty. Ltd, highlighting the need for an integrated strategy that harmonizes landscaping maintenance and IT solutions to ensure the company's long-term success and sustainability.

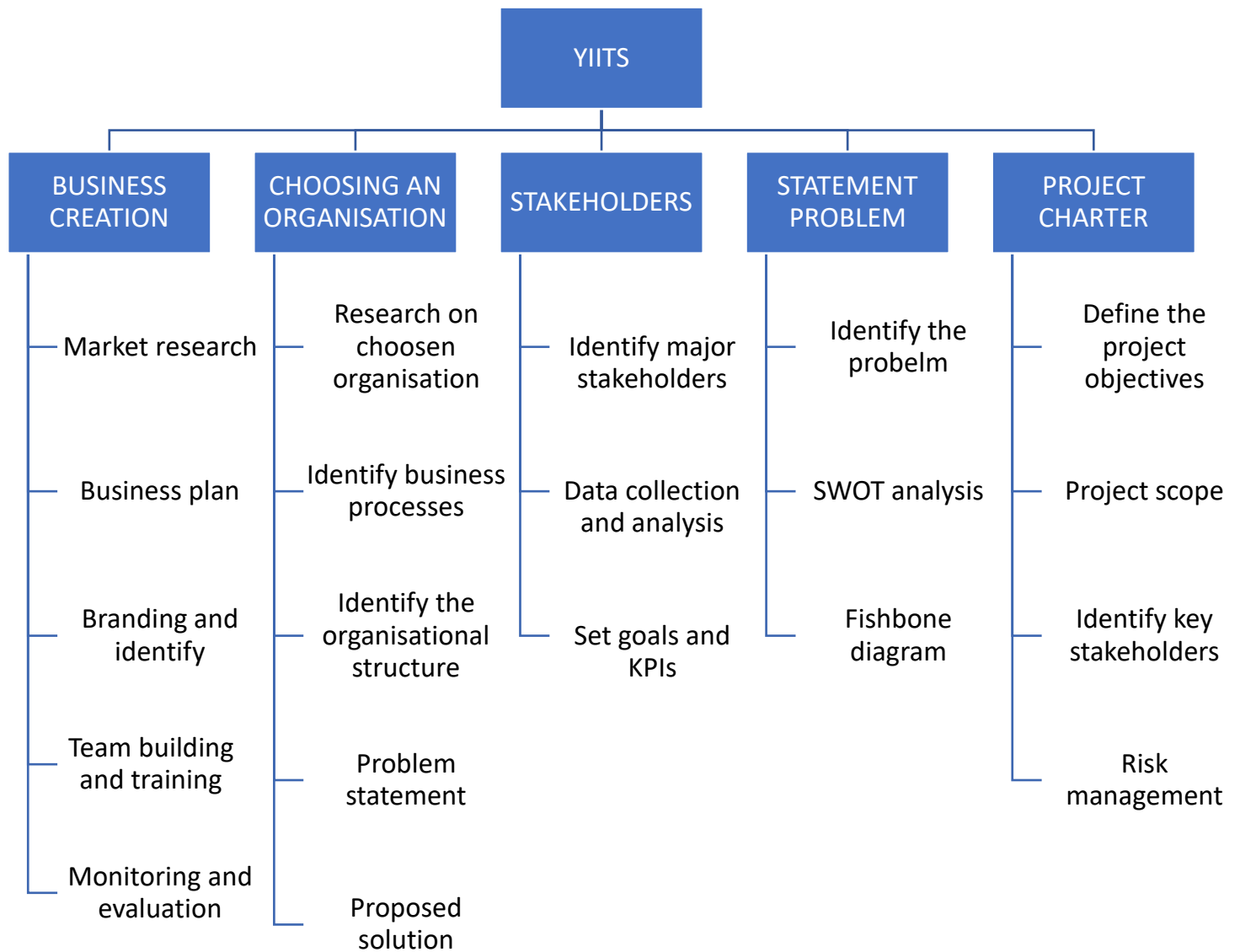
Proposed solutions

- Choose a billing system that suits the company's needs.
- Make professional invoices that include the company's contact details, payments terms, and logo.
- Simplify the invoicing process by using the billing software. To save time, set recurring bills or ongoing services.
- Allow online payments options like credit card or EFT to make it easier for customers to pay invoices.
- Implement an expense tracking system to monitor cost related to projects, such as materials, labor, and equipment.
- Train the employees on how to use the billing system, so that errors can be reduced and ensure consistency.
- Implement backup and security procedures to protect financial data. These should include regular data backups and controlled access.

PROJECT CHARTER

Project title	Young Innovators of IT Systems
Purpose	We are embarking on this project to help Rose and Shadrack Pty Ltd reduce their Maintenance costs by implementing a billing system for them.
Description	Young innovators of IT systems is a dynamic and forward thinking company that provides innovative IT solutions. Our motto “ IT solutions made simple ” reflects our commitment to offering cutting-edge technology that is tailored to specific needs of our clients. Our goal is to make a difference in the lives of our clients.
Objectives	<ol style="list-style-type: none">1. Develop a Billing System2. Provide IT training and support
Scope	We are focusing on: <ol style="list-style-type: none">1. Implementing IT solutions for Rose and Shadrack Pty Ltd landscaping.2. Coming up with unique solutions needed by Rose and Shadrack Pty Ltd landscaping like implementing a Billing system to improve their customer service and reduce maintenance costs.

WORK BREAKDOWN STRUCTURE



GANTT CHART

Task Name	Duration	Start	Finish	Predecessors	Resource Names
Develop a Billing System	11 days	Tue 23/08/01	Fri 23/08/11		Bathabile Palesa Avhatakali
Research and select billing system software or design a custom solution.	1 day	Tue 23/08/01	Tue 23/08/01		Palesa
Develop the billing system software.	3 days	Wed 23/08/02	Wed 23/08/04	2	Avhatakali
Test the billing system for accuracy and functionality.	1 day	Thu 23/08/03	Thu 23/08/03	3	Bathabile
Train staff on how to use the new billing system	1 day	Fri 23/08/04	Fri 23/08/04	4	Palesa
Implement the billing system.	5 days	Mon 23/08/07	Fri 23/08/11	1	Avhatakali Bathabile

SWOT ANALYSIS

Strengths 1. Range of services: Offers a variety of services including lawn maintenance, garden design and landscaping. 2. Local presence: Established in the community, allowing for better understanding of local preferences and needs.	Weaknesses 1. Lack of Billing System: The absence of a proper billing system can lead to inefficiencies, errors and delayed payments. 2. Customer expectations: in an age of digital convenience some customers may expect online payments options and automated billing service, potentially making your company less competitive.
Opportunities 1. Online presence: utilizing Social media and online marketing to reach a wider audience. 2. Offer online payment options: by providing online payment options, you can cater to customer preferences and increase the possibility of timely payments.	Threats 1. Competition: Facing competition from both established landscaping companies and new entrants that have billing systems. 2. Late or non-payment: Without a billing system Rose and Shadrack pty ltd might face challenges related to late or non-payment from customers which can create a cash flow problems and strain their finances.

FEASIBILITY STUDY

Technical feasibility

Rose and Shadrack Pty Ltd does not have the equipment needed to install the Billing system therefore they would need to invest in hardware such as:

1. Server:

- **Web Server:** This server would host the billing system's web application, making it accessible to users for invoicing, payment processing and other related tasks. It will handle user interactions and requests as well as provide a user interface for managing billing-related data.

2. Workstation

- Desktop computers or laptops for the team.

3. Infrastructure for installing and maintenance: Networking equipment

- **Router:** It ensures that incoming and outgoing traffic is properly directed between servers, workstations and the outside world.

- **Network Cabling:** Ethernet cables connect the servers to the switches, ensuring a fast and reliable wired network connection.

Economic feasibility

Rose and Shadrack Pty Ltd will need to take out **R13 000** to ensure that the implementation of the billing system and training of employees is successful.

- Server will cost R4000

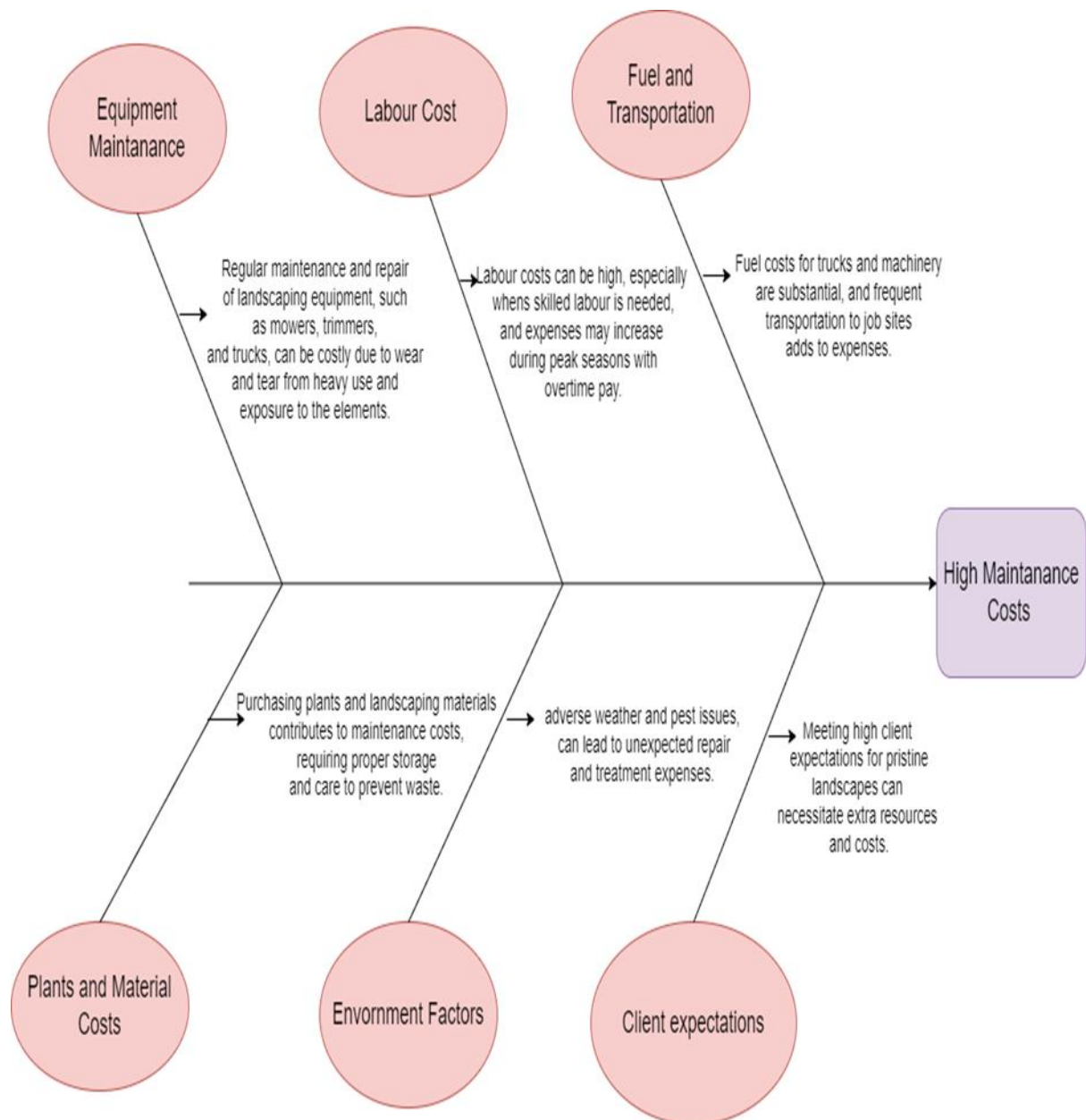
- Workstation will cost R6500

- Infrastructure for installing and maintenance will cost R2500.

RISK MANAGEMENT

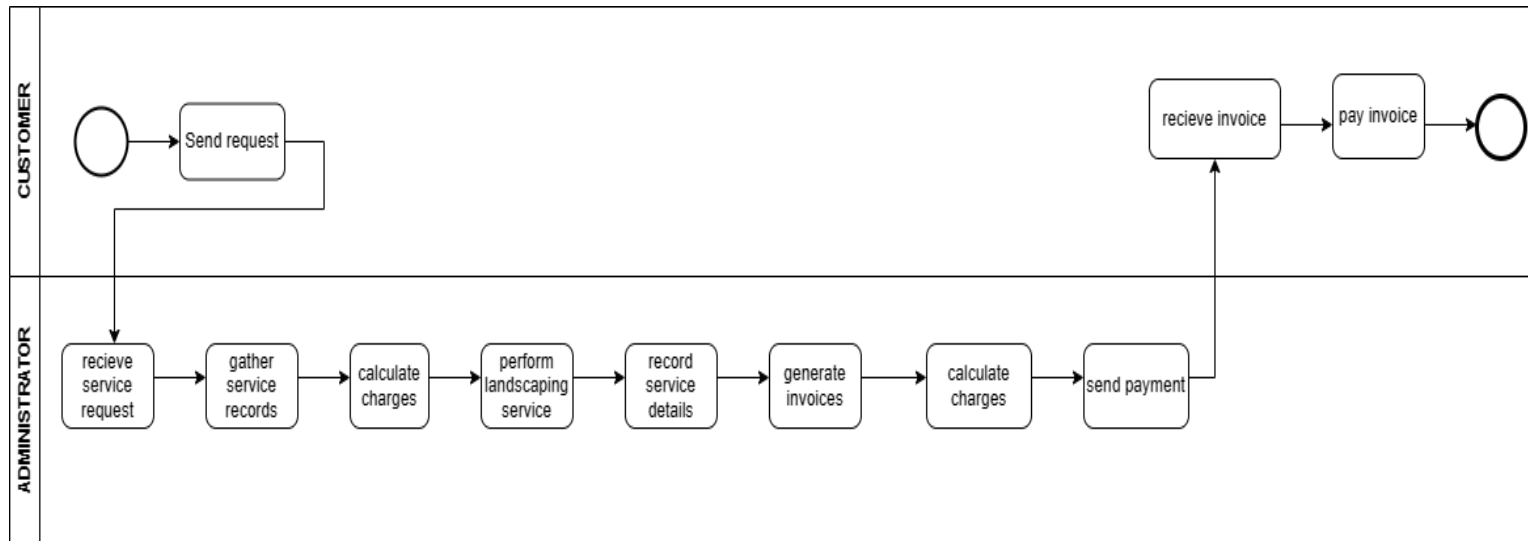
Risk Description	Risk Matrix	Actions	Response
Risk: Inaccurate Billing Risk Description: The billing system may generate incorrect invoices, leading to customer disputes, loss of revenue, and damaged reputation.	High	<ul style="list-style-type: none"> Conduct thorough testing of the billing system before implementation. Regularly review and update the billing software to address any bugs or errors. Train staff on how to use the billing system accurately. 	<ul style="list-style-type: none"> Implement a dispute resolution process to address billing errors promptly. Provide discounts or refunds to affected customers if errors are identified.
Risk: Data Security Breach Risk Description: A breach in the billing system could expose sensitive customer information.	Moderate	<ul style="list-style-type: none"> Implement robust security measures, including encryption and access controls. Regularly update and patch the billing system. 	<ul style="list-style-type: none"> Conduct regular security audits and testing. Have a response plan in place in case of a breach.
Billing System Downtime Risk Description: The billing system may experience unexpected outages, preventing the company from invoicing customers and receiving payments.	Moderate	<ul style="list-style-type: none"> Invest in reliable hosting and infrastructure. Implement redundant systems and backup procedures. Have an IT support team available for rapid issue resolution. 	<ul style="list-style-type: none"> Communicate with customers about downtime and the steps being taken to resolve the issue. Extend payment deadlines for affected invoices during downtime.
Risk: Regulatory Compliance Issues Risk Description: The billing system may not comply with local, state, or federal regulations, leading to legal and financial consequences.	High	<ul style="list-style-type: none"> Stay updated with tax and billing regulations. Implement compliance checks and alerts within the billing system. 	<ul style="list-style-type: none"> Regularly audit the billing system for compliance. Develop a contingency plan for potential regulatory changes.

FISHBONE Diagram

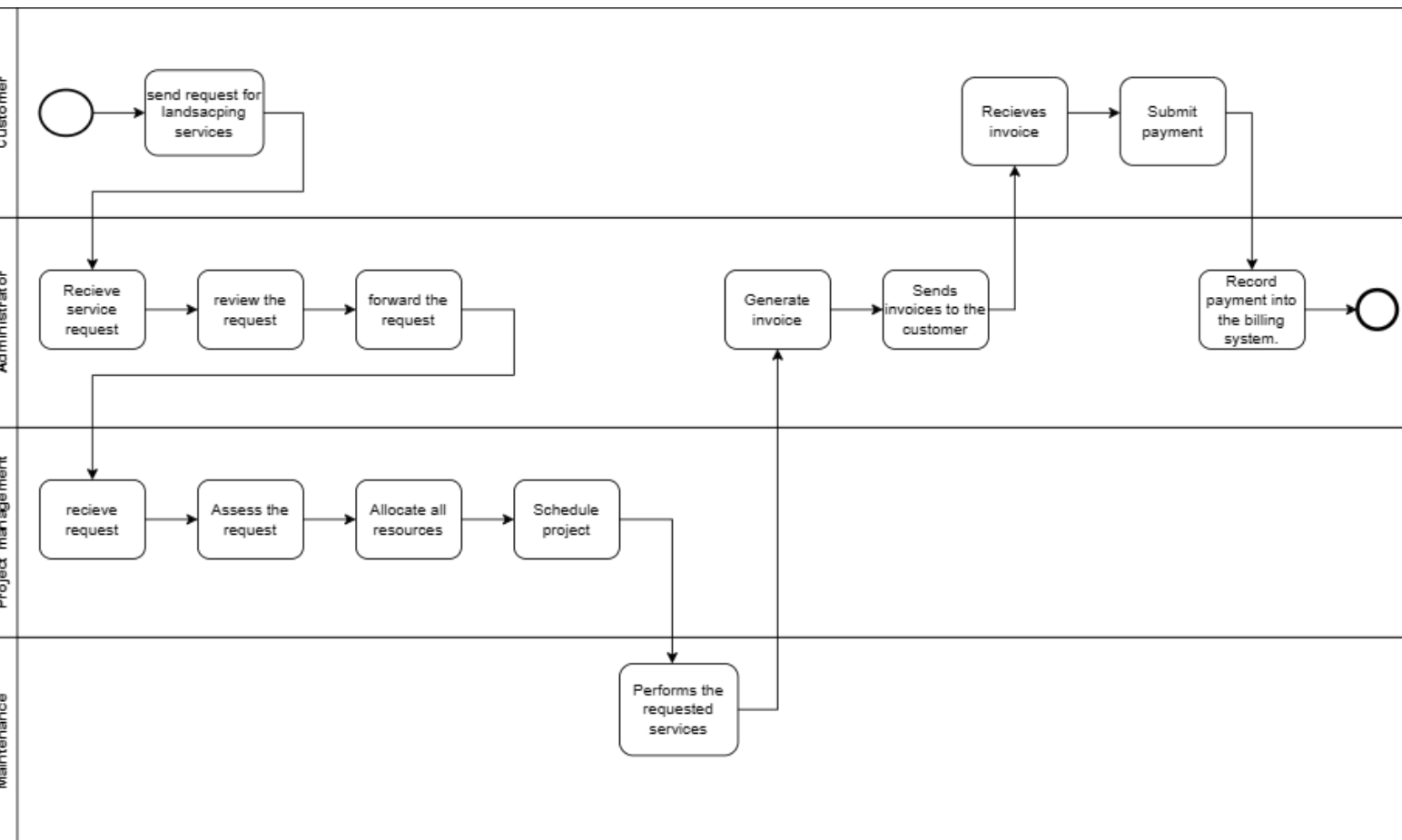


BPMN Diagram (Before and After)

BEFORE

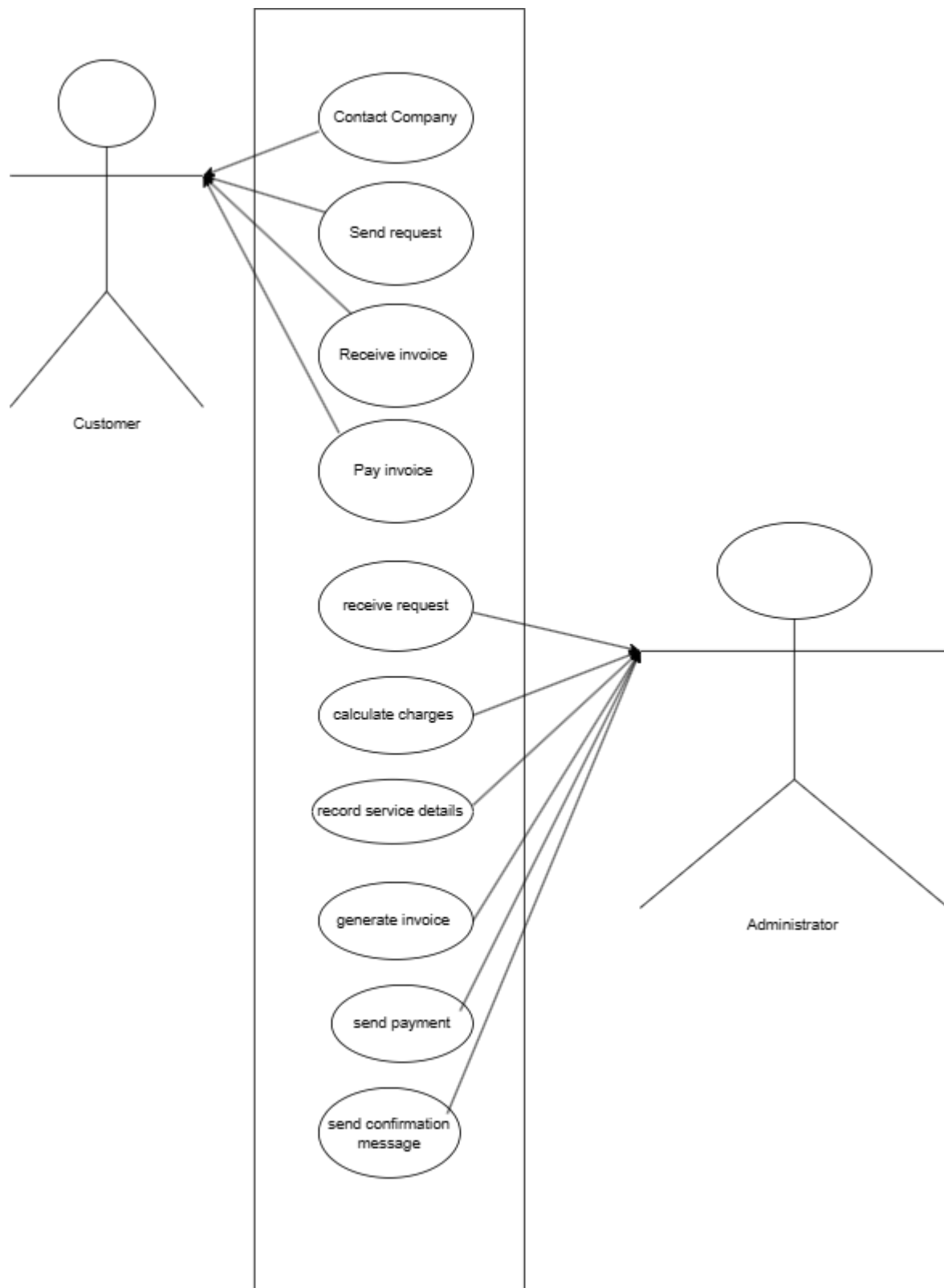


AFTER

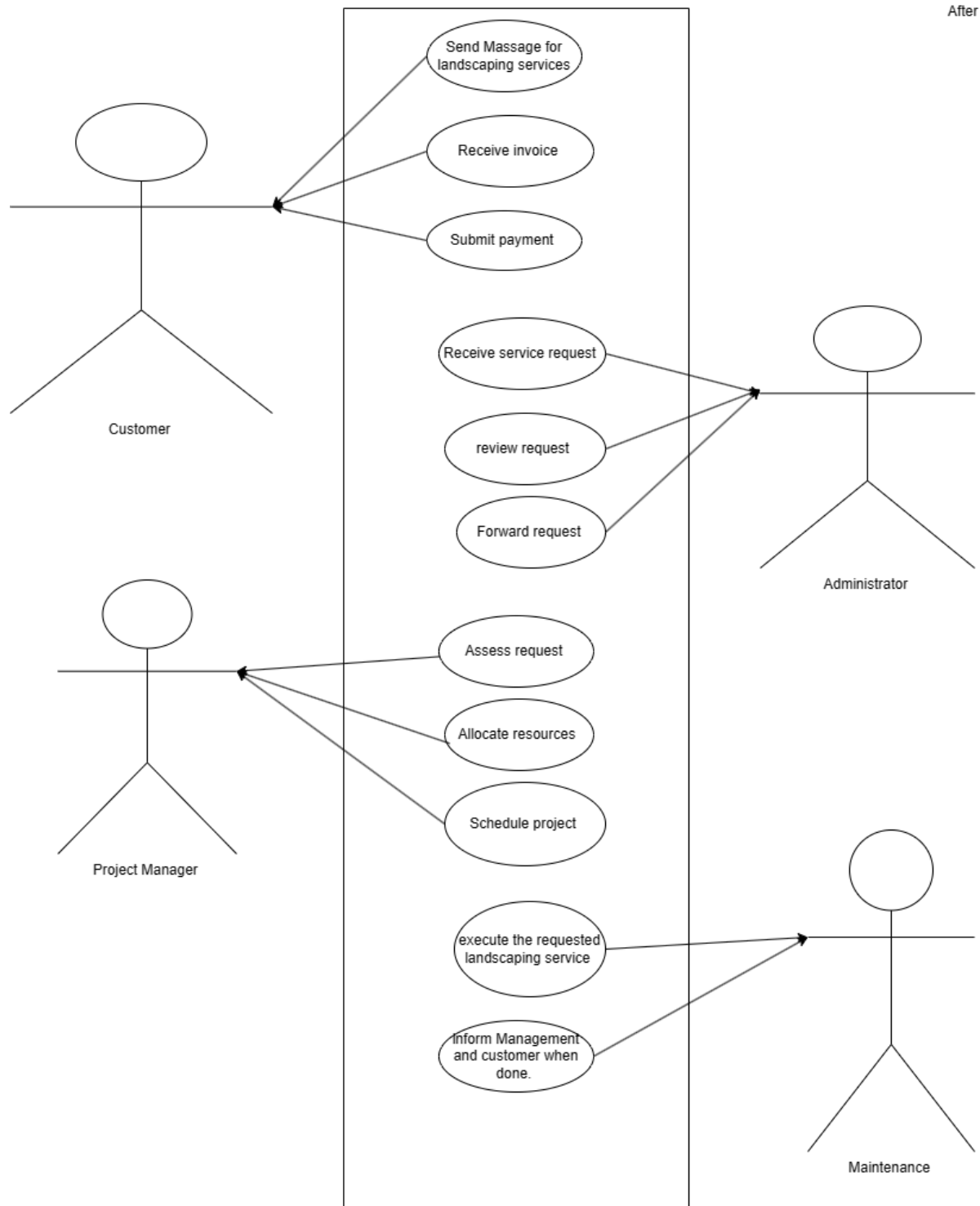


USE CASE Diagram (Before and After)

BEFORE



AFTER



FINDINGS AND RECOMMENDATIONS

Findings and Recommendations for Rose and Shadrack Pty Ltd.

Findings:

- **Manual Billing Processes:** Rose and Shadrack Pty. Ltd currently relies on manual billing processes, which are time-consuming and error prone. This inefficiency can lead to delayed invoicing and revenue collection.
- **Inconsistent Invoicing:** The manual system has resulted in inconsistencies in invoice formats and content, which can confuse clients and lead to disputes.
- **Data Security Risks:** Paper-based records and spreadsheets can pose security risks, as they are vulnerable to physical damage, loss, or unauthorized access.
- **Missed Revenue Opportunities:** The current system may not efficiently track billable hours, materials, and expenses, potentially causing missed revenue opportunities.

Recommendations:

- **Implement an Automated Billing System:** Rose and Shadrack Pty. Ltd should invest in an automated billing system to streamline the invoicing process, reduce errors, and improve efficiency.
- **Scalable Software Solution:** Choose a billing system that can scale up with the company's growth and accommodate a growing number of clients and projects.
- **Data Security Measures:** Ensure that the selected billing system has robust data security features to protect sensitive financial information. Regularly back up data to prevent loss.
- **Time Tracking and Expense Management:** Implement time tracking and expense management features within the billing system to accurately capture billable hours, materials, and costs.

By implementing these recommendations, Rose and Shadrack Pty. Ltd can modernize its billing processes, reduce inefficiencies, and enhance client satisfaction while improving the company's financial stability.

CONCLUSION

This project has provided us with a valuable opportunity to apply our theoretical knowledge in the field of IT to real-world challenges faced by Rose and Shadrack Pty Ltd. Our key recommendations encompass three crucial aspects which are first, implementing a billing system.

These recommendations hold huge importance as they can potentially revolutionize the landscaping industry by modernizing processes, boosting customer engagement, and improving operational efficiency. As young innovators in IT Systems, we are committed to delivering innovative technology that simplifies the IT landscape for our clients. Our mission is to make a positive impact on the businesses we work with, and we believe that our proposed solutions have the potential to do just that. Through this project, we have also gained invaluable experience in project management, teamwork, communication, and problem-solving, setting us on a path toward becoming dynamic and forward-thinking IT professionals.