

IAB204 -Business
Requirements Analysis

Wednesday 5:00-6:30 Tutorial
Tutor: Toni De Palo

Business Analysis



LITTLE STARS
NURSERY

Declaration

By Submitting this assignment, we are aware of the University rule that a student must not act in a manner which constitutes academic dishonesty as stated and explained in the QUT *Manual of Policies and Procedures*. We confirm that this work represents our team's effort, we have viewed the final version and does not contain plagiarized material.

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Executive Summary

Welcome to the Business Analysis Report for the Little Stars Group, located in Brisbane, Australia. Within the scope of this document, Group 29 Consultants will detail the results of the recent Business Analysis conducted on the Little Stars Group in April 2022.

Using a contextual perspective to the end client (Little Stars), this document will highlight and provide clear goals and objectives, as set and discussed with Senior Management, to set a basis for the Analysis of the business detailed in this report. The goals highlighted with Group 29 Consultants and Senior Management shall be iterated as “Organisational Objectives”, which shall set the context for the following report composition and contents.

Using a range of Analysis Methods within the scope of this document, Group 29 Consultants will provide problem statements, assess “capability gaps” with the “As-is” business to allow for in-depth requirements elicitation; clearly detailing the business requirements which have been identified, and providing a prioritised range of requirements which shall be highlighted as part of the consultative process and detailed in this document.

Based on the available information, the scope and outcomes required by the client, Group 29 Consultants will be completing the report utilising the sequential model of analysis, due to the set outcomes and deliverables required by the client, detailed as per the following.

On behalf of Group 29 Consultants, we thank you for the chance to be of assistance with “Little Stars” Group, and we greatly look forward to discussing the following findings in detail, and how we can be of assistance to support your business now, and well into the future.

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1.0 Introduction

1.1 Organisational Background and Contextual Environment

Little Stars is a pre-school educational facility, operating five establishments across Brisbane. Little Stars offers high quality nursery facilities at each of their branches, with addition to kindergarten for 150 to 200 children. The CEO of Little Stars maintains a positive outlook for the future growth for Little Stars and to achieve that, the business needs to modernise the operations of Little Stars using information systems and technology.

The business operates within a complex regulatory environment that has seen significant change within the past 5 years (Meulman, Binkley, & De Wet, 2017). The rising cost of childcare have seen changes in parent expectations regarding the value provided by childcare operators. Centres are providing gourmet food prepared by in-house chefs, custom-designed play equipment (Pod Early School, 2022), coffee-carts, second language lessons and daily photo and videos updates—all to attract enrolments. Despite recent COVID-19 related migration and expected higher population growth, Brisbane is currently facing a childcare oversupply, with providers in some locations closing as they are no longer viable (Herde, 2022). These factors all contribute to increased costs of running a centre and impact the profitability and therefore long-term viability of operators within the sector.

Internally, Little Stars' back-office operations have not kept pace with the growth of the business. There are many paper-based processes that hinder productivity and get in the way of the businesses primary purpose—providing high quality pre-school education and caregiving. Caregivers are pulled away from value-adding duties to complete manual fee payments, leave applications, both staff and student record management, inventory management and documentation and communication of student's special arrangements (e.g. important requests regarding medication, food and participation in activities). The inefficiency and the ineffectiveness of the current processes have also created poor satisfaction from parents—for example, parents are unable to pay through a payment method most convenient to them (e.g. online payments and direct-debits); and special arrangements are not being communicated amongst the care team adequately, endangering children's care.

Modernisation of the business operations to leverage the latest information systems and technology available presents an opportunity for Little Stars to gain a competitive advantage in a populated sector, whilst improving efficiency and reducing cost—ensuring Little Stars will be in a position to capitalise on the expected growth in the sector, to continue to provide high quality care for our future generations.

1.2 Project Goals & Objectives

| Goal | Objectives |
|--|---|
| Increase employees' morale by decreasing 45% of their workload within the next 18 months. | Reduce the use of paper-based forms by digitalising 80% of the forms by the end of 2023. |
| | Standardise the communication between the departments within Little Stars by using an online platform to cover 75% of the communication by the end of 2022. |
| Increase parents' satisfaction by 90% and retain 20% more customers within the next 18 months. | Allow for a wider choice of payments, to cover Cash and Bank Transfer payments by December 2022. |
| | Standardise a learning management system across all Little Stars branches by the end of 2023. |
| Reduce processes inefficiency within Little Stars by digitalising the system by the end of 2023. | Move 300 employees' records into a database by September 2022 |
| | Minimise the HR department workload by developing a HR management system by June 2023. |

Table 1 - Goals & Objectives for Project

1.3 Problem Statement

Little Stars Group is suffering from issues with business efficiency across all of its operations due to outdated systems, which are causing a large quantity of additional time and resources to be committed into administering these systems and processes across all areas of their business. These processes typically involve employees across several different levels across the organisation, which result in:

- Slow processing of requests,
- Confusion, frustration and dissatisfaction from clients and employees,
- Delays in cashflow occur from paper-based fee payment,
- Late and often outdated staff reports provided to the CEO and executive management generate little to no value or business insight.

Centre staff may miss critical special arrangements for children's medication, food or exclusion from activities.

2.0 Needs Assessment

2.1 SWOT Analysis

A SWOT analysis is a tool used to assess a business's strengths, weaknesses, threats, and opportunities. The main purpose of using SWOT analysis is to evaluate the business's competitive position and for future development planning (Teoli, Sanvictores, & An, 2019). For a better understanding of Little Stars current internal and external factors that are impacting the business, a SWOT analysis (Figure 1) is conducted.

The SWOT analysis illustrates that Little Stars has a competitive advantage with offering casual booking, as it increases the parents' flexibility, along with well-established brand and facilities. However, handling almost all of the business process manually using paper-based forms puts the business into a significant weakness gap, which will be focused on in this report. Furthermore, having such weakness opens up Little Stars for many opportunities that will give the business competitive advantage! With the use of technology and digital solutions the process can be modernised, which will help the business grow and retain more parents and employees. Although, continuing with the current approach and fully depending on manual paper-based forms is the main threat to the business, and parents may eventually leave Little Stars and start using the competitors services.

To understand threats and opportunities of the business more, a TOWS analysis is conducted for Little Stars, based on the previously discussed SWOT analysis. TOWS analysis will help with determining on how to use the business strengths and weaknesses to create opportunities, and how to manage potential threats to the business (GÜREL, 2017). TOWS Analysis is represented in figure 2 below. The key points of the TOWS analysis are summarised with Little Stars needs to use the weakness of not having an IT department and establish in-house IT department to create digital systems and maintain them, in addition to reduce the manual paper-based processes and digitalise the processes using information systems.

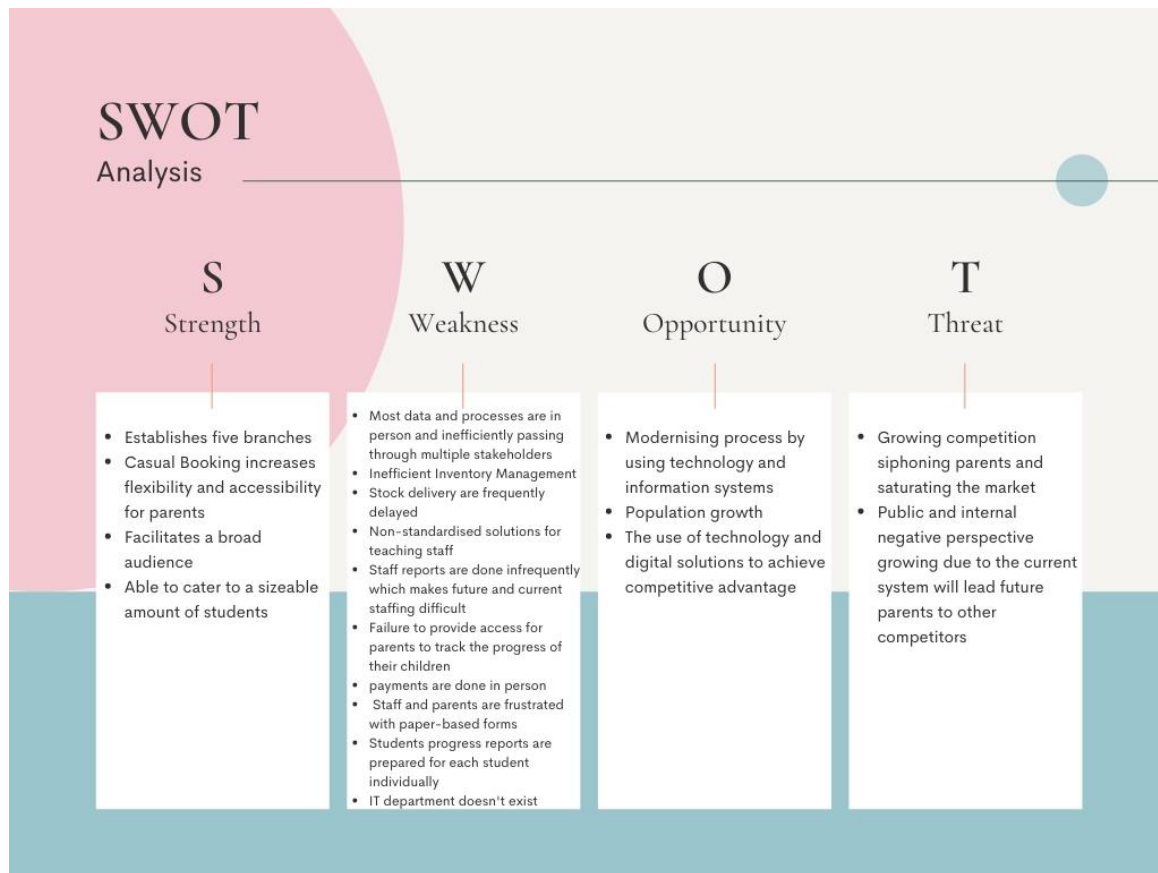


Figure 1 - SWOT Analysis

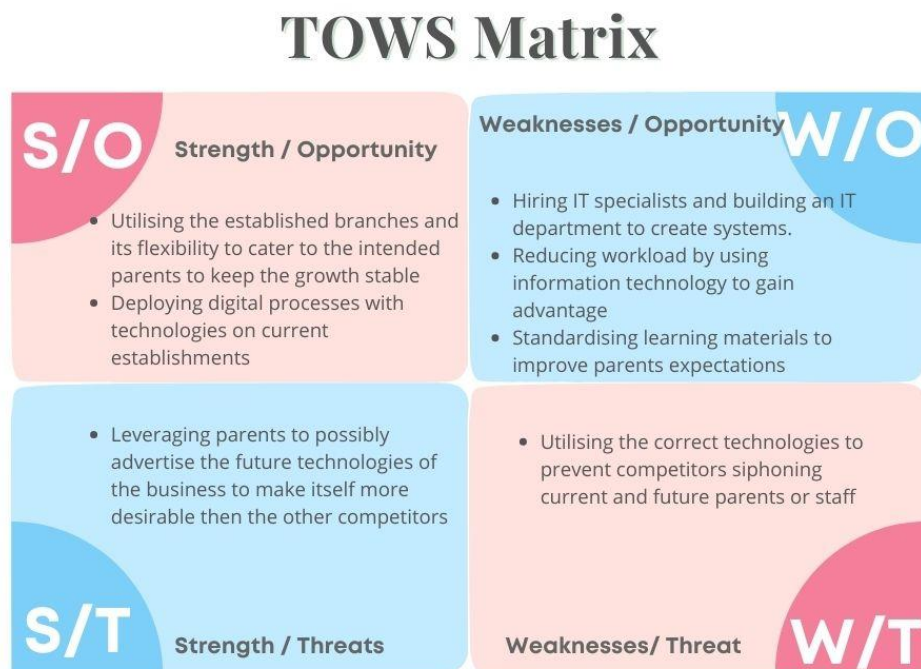


Figure 2 - TOWS Matrix for Needs Assessment

2.2 Stakeholder Analysis

| Stakeholder | Project Role | Facts Known | Levels of Interest | Influence | Suggestions on Managing Relationships |
|------------------------------------|----------------------|-----------------------------------|--|--|--|
| CEO | Sponsor | Interested in modern technologies | As the sponsor, she'll be very involved on the progress of the project | Very high. One of many that will influence the designs and scope of the project | Inform the progress of the project periodically. Concise documentation of the project. |
| Executive Management Team | Assessor | The same as the sponsor | The same as the sponsor | Very high. Like the CEO, they will be influencing the project a lot | Inform the progress of the project periodically. Keep the quality of the tasks up to professional standards. |
| Operations Manager | Information Provider | -- | Responsible for providing information on the organisation | High. Main provider of information about the operational structure of the organisation | Communicate needs properly. |
| HR Department/Administrator | Information Provider | -- | Interested in the new solution | High. Provide information and feedback about the system | Maintain a good relationship to the benefit of the solution |
| Business Analysts | Managers | -- | We are responsible for finding possible solutions | Very high. We are responsible for the project's progress. | -- |

| | | | | | |
|------------------------------|-------------------------------------|---------------------------------|--|--|--|
| Parents | End users of most of the processes | Frustrated for multiple reasons | Neutral. Don't particular care | Very High. Provide feedback about the system. | Utmost care in communicating the advantages of the future solution. Their feedbacks are crucial for the project's status |
| Competitors | Reference | Observant | Looking closely at what Little Stars is doing. | High. They will be used as a reference to the solution | Possible future client |
| Registered Suppliers | Observer | -- | Waiting for the new system. | High. They are part of the logistical problems | We need to provide them information about the changes |
| Government Regulators | Observer | -- | Interested with the project's compliance with the laws | Low – Medium. Indirectly involved with the project and may influence some decisions. | Maintain a good relationship to the benefit of the solution |
| Purchasing Officer | Information Provider/ System Tester | -- | Interested in the new solution | High. They are part of the logistical problems | Maintain a good relationship to the benefit of the solution |
| Branch Managers | Information Provider/ System Tester | -- | Interested in the new solution | High. They have information that they can provide | Maintain a good relationship to the benefit of the solution |

| | | | | | |
|---|-------------------------------------|---------------------------------|--|--|---|
| Supervisors | Information Provider/ System Tester | -- | Interested in the new solution | High. They have information that they can provide | Maintain a good relationship to the benefit of the solution |
| General Staff (Child's Room Leaders + Teachers + Caregivers) | System Tester | Frustrated on multiple reasons. | Interested in the new solution as the current one is inefficient | Very High. Provides feedback about the system. Important to please as they are more involved with the clients. | Made up of Child's Room Leader, Teachers, and Caregivers. Provide information about the benefits of the future solution |
| Administrators | Information Provider/ System Tester | -- | Interested in the new solution | Very high. Holds the physical records. | Maintain a good relationship to the benefit of the solution |
| Payment Clerks | Front-End System Feedback provider | Frustrated on multiple reasons. | Interested in the new solution | Very High. Provides feedback about the system. | Maintain a good relationship to the benefit of the solution |
| Receptionist (Counter Staff) | Front-End System Feedback provider | Frustrated on multiple reasons. | Interested in the new solution | Very High. Provides feedback about the system. | Maintain a good relationship to the benefit of the solution |

Table 2 - Stakeholders Profiles

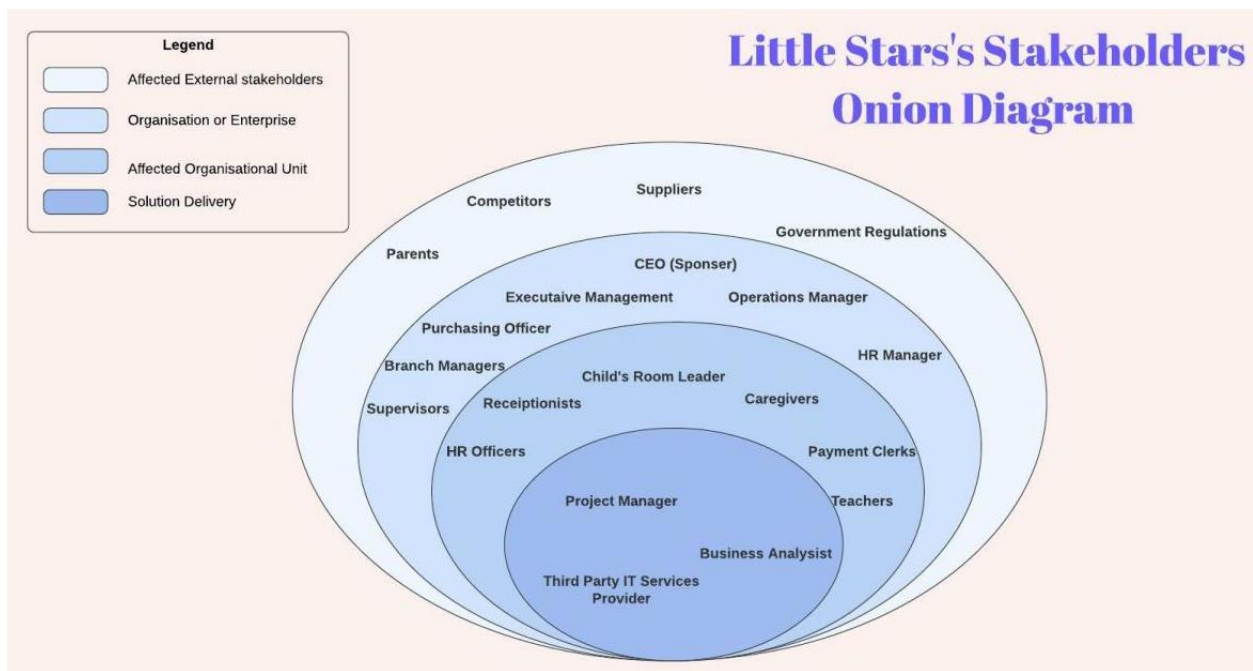


Figure 3 - Stakeholders Onion Diagram

| | Business Analyst | CEO/Sponsor | Executive Management | Branch Manager | Supervisor | HR Officer/Department | Operations Manager | Purchasing Officer | Registered Suppliers | Customer Service | General Staff | Parents | Government Regulations |
|---|------------------|-------------|----------------------|----------------|------------|-----------------------|--------------------|--------------------|----------------------|------------------|---------------|---------|------------------------|
| Evaluate Current Business State | R | A | C | C | C | C | C | C | C | C | C | C | |
| Identify the problem | R | A, C | C | C | C | C | C | C | C | C | C | C | |
| Conduct Risk Assessment | R | I | A | C | C | C | C | C | C | C | C | C | C |
| Recommend Solution | R | C | A | I | I | I | C | I | I | I | I | I | I |
| Assemble Business Case | R | I | A | I | I | I | C | I | I | I | I | I | I |
| Request Budget Allocation for the project | R | C | A | I | | | C | | | | | | |

| Legend | | | |
|-------------|-------------|---------|--------|
| Accountable | Responsible | Consult | Inform |
| A | R | C | I |

Table 3 - RACI Matrix

2.3 Root Cause Analysis

Root Cause Analysis is a systematic approach to analyse the main business problems in order to solve them (Gangidi, 2018). To analyse Little Stars' problems, the 5 Why technique (Table 4) and Fishbone Diagram (Figures 4, 5 & 6) are conducted as below.

| Problem: Little Stars are receiving complaints from Staff and parents | |
|---|---|
| BA | Why are staff and parents complaining? |
| Sponsor | Manual and Paper-based systems are making processes (such as fee payment, staff management etc.) very time consuming for all parties. |
| BA | Why are processes so time consuming? |
| Sponsor | All of our major processes need to be completed manually. |
| BA | Why are manual and paper-based processes used? |
| Sponsor | The business has not updated their processes to automatic systems. |
| BA | Why has the business not updated their systems? |
| Sponsor | Because our business has grown, and our Childcare centres and business processes are not yet connected. |
| BA | Why are these systems and processes not connected? |
| Sponsor | There is no automatic system to help manage our processes. |

Table 4 - 5 Whys Technique

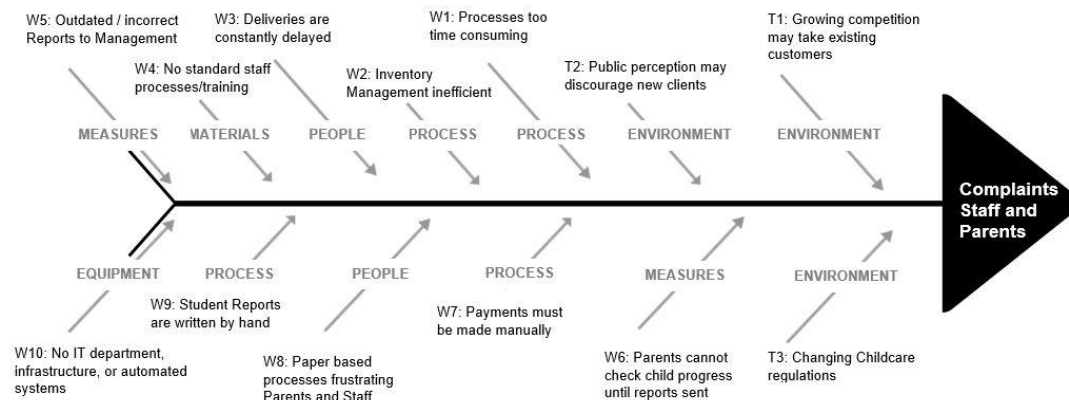


Figure 4 - Ishikawa Diagram using Weaknesses and Threats and Items classified into categories of similar concerns

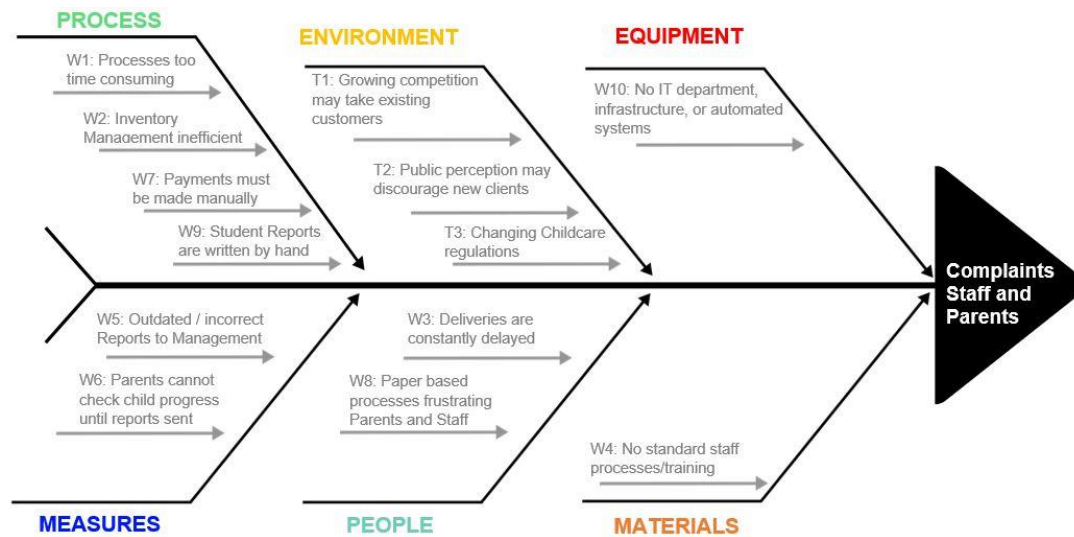


Figure 5 – Rearrangement of Threats and Weaknesses into groups by category

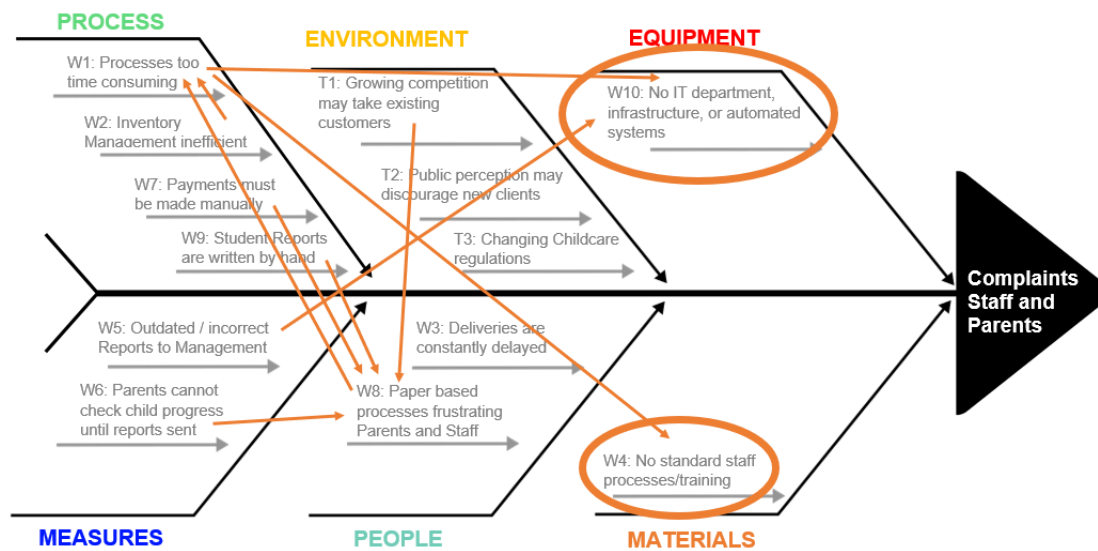


Figure 6 - Complete Ishikawa Diagram with Identified Root Causes

2.4 Capability Analysis & Gaps

Capability analysis is used to examine the business's root causes issues and spot out the gaps that may prevent the business from meeting its goals (Volyntseva, 2022). Table 5 illustrates the conducted capabilities analysis gap, which mainly focuses on making use of digital technologies and information systems to digitalise the processes and achieve efficient business processes for Little Stars.

| Problem/ Current Limitations | Root Causes | New Capabilities/ Features | Project Deliverables to Fill Gaps |
|--|--|---|---------------------------------------|
| Inefficient & ineffective processes | Processes are not integrated | Redesign business processes | Train staff in new business processes |
| | No formal IT support or infrastructure | Learning Management System (LMS) and Enterprise Resources Planning System (ERP) | Implement LMS |
| | | | Implement ERP |
| | | | Train staff in new systems |
| Reports delayed | Paper-based reports (Student reports and management reports) | Eliminate paper-based reports | Systems generate online reports |

Table 5 - Capability Analysis & Gaps

3.0 Requirements Elicitation

3.1 Elicitation Plan

3.1.1 Student's Special Arrangement Process – Diether Pastulero

| Information | Source | Method | Order |
|--|---|------------------------|-------|
| What do parents and staff think about the current process? | Parents Staff | Interviews Surveys | 5 |
| What is the current usage rate? | Main Office | Document Analysis | 4 |
| How much of the budget is allocated to this process? | CEO Executive Management | Meeting | 1 |
| What do parents/staff think they want to do? | Parents Staff | Observation Surveys | 6 |
| Functionalities required on the new system | Parents Executive Management CEO Staff | Surveys Meetings | 3 |

| | | | |
|---|--|---------------------|---|
| | Competitors | Competitor Analysis | |
| Is the organisation constructing an IT department to maintain the new systems? | CEO Executive Management HR Department | Meeting | 2 |
| | | | |

Table 6 - Student's Special Arrangement Process Elicitation Plan

Analysis summary

1. **“What do parents and staff think about the current process?”** – We need to know information about how people feel about the current process. The information we extract can be used to give us an idea to how we'll do the new process.
2. **“What is the current usage rate?”** – Document analysis to find how many parents engages with the system.
3. **“How much of the budget is allocated to this process?”** – The first question we ask in the meeting with the CEO and the executive management. It's to manage the construction of the system within the required constraint.
4. **“What do parents/staff think they want to do?”** – Although an end user doesn't necessarily know what they want, this will be used as a reference of what the new system could be.
5. **“Functionalities required on the new system”** – Documenting functionalities the business want should be a question asked early. This gives the scope for the system and what it wants to achieve.
6. **“Is the organisation constructing an IT department to maintain the new systems?”** – Knowing the feasibility of maintaining the system should also be something we need to know early. This tells us if the business will be able to work with more complex process or kept simple.

3.1.2 Staff Leave Management Process – Cham Jazdan

| Information | Source | Method | Order |
|--|--|---------------------------|-------|
| What is the allocated budget for this process? | CEO (Sponsor) | Interview | 2 |
| What is the impact of the current process on Little Stars employees? | HR Department Teachers Supervisors Branch Managers | Survey Observation | 4 |
| What does the business want to achieve with the new system? | CEO (Sponsor) | Interview | 1 |
| What are the difficulties with the current process? | Teachers HR Department Supervisors Branch Managers | Interview Survey | 3 |
| What are the employees IT Skills? | Teachers HR Department Supervisors Branch Managers | Survey Observation | 6 |
| What are the preferred capabilities and functionalities of the new system? | HR Department Teachers Supervisors Branch Managers CEO | Survey Interview | 5 |

Table 7 - Staff Leave Management Process Elicitation Plan

Analysis summary

1. **“What does the business wants to achieve with the new system?”** - First and foremost, it is critical to understand what the aim of the project to define the project scope.
2. **“What is the allocated budget for this process?”** - Second, we need to know the budget to restrict the suggested solutions to fit into the allocated budget.
3. **“What are the difficulties with the current process?”** - This question lays the foundation for the new proposed solution. By addressing the difficulties the current process users are going through, it will help us with finding the solutions that will eliminate the difficulties.
4. **“What is the impact of the current system on Little Stars employees?”** - It is critical to understand how the current process is impacting its users and find solutions to Little Stars that will improve their productivity and eliminate the impacts.

5. **“What are the preferred capabilities and functions of the new system?”** - To find the solution that fit the stakeholders' expectations, it is important to understand what they are looking for in the new system and what they are expecting the system to provide.

6. **“What are the employees IT skills?”** - Currently, Little Stars does not have an IT department. To implement a digital solution, it is significantly important to understand what the IT skills capabilities of Little Stars employees are and find solutions that fit with their skills.

3.1.3 Staff Record Management Process – Brian Kim

| Information | Source | Method | Order |
|---|--|-----------------------|-------|
| What makes staff record management process inefficient? | HR department administrator | Survey | 2 |
| What kind of things HR department needs to manage staff record? | HR department administrator | Requirements workshop | 3 |
| How will digitalisation effect on management process? | HR department administrator Centre administrator Executive management team | Requirements workshop | 5 |
| How much do employees get stress with paper-based process? | Staffs (Employees) | Survey | 6 |
| What kind of functionalities of digitalised staff record management system is required? | HR department administrator | Survey | 4 |
| How can we fix future staff planning easier and precise? | HR department administrator | Brainstorming | 7 |
| What is the main goal of this project | HR department administrator Executive management team | Requirements workshop | 1 |

Table 8 - Staff Record Management Process Elicitation Plan

Analysis summary

1. **“What makes staff record management process inefficient?”** – It is required to understand how HR department feels uncomfortable with current staff record management process. This can be a basic information prior to deliver new process.

2. **“What kind of things HR department needs to manage staff record?”** – This question is to understand specific process to manage staff personal information driven by HR department.
3. **“How will digitalisation effect on management process?”** – It is needed to understand expectation of toward new staff record management process via digitalisation.
4. **“How much do employees get stress with paper-based process”** – It is required to understand how employees feel uncomfortable with current system and how it affects to their work efficiency.
5. **“What kind of functionalities of digitalised staff record management system is required?”** – It is required to understand what functions they want to use within the new process.
6. **“How can we fix future staff planning easier and precise?”** – It is important to understand future staff planning process and get some idea to improve. As future staff planning is strongly linked to staff record management, it is expected to understand stakeholder’s needs.
7. **“What is the main goal of this project”** – The first question is to ask scope of this project and what stakeholders expect.

3.1.4 Inventory Management Process – Dennis Edmunds

| Information Required | Source | Method | Order |
|--|--|-------------------------------------|-------|
| Gather staff experiences with Inventory processes from internal stakeholders | Teachers, Staff, Carers Supervisors, Room Leaders Executive Management Operations Manager | Group session Survey | 3 |
| Measure skills and technical capabilities of the Purchasing Officer | Purchasing Officer | Observation Interview | 6 |
| Identify current processes and business rules for ordering, tracking and managing stock levels | Executive Management Operations Manager Purchasing Officer | Interview Technical Documents | 4 |
| What are the deliverables we want to measure for our Inventory Management Process | CEO Executive Management | Interview Desktop study | 1 |
| What tools and software are you currently using for your existing Inventory Management Solution | Purchasing Officer Operations Manager | Survey Technical Documents | 5 |
| What are our KPIs (Key Performance Indicators) for the process | Operations Manager Executive Management | Interview | 2 |
| Exceptions to process | Purchasing Officer | Interview | 7 |

Table 9 - Inventory Management Process - Elicitation Plan

Analysis summary

The above table referenced highlights findings which are expected to be obtained by means of elicitation. The following denote the process intended to be taken by the team, in order of process.

1. Initial plan shall be a desktop study of the business and its working environment. This will begin by identifying deliverables from CEO and Executive Management
2. Key Performance indicators to be discussed with Exec Management and Operations to determine appropriate deliverables for project
3. Conduct survey to ascertain business experience with existing process. This will seek to determine any unknown variables and highlight any exceptions to process through survey/questionnaire.
4. Discuss relevant business rules and constraints with Execs, Operations and Purchasing Officer and review existing technical documentation to understand existing process.
5. Learn about relevant software or tools used to manage inventory as part of “As-is:” process
6. Assess technical skills of Purchasing Officer to highlight any specific capability gaps
7. Identify any exceptions to existing process following interviews, questionnaires, observation. This shall ensure all parts of existing process are fully identified and will assist with providing a comprehensive solution.

3.2 Data Collection Techniques

3.2.1 Student's Special Arrangement Process – Diether Pastulero

Survey Questionnaire [Parents]

Submit form to the tray beside the reception

How often do you submit a special request in a monthly basis? (Tick one)

- ☐ 15+
- ☐ 10-14
- ☐ 5-9
- ☐ 1-4
- ☐ None

Around how many of those are done through calling the centre?

What are possible reasons which made you call the centre instead? Number the importance (e.g., 1 = highest) of the selections that is relevant to you.

- | | |
|--|---|
| <input type="checkbox"/> Didn't know the forms exist | <input type="checkbox"/> Forgotten |
| <input type="checkbox"/> Convenience | <input type="checkbox"/> Busy/missing staff |
| <input type="checkbox"/> Late to work | Other: _____ |

How satisfied are you with the procedure overall?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> Neutral |
| <input type="checkbox"/> Somewhat Satisfied | <input type="checkbox"/> Somewhat Dissatisfied |
| <input type="checkbox"/> Very Dissatisfied | |

Were there any cases where you knew the request wasn't fulfilled? If so, can you write down the most egregious case?

How often do you use applications on your phone/computer?

- | | |
|---|--|
| <input type="checkbox"/> Very often | <input type="checkbox"/> Somewhat rarely |
| <input type="checkbox"/> Somewhat often | <input type="checkbox"/> Very rarely |

Figure 7 - Student's Special Arrangement Process - Parents Survey Questionnaire

Survey Questionnaire [Staff]

Submit to tray behind reception

Job _____
Title: _____

How often do you miss out on reviewing the general board during the mornings?

- | | |
|--|--|
| <input type="checkbox"/> Very likely | <input type="checkbox"/> Very unlikely |
| <input type="checkbox"/> Somewhat likely | <input type="checkbox"/> Somewhat unlikely |

How do you feel about the current procedure for handling the arrangements?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> Neutral |
| <input type="checkbox"/> Somewhat Satisfied | <input type="checkbox"/> Somewhat Dissatisfied |
| <input type="checkbox"/> Very Dissatisfied | |

Is the special arrangement form adequate to prevent confusion on fulfilling most requests?

- | | |
|------------------------------|----------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Neutral |
| <input type="checkbox"/> No | |

How do you feel about parents calling their request in, throughout the day?

- | | |
|---|--|
| <input type="checkbox"/> Very Satisfied | <input type="checkbox"/> Neutral |
| <input type="checkbox"/> Somewhat Satisfied | <input type="checkbox"/> Somewhat Dissatisfied |
| <input type="checkbox"/> Very Dissatisfied | |

How confident are you with learning new technologies?

- | | |
|---|---|
| <input type="checkbox"/> Very Confident | <input type="checkbox"/> Neutral |
| <input type="checkbox"/> Somewhat Confident | <input type="checkbox"/> Somewhat Difficult |
| <input type="checkbox"/> Very Difficult | |

Figure 8 - Student's Special Arrangement Process - Staff Survey Questionnaire

Survey Questionnaire Analysis

The survey's purpose is to gain further insights on both parents and staff who engages with the system. The anonymity gives them the leniency to answer the questions without getting pressured to answering in a certain way. Both surveys gauges further insights of the problems identified. They were asked certain questions which helps us make decisions on things to change like making

use of technologies. Knowing the numbers of staffs and parents' usage of technologies conveys the needs for them to be able to use the technologies. The surveys also act as a reference as we need to make sure that what we observed and analysed are similar to the responses the survey will get.

The persona below highlights the key problems from the workers. It give further understanding and scope of the problems by simulating a person.


| Persona | Sarah Cully |
|--|---|
|  | Gender: Female Age: 25 Motivations: Sarah is a nursery teacher working full time. She consistently tries to finish the arrangements to the best of her abilities but have been missing some every now and then. She would love to reduce her workload but doesn't know what she can do to make her workflow faster. |
| | |
| Goals | Frustrations |
| <ul style="list-style-type: none"> - Getting clarity from the parents about the arrangements - Fulfilling requests to the - Reviewing the board to not miss any arrangements | <ul style="list-style-type: none"> - Parents calling mid-day disrupting the workflow - Heavy workload makes finishing tasks so much harder - Medications all over the place. |

Table 10 - Sarah Cully Persona

3.2.2 Staff Leave Management Process – Cham Jazdan

The aim of the survey is to collect data from employees who either submit the leave forms, or who process the application approval, to get more insight about the current process and how to improve it.

Three surveys were sent out to the business, [Leave Process – Staff Survey Questionnaire](#) (Figure 9) which was sent out to all Little Stars employees, [Leave Process – HR Department Survey Questionnaire](#) (Figure 10) that was only sent out to the HR employees, which includes HR officers and the HR manager, and [Leave Process – Management Survey Questionnaire](#) (Figure 11) which was sent out to each branch manager and all supervisors.

The survey was sent out to all employees of Little Stars, with the responses being anonymous to us, as it will help the employees who are responding to the survey to be more transparent with their respond to the questions, and they will be more able to provide honest feedback.

The questionnaires go into the details of the current process, to get more data on how each stakeholder deals with it. There are questions about the struggles with the current process, and how these have impacted them in different ways. The main purpose is to get to the roots of the issues and define solutions to address all stakeholders' requirements.

Leave Process - Staff Survey Questionnaire

We are conducting this survey seeking your feedback and ideas related to the current Leave process, based on your experience in Little Stars.

The Survey is confidential and anonymous, so please feel free to share your experience and thoughts.

The results will be used in identifying the current gaps within the process, and the areas needs to be improved.

This survey will take around 10 - 15 minutes to complete, and we are seeking your response by close of business 30/04/2022

Thank you for your time and effort!

[Sign in to Google](#) to save your progress. [Learn more](#)

***Required**

Are you: *

☐ Full-time employee

☐ Part-time employee

In the past 12 months, have you raised a leave request form? *

☐ Yes

☐ No

How many days in advance do you need to apply for a leave request before your leave date? *

☐ 1 - 10 Working Days

☐ 11 - 20 Working Days

☐ 21 - 30 Working Days

☐ More than 31 working days

On a scale from 1 to 5, how was your experience? *

1 2 3 4 5

Bad ☐ ☐ ☐ ☐ ☐ Excellent

What are the difficulties you went through with the current process? *

You can provide more than one difficulty

Your answer

Has any of your submitted leave requests got rejected, or not fulfilled? *

☐ Yes

☐ No

If known, what are the reasons your request got rejected, or was not fulfilled? *

You can select more than one option

☐ Could not find a suitable substitute

☐ Could not get the request approved by the intended time

☐ One of the approvers was on leave

☐ The paper form got lost

☐ Other: _____

How did the experience impacted you?

The impact can be on your work, or personal life

Your answer

If we are looking into implementing a digital system for the Leave Request, what are the features you wish to be available with the system? *

You can select more than one feature

☐ Finding your substitute

☐ Send reminders to the next approver

☐ Show you colleagues calanders

☐ Show your current leave balance

☐ Other: _____

Have you ever used a web-based application to submit a request? *

It does not have to be in a work context

☐ Yes

☐ No

☐ Not sure

On a scale from 1 to 5, how confident are you with using technology and digitalised forms? *

1 2 3 4 5

Not Confident ☐ ☐ ☐ ☐ ☐ Very Confident

Submit [Clear form](#)

Figure 9 - Leave Process - Staff Survey Questionnaire

After collecting the data for Leave Process Staff Survey Questionnaire (Appendix 7.1.1), the results illustrate that the leave process is insufficient in many areas. Employees have difficulties finding a suitable substitute to cover for

them during their leave, and many employees experienced insufficient processing time for their applications, which was not fulfilled by the leave intended time. Moreover, as they are submitting paper-based forms to the HR department, and the form needs to be approved by multiple managers, it is noted that the paper-form may get lost in transition between approvers. These issues are causing the employees stressful working environment which conflict on their personal life and families.

The survey also touched bases on the employees' technology skills, and if they have any experience with submitting web-based forms. The results show that the employees are comfortable with using web-based forms, and they have experienced submitting a web-based or digitalised forms.

Leave Process - HR Department Survey Questionnaire

We are conducting this survey seeking your feedback and ideas related to the current Leave process, based on your role in the HR department.

The Survey is confidential and anonymous, so please feel free to share your experience and thoughts.

The results will be used in identifying the current gaps within the process, and the areas needs to be improved.

This survey will take around 5 - 10 minutes to complete, and we are seeking your response by close of business 30/04/2022

Thank you for your time and effort!

[Sign in to Google](#) to save your progress. [Learn more](#)

***Required**

On monthly basis, around how many Leave Request forms do you receive? *

☐ 1 - 5 Requests

☐ 6 - 10 Requests

☐ 11 - 20 Requests

☐ More than 21 Requests

How you you find the HR department handling the current process *

☐ sufficiently

☐ Neutral

☐ Insufficiently

What makes the current process insufficient to the HR department? *

Your answer

If we are looking into implementing a digital system for the Leave Request, what are the features you wish to be available with the system? *

Your answer

On a scale from 1 to 5, how confident are you with maintaining and managing digitalised forms? *

1 2 3 4 5

Not confident ☐ ☐ ☐ ☐ ☐ Confident

Figure 10 - Leave Process - HR Department Survey Questionnaire

Based on the results of the HR department survey (Appendix 7.1.2), overall, the HR department is frustrated with the current process. The process adds workload to the HR department in

multiple aspects. The survey showed that the HR department receive phone calls daily to check the staff's current leave balance, which can be frustrating and distracting to the HR department. Moreover, the HR department is struggling with tracking the “in-progress” leave requests, to follow up with the current approver, and with maintaining the fulfilled requests securely. Paper-based forms can get lost in transition, and this is causing issues with the integrity of the HR department reports.

Also, the results show that the HR department has some to limited knowledge in managing and maintaining web-based systems and platforms.

Leave Process - Management Survey Questionnaire

We are conducting this survey seeking your feedback and ideas related to the current Leave process, based on your experience being an approver of the applications.

The Survey is confidential and anonymous, so please feel free to share your experience and thoughts.

The results will be used in identifying the current gaps within the process, and the areas needs to be improved.

This survey will take around 5 - 10 minutes to complete, and we are seeking your response by close of business 30/04/2022

Thank you for your time and effort!

[Sign in to Google](#) to save your progress. [Learn more](#)

***Required**

On a scale from 1 - 5, how is your experience with the current Staff Leave Request process? *

1 2 3 4 5

Bad ☐ ☐ ☐ ☐ ☐ Excellent

If there is any, what are the difficulties you you experienced, as an approver to the forms? *

Your answer

How did this impact you? *

The impact can be on your work or personal life

Your answer

If we are looking into implementing a digital system for the Leave Request, what are the features you wish to be available for the approvers with the system?

Your answer

On a scale from 1 to 5, how confident are you with using technology and digitalised forms?

1 2 3 4 5

Not confident ☐ ☐ ☐ ☐ ☐ Confident

Figure 11 - Leave Process - Management Survey Questionnaire

The management is also struggling with the current process, based on the results for the survey (Appendix 7.1.3). Their frustration can be summarised with maintaining past and current request forms and caring for the staff wellbeing.

It has been noted that the management is concerned about the process time to get a leave request approved, and this is affecting the staff wellbeing and performance.

The management is looking for a digitalised solution, that can help them with maintaining the staff requests, producing reports, and saving the staff requests securely to increase their staff morale and productivity.

3.2.3 Staff Record Management Process - Brian Kim

Survey Method

According to the elicitation provided above, survey methods will be used to analyse problems that current staff record management process has. To collect data, two different surveys will be delivered to different stakeholders, HR management team and staff. It will be asked how HR management team feel about current process and degree of inefficiency. Furthermore, through the survey, expectation on this project can be collected so that project scope and improvement points can be decided. For staff in Little Stars, they will be asked inefficient work due to current paper-based process. It is expected to save time with this method as it is possible to get various responses at the same time.

(Survey) [Staff Record Management – HR Department Link](#)

| | |
|--|---|
| <p>How much do you feel the current process is inefficient?</p> <p>1 2 3 4 5</p> <p>Very low <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Very high</p> <hr/> <p>What makes current staff record management process inefficient?</p> <p><input type="radio"/> Paper-based work</p> <p><input type="radio"/> Too many items in the form</p> <p><input type="radio"/> Inconsistent update issue</p> <p><input type="radio"/> Paper record storage</p> <p><input type="radio"/> Information loss</p> | <p>Provide other difficulties with staff record management process</p> <p>Your answer <input type="text"/></p> <hr/> <p>What can be done if information loss or incorrect issues occurs?</p> <p>Your answer <input type="text"/></p> <hr/> <p>In the current staff record management process, which one is the most overloaded and inefficient?</p> <p><input type="radio"/> Maintain 300 employees detail records</p> <p><input type="radio"/> Produce monthly report for executive management team</p> <p><input type="radio"/> Update every single staff record after they finish professional development programme</p> <p><input type="radio"/> Edit or reorganise because of wrong information of employees</p> <p><input type="radio"/> Future staff planning for the school</p> |
| Section 1 | Section 2 |

| | |
|---|--|
| <p>Is paper-based process stressful when handling every change of staff detail?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Maybe</p> <hr/> <p>Do you feel uncomfortable when preparing report for executive management team?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Maybe</p> <hr/> <p>Is there any strong point of current staff record management process?</p> <p>Your answer _____</p> | <p>What kind of functionalities of digitalised staff record management system are required? (Max 3 items)</p> <p><input type="checkbox"/> Auto report generation (Monthly)</p> <p><input type="checkbox"/> Accessibility to report for executive management team</p> <p><input type="checkbox"/> Staffs can update any changes themselves</p> <p><input type="checkbox"/> Staff professional skills management</p> <p><input type="checkbox"/> Professional development programme alert for each staff</p> <p><input type="checkbox"/> Overview and analysis report for future staff planning</p> <p><input type="checkbox"/> Incorrect or outdated information issue report</p> <hr/> <p>Provide other functionalities you want to add</p> <p>Your answer _____</p> |
| Section 3 | Section 4 |

Figure 12 - Staff Record Management - HR Department Survey

Between section 1 and 3, HR Department administrators were asked to provide feedback on current paper-based staff record management. In section 2, the questionnaires focus on what they should do when they face information loss and the most inefficient job among their responsibilities provided in the scenario. Also, the project team needs to know how much stress that HR department gets when preparing monthly report based on the paper-based staff record were asked in the following section. In the last section, the project team tried to get their expectations of new system delivered after the project ends. So the teams asked which functions would be good to be included in a further solution.

(Survey) [Staff Record Management – Staff Link](#)

| | |
|--|--|
| <p>Have you repeated same paperwork task because of incorrect or outdated information?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Maybe</p> <hr/> <p>How much stressful with paper-based staff detail recording process?</p> <p>Very low 1 2 3 4 5 Very high</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> | <p>How much do you feel the current process is inefficient?</p> <p>Very low 1 2 3 4 5 Very high</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> <hr/> <p>In terms of efficiency, does this process affect to your own work at Little stars?</p> <p>Not so much 1 2 3 4 5 Very much</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> <hr/> <p>In terms of satisfaction of efficiency, how will digitalised staff record management system affect?</p> <p>Low 1 2 3 4 5 High</p> <p><input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> |
| Section 1 | Section 2 |

Figure 13 - Staff Record Management - Staff Survey

The survey was sent to all staffs via email they are currently using at the company. The questionnaires focus on how current staff records management process affects to their work efficiency. As the current system is paper-based one, sometimes they need to submit their

information twice if there is data loss or wrong information. Since they have to participate in the professional development programme regularly and they need to update themselves, the project team thought it is one of the worst things that the system has. With this survey, it was expected to see how much people think an improved process is needed.

Survey Questionnaire for HR Department Link

(Result) [Staff Record Management – HR Department](#) (Appendix 7.2.1)

Currently, HR department administrators are struggling to deal with the staff record management system. The result of the survey says there needs to convert current system into digital one. Also, there is no precise manual regarding to information loss. The administrators answered differently so that the project team can see that guidelines needed. Also, the administrators provided various idea for future system with functions that they want to have in the future to be more efficient.

Survey responses of Staff Link

(Result) [Staff Record Management – Staff](#) (Appendix 7.2.2)

The statistical result of survey for staff shows that most of employees are struggling with the current staff record management system. They wish to have a new system so that they can focus on their own job without any interruption by error of the current system. This result will be supportive evidence that the paper-based staff record management system needs to be changed.

Workshop Method

The workshop method for data collection is effective one to scope, define, analyse, and prioritise stakeholder's requirements. By attending a workshop, the project team can get clarify what makes the current process inefficient and how to solve the problems. It is expected to understand current staff record system deeply so that the project team can analyse each stakeholder's requirements.

| | |
|-------------------|---|
| Agenda 1 | Q. What kind of things should be done when HR department manages staff record? |
| | Item: - Introduction: Purpose of workshop (30minutes) - Activity: Post HR department's tasks using post-it (1hour) - Discussion: Find bad process(task) from activity (1hour) - Closing: Sum-up (30minutes) |
| Attendees | HR department administrator |
| Time/Place | Running Time: 3 hours Place: Little Stars Meeting Room |

| | |
|---|--------------|
| Workshop Method (Virtual / Face to Face) | Face to Face |
|---|--------------|

Table - Staff Record Management - Workshop Agenda 1

In this activity, some bad processes or tasks could be found;

- Checking more than a hundred of paper sheet before they produce monthly report (Time consuming)
- Checking professional development programme regularly in manually (Time consuming & inefficiency)

| | |
|---|---|
| Agenda 2 | Q. How will digitalisation effect on management process? |
| | Item: - Introduction: Purpose of workshop (30minutes) - Activity: Prototyping (applying stakeholders' requirements) (2hours) - Activity: Pretend working with digitalised process (2hours) - Discussion: Find good / bad points of the process from activity (1hour) - Closing: Sum-up (30minutes) |
| Attendees | HR department administrator Centre administrator Executive management team |
| Time/Place | Running Time: 6 Hours Place: Little Stars Meeting Room |
| Workshop Method (Virtual / Face to Face) | Face to Face |

Table - Staff Record Management - Workshop Agenda 2

First activity (Prototyping): Figure out which requirements can be included in the system.

Second activity (Pretending): Pretend if working with digitalised process brought from first activity. Benefits are provided below;

- Save time
- Increase work efficiency
- Generate monthly report automatically
- Search staff record on the system

There was discussion section to share their ideas which one was helpful, and which one was downside. Based on this discussion, the new process can be delivered appropriately.

| | |
|-----------------|--|
| Agenda 3 | Q. What is the main goal of this project? |
| | Item: |

| | |
|---|---|
| | <ul style="list-style-type: none"> - Introduction: Purpose of workshop (30minutes) - Discussion: Problem of current staff records management system (30minutes) - Discussion: Find how to deal with problems (1hour) - Discussion: Expectation after the project ended (30minutes) - Closing: Sum-up (30minutes) |
| Attendees | HR department administrator Executive management team |
| Time/Place | Running Time: 3 hours |
| Workshop Method (Virtual / Face to Face) | Virtual (Zoom Meeting) |

Table 13 - Staff Record Management - Workshop Agenda 3

This workshop was to set a scope for this overall project. The participants were asked what expectations they have for end of this project. The summary of discussion provided below;

- Effective process is needed (Digitalisation) for easier and more precise work can be done

Brainstorming Method

The brainstorming method is expected to get answer for specific questions rapidly within a limited time. This method can be used not for broad spectrum but narrow one. It is possible to prevent potential future issues or unknown needs or processes. Also many stake holders can provide different idea with one topic.

| Question | How can we fix future staff planning easier and precise |
|---|--|
| Participants | HR department administrators (10 People) |
| Place | Little Stars Meeting Room |
| Running Time | 2 hours + 10 minutes coffee break |
| Time Schedule (2 hours + 1 hour) | 5 minutes – Brainstorm on their own before bringing ideas 50 minutes – First session conduction (Current staff planning) 10 minutes – Coffee break 50 minutes – Second session conduction (Future staff planning) 5 minutes – Conclusion 1 hour – Refinement <ul style="list-style-type: none"> - Gather ideas into one thought - Create a list of results, and distribute it to all for review |
| Caution | 1. Do not limit creativity, free association, or the number of ideas 2. Record all idea in plain view of the entire group |

Table 14 - Staff Record Management - Brainstorming Method

HR department administrators participated in the brainstorming section to share their ideas to improve future staff planning. Through this activity, the main idea was;

- Storing all staff information in the database
- Create a system to retrieve them to produce monthly report
- System that assists conducting future staff planning.

The brainstorming section was helpful to gather various ideas within limited time. After finishing the activity, all ideas were saved and prioritised them prior to the new process development.

3.2.4 Inventory Management Process – Dennis Edmunds

In order to gather a varied field of information to understand the needs of the business and how to improve this process, multiple data collection techniques have been utilised. These included:

- **Desktop analysis** – For the purpose of understanding a multitude of factors for the business/domain, a review of the current social and economic perspectives has been conducted to assist in understanding the context of the needs of the business and a means to measure the success of the delivered outcomes.
- **Interviews** – To obtain specifics such as deliverables from CEO and Executive Management, structured interviews have been conducted in real-time. This critical part of the elicitation process provides direct answers to our specific questions for understanding the sponsor's business needs and KPIs.
- **Survey / Questionnaire** – Where interviews are impractical to gather information from a wider perspective, and to minimise impact on staff and the overall business, a survey was utilised consisting of 11 questions, aimed at gathering the common experiences of the staff across the Little Stars Group when ordering Inventory. By understanding different aspects of the process, and how the As-Is process functions for those who use it in varying levels, this is a highly useful medium to extract key information from staff with a minimum of disruption of their day-to-day activities.
- **Observation** – In order to get an understanding of the full scope of responsibilities and activity of the group Purchasing officer, active observations have been carried out to confirm regular tasks but also to identify any failure conditions or exceptions for process updates.
- **Technical Documents** – Little Stars Group technical documentation provided by Operations Manager and Exec management has been critical in understanding existing process and shall form a basis of what is required in updated process such as deliverables for any recommendations made.

NOTE: The Questionnaire data collected for this section is available in the Appendices section (7.1) of this report.

Inventory Management Process - Survey questionnaire

Inventory Systems Questionnaire

Little Stars Group

dennisedmundsau@gmail.com (not shared) [Switch accounts](#) [Draft restored](#)

In your role at Little Stars Group, have you ordered any equipment or supplies in the last 18 months?

☐ Yes

☐ No

If yes, how many times have you placed orders in the same time period (last 18 months)

1 2 3 4 5 6 7 8 9 10

One ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Ten (or more)

What would you estimate the TOTAL monetary value of your requests at over the last 18 months?

Choose

Have you ever had a request lost or not actioned before?

☐ Yes

☐ No

On average, what amount of time does it take you to complete EACH inventory request?

more than 30 minutes

On average, what amount of time does it take for approval of an inventory request?

4 hours to 1 day

Assuming your request is approved, how long does it take for the Inventory you have requested to arrive?

☐ Less than a day

☐ One Day

☐ Two Days

☐ Three Days

☐ Four Days

☐ Five Days or more

Has delayed arrival of Inventory you requested affected your work before?

☐ Yes - Major Impact (some of your work could not proceed, or caused problems elsewhere)

☐ Yes - Minor Impact (inconvenienced, but could still complete other tasks)

☐ No

On a scale of Zero to Ten, how satisfied are you with the current Inventory Request Process?

0 1 2 3 4 5 6 7 8 9 10

Very unsatisfied ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very satisfied

Do you believe the process of requesting Inventory should be simpler / more efficient?

☐ Yes

☐ No

Do you have any general feedback or information on the existing Inventory Management process which you would like to pass on?

Your answer

Figure 14 - Inventory Management Process Questionnaire

Inventory Management Process - Summary analysis

A survey was conducted of centre staff who are directly involved in the inventory management process. Surveys were conducted across all branches of Little Stars' operations, with a total of 12 responses received.

The majority of respondents (91.7%) have used the inventory management process over the last 18 months. The number of orders placed in the last 18 months varied across the group. The elicitation results from the survey have shown that:

Of the 12 staff members surveyed.

- **Over 91% (91.7%) of respondents had ordered supplies or equipment**, which tells us that from sample size almost all of the group's staff were involved with the inventory management process in some capacity.
- **Staff place a wide quantity of orders** ranging from 1 to 10+ in their various roles in the group.
- **A wide range of estimated total value of orders were placed** across the sample which ranged from less than \$500 to more than \$20,000. This data demonstrates that staff use the system for orders of many different
- **16.7% of staff reported to having their request either lost or not actioned** before. This is not uncommon in manual processes and tends to be lower with automated processes due to the removal of human error ⁽⁴⁾.
- **72.7% of respondents took more than half an hour** to place a single order.
- **91% of respondents have had their tasks impacted due to their orders arriving late.**
- **100% of respondents indicated the process of ordering should be more efficient.**

Summary

The range of data collected from various sources as part of the elicitation process indicated some interesting results. The current ("As-Is") process is widely utilised across the group, with a wide variety of orders being placed both in quantity, and value. A significant portion of these orders have been either lost or not actioned, with many respondents stating the process of ordering equipment or supplies took a half an hour or more for each order placement. Nearly all indicated that their orders were arriving late, as a result had impacted their work in some form. All respondents indicated that the process needs to be made more efficient which is overall looks to be a cause for concern.

For further information on the collected data, please reference section 7.3 of this document (appendices).

3.3 Business Requirements

3.3.1 Student's Special Arrangement Process – Diether Pastulero

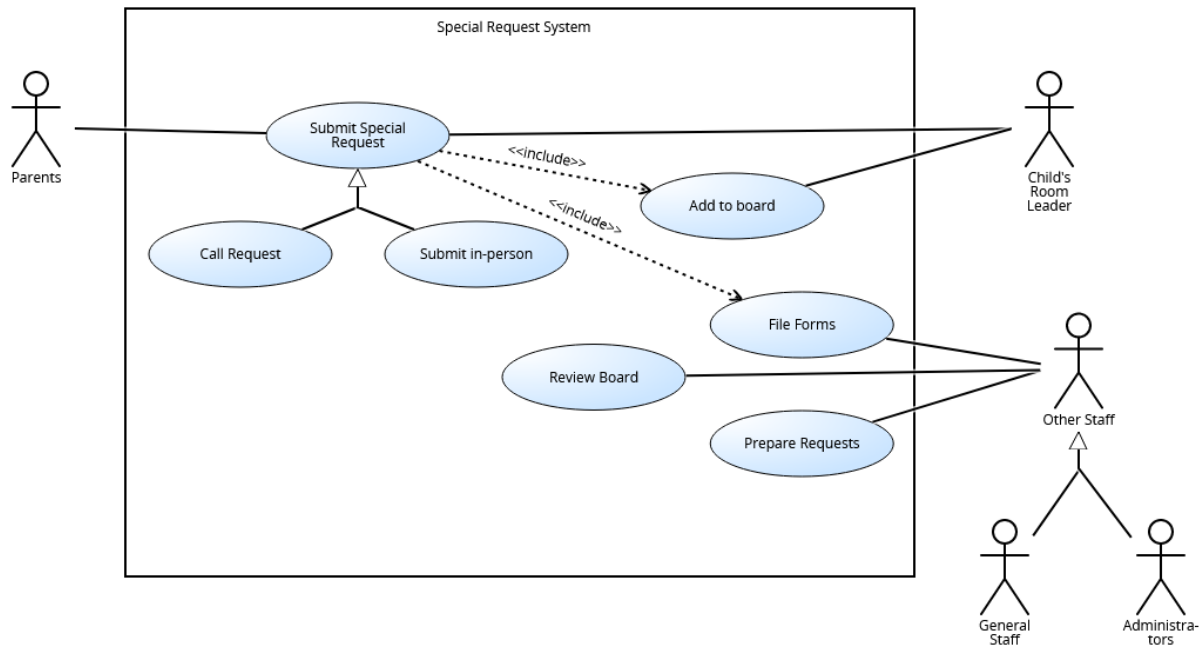


Figure 15 - Student's Special Arrangement - Business Use Case

Brief Description

The use case diagram conveys the process of parents arranging request for their children. The organisation is depicted on the right while the clients are depicted on the left. The process begins with 'Submit Special Request' which has 'Call Request' and 'Submit in-person' as a generalisation since both ends with the same outcome. 'Add to board' and 'File Forms' are use cases that will only really happen after a parent submitted a form.

3.3.2 Staff Leave Management Process – Cham Jazdan

| ID | User Story |
|------------|---|
| So1 | As a Branch Manager , I want to access all the current leave applications, so that I can produce reports for the branch effectively. |
| So2 | As a Branch Manager , I want to receive reminders about the outstanding approvals I have, so that the staff leave requests can be processed in a timely manner. |
| So3 | As a HR Manager , I want all of the submitted leave forms (past and current) to be maintained and saved on a cloud-based platform, so that the HR department can access the forms effectively. |
| So4 | As a HR Officer , I want to be able to delegate staff member's responsibility to a suitable substitute, so that outstanding forms can still get approved even when an approver is on leave. |
| So5 | As a HR Officer , I want the staff leave record to be maintained digitally, so that the data will be efficiently protected and secured. |

| | |
|------------|--|
| So6 | As a HR Officer , I want staff members to be able to access their leave balance, so that I can reduce my workload and increase my productivity. |
| So7 | As a HR Officer , I want to be able to track each leave form's status, so that I can get the form processed in a timely manner |
| So8 | As a Supervisor , I want to access the current and previous leave applications of my reporters, so that I can effectively track and manage their leave. |
| So9 | As a Staff Member , I want to be able to see my colleagues' availability schedule on a platform, so I can plan my leave based on that. |
| S10 | As a Staff Member , I want to have access to my previous leave applications, so that I can track my leave days balance. |

Table 15 - Staff Leave Management - User Stories

3.3.3 Staff Record Management Process - Brian Kim

| ID | User Story |
|------------|--|
| So1 | As a HR administrator , I want paper-based monthly report to be digitalised So that I do not have to produce it monthly |
| So2 | As a HR administrator , I want paper-based staff detail management to be digital-based one So that I do not have difficulty for managing staff information with paper |
| So3 | As a HR administrator I want staff planning to be easier without incorrect or outdated staff detail information So that I do not have to reorganise or fix wrong information manually |
| So4 | As an executive manager I want to receive precise information report without any error So that I do not have to request HR department to produce another one |
| So5 | As a HR administrator I want to be more effective in terms of update any changes for staff So that I do not have to check every change and update and focus on my job |
| So6 | As a staff of Little Stars I want my staff information to be kept correctly without outdated or wrong information So that I do not have to provide my detail again which makes me waste my time and not to focus on my job properly |
| So7 | As a centre administrator I want to work more efficient So that I can provide a proper service to customer without any mistakes |
| So8 | As a HR administrator I want self-update and auto report generation functions to be added on the system So that I do not have to update every changes and also produce monthly report for executive team |
| So9 | As a staff of Little Stars I want to update my professional skills and programme that I participated in easier than current environment So that I can improve work efficiency |
| S10 | As a staff of Little Stars I want to get an alert automatically for professional development programme due date So that I do not have to check date every 6 months |

Table 16 - Staff Record Management - User Stories

3.3.4 Inventory Management Process – Dennis Edmunds

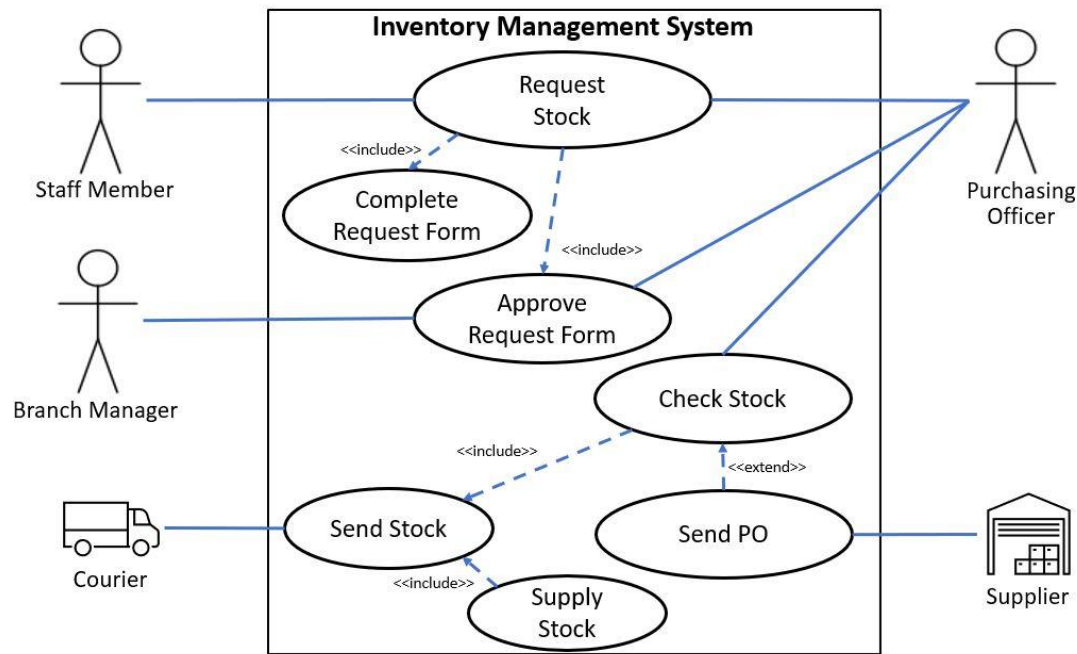


Figure 16 - Inventory Management - Business Use Case

Requirement Analysis: Use case Descriptions

- **Actors** – Staff Member, Purchasing Officer, Branch Manager, Courier, Supplier.
- **Goals** – Request Stock, Send Stock, Approve Request
- **Pre-conditions** – Suppliers and Couriers must be approved for use in process.
- **Post-conditions** – Request Stock, Send Stock
- **Main Flow** - Staff Member (Primary Actor, Stakeholder) sends request to manager. Branch Manager (stakeholder) sends approval to Purchasing Officer (stakeholder). In main flow, items are assumed as in stock, and Stock sent by Courier (stakeholder) to Staff Member to complete main flow.
- **Exceptions** – Request Rejected by Branch Manager
- **Alternate flows** – No stock, order from Supplier (stakeholder) required, Send PO as part of process.

From the analysis of the range of data collected, the Inventory Management process is illustrated in the above 'Use Case Diagram'. The Diagram highlights the key actors and use cases that are present in the overall inventory management system as indicated in the centre of the diagram.

From the diagram we can clearly identify the inventory process and the relationships between the use cases and what conditions are required for each to come into effect in the process.

3.4 As-Is Process Model

3.4.1 Student's Special Arrangement Process – Diether Pastulero

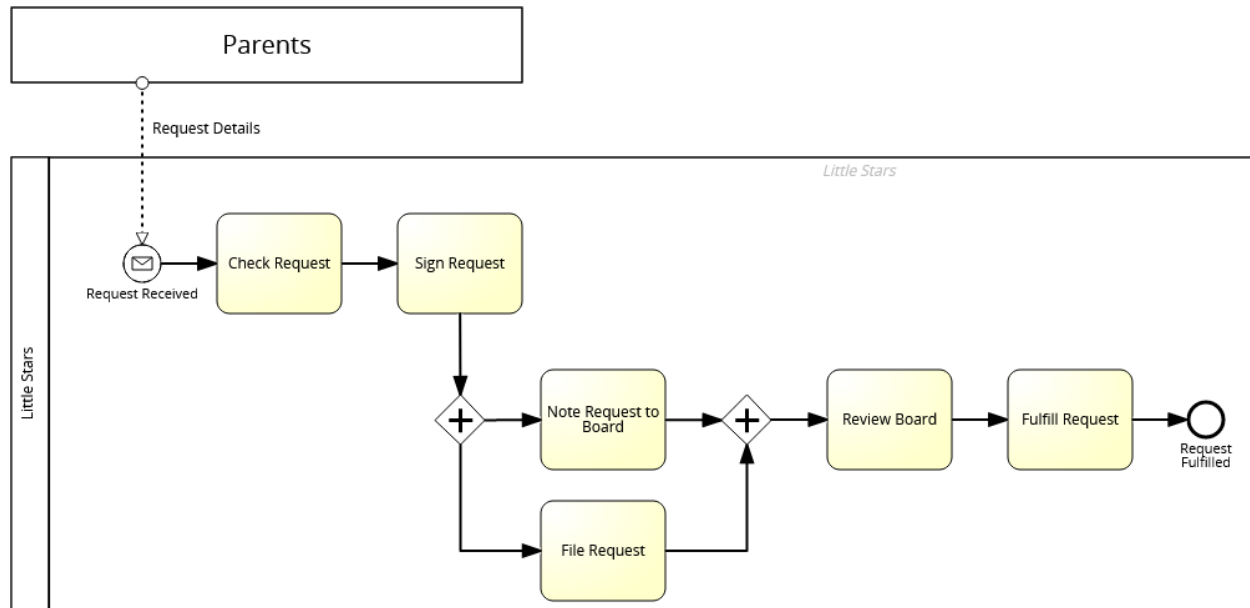


Figure 17 - Student's Special Arrangement - As-Is Process

Process Analysis

The model above is the current system to manage the special arrangements for both method of request, paper form and call-in method. The process doesn't seem like a problem as it is, but the efficacy is quite undesirable when implemented. There is a bottleneck that comes from the activity, 'Review Board', indicated by the staffs' issue of finding time to review the general board. Additionally, the process can commence anytime during the day which makes fulfilling the request difficult as the staff will need to review the board periodically to make sure they don't miss any special arrangement placed on the board.

3.4.2 Staff Leave Management Process – Cham Jazdan

Figure 18 below illustrates the process model for the current staff leave management. The process starts when a staff member, or a teacher, wants to apply for a leave. The staff member contacts the branch's HR officer and request them to find how many leave days are available for them.

Once the HR officer tells them of their available leave day, they may not have enough available leave days, and the process will end. However, if they do have available leave days, then, they will need to discuss availability with their colleagues and find a suitable substitute for their role. If no substitute is found, the process ends.

Once a substitute is found, the staff member needs to fill out the Staff Leave Request form and submit the form to their supervisor for approval.

The supervisor may reject the request, so the leave request is rejected, and the process ends.

When the leave request is approved by the supervisor, they supervisor will submit the form back to the HR officer for records keeping.

Then, the HR officer will forward the request form to the branch manager to get their approval as the final approval for the process.

The branch manager may reject the request, the process ends, and the leave request is rejected.

Finally, once the form is approved by the branch manager, it will be emailed to the HR manager for reporting and records keeping. The process ends here, and the leave request is approved

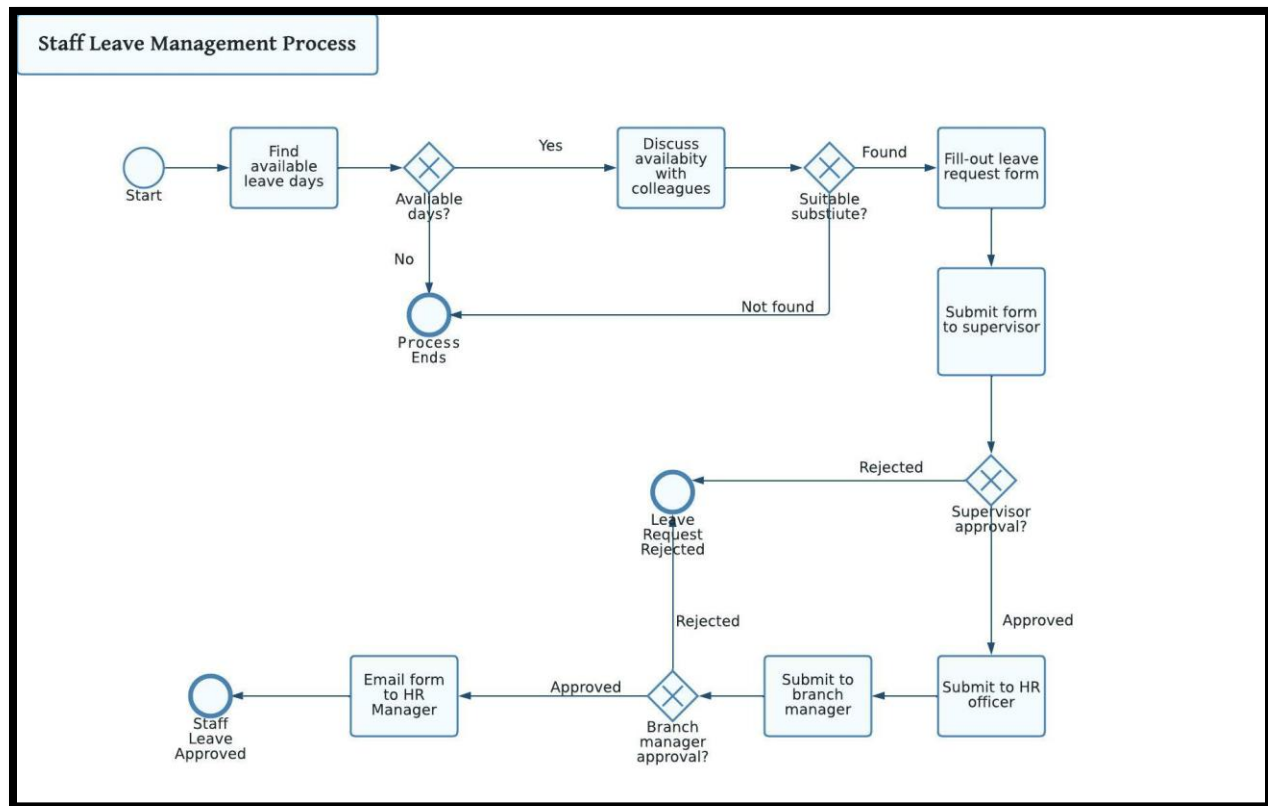


Figure 18 - Staff Leave Management - As-Is Process

3.4.3 Staff Record Management Process - Brian Kim

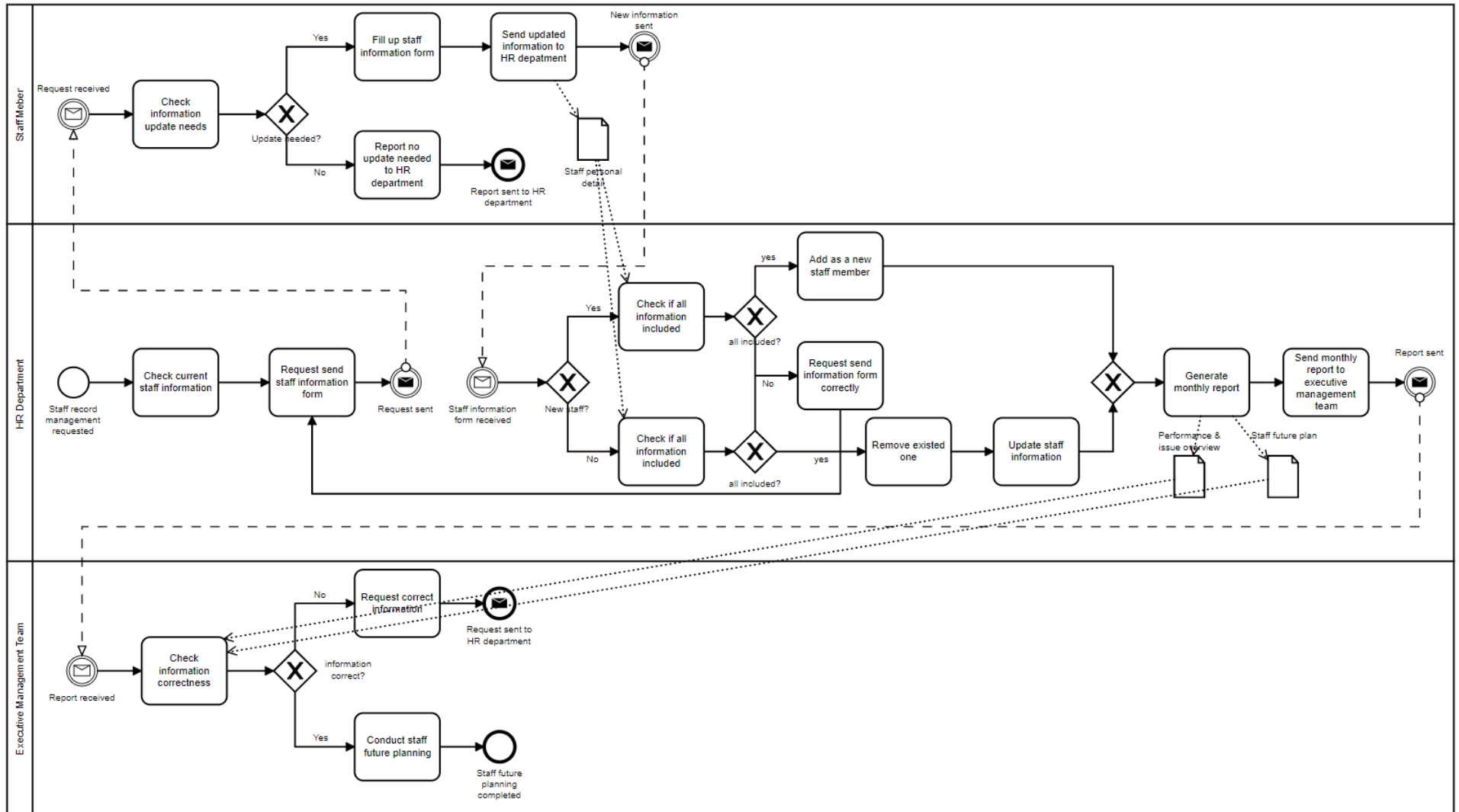


Figure 19 - Staff Record Management - Executable As-Is Process

3.4.3 Staff Record Management Process (cont'd)

The As-Is process model above shows how HR department manages staff information and deliver monthly report toward executive management team for future staff planning. Once HR department request staff to submit record by paper, they check if there needs to be updated. If the staff needs to do, he needs to fill up form and submit it to the HR department. Afterward, the HR department check if all required information is given without incorrect one. Once staff record is updated and stored, it is possible to produce monthly report to be delivered to executive management team. In this process, they need to check if all information is handed over with precise and not outdated. If everything is correct, executive management team can conduct future staff planning. This whole process shows current process with paper-based staff record management.

3.4.4 Inventory Management Process – Dennis Edmunds

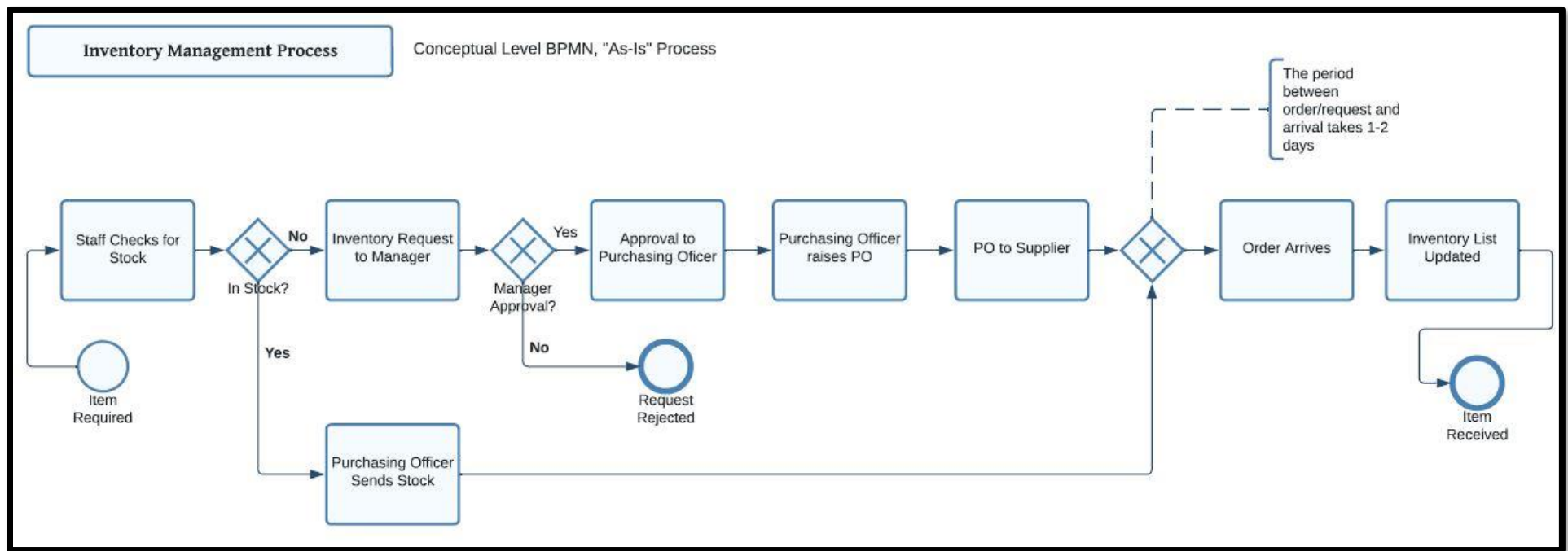


Figure 20 - Inventory Management - As-Is Process

3.4.4 Inventory Management Process (cont'd)

As part of the analysis of business needs for Little Stars, Group 29 Consultants has mapped the existing Inventory Management Process, as detailed in the previous figure. The existing process has been mapped at a conceptual level, utilising standard BPM (Business Process Model) notation for ease of understanding.

Inventory Management is a critical part of any business, and one in which Little Stars is able to make large efficiency improvements by removing tasks in the process which will be made redundant utilising a digital solution.

An analysis of the existing process shows there are several activities which can be made redundant by the introduction of automation, which will not only decrease the number of steps in this process but will also drastically reduce processing time on the request and processing end, saving employees at Staff, Manager, and Head Office levels, by automating steps such as automated forms, allowing valuable Staff time to be spent on other tasks.

Note: For further information, please refer to the Appendices (section 7.4) of this report

4.0 Requirements Analysis

4.1 Assumptions & Constraints

4.1.1 Student's Special Arrangement Process – Diether Pastulero

| Assumptions |
|--|
| 1. The organisation does not go bankrupt and will be able to support the project till the end. <i>It can't be mitigated when it happens.</i> |
| 2. The IT department hired will maintain the system. <i>At least some IT personnel and implement a cloud-based solution by using SaaS (Microsoft, 2022). The infrastructure will be provided by an external organisation.</i> |
| 3. Every staff member will use the new system. <i>Provide training days to slowly get everyone adjusted.</i> |
| Constraints |
| 1. The time to implement the solution. Will we be given enough time? |
| 2. The infrastructure needed to implement the solution such as server rooms and IT department. |
| 3. The skills of the staffs varying from each other to learn the new system. |

4.1.2 Staff Leave Management Process – Cham Jazdan

| Assumptions |
|--|
| 1. Staff will receive training on the new system to submit requests and maintain the system. |
| 2. A database of the staff details existed, to migrate the data onto the new system |
| 3. All staff have access to mobile devices, tablets, PCs, or laptops to submit the form |
| Constraints |
| 1. The infrastructure to implement the system needs to be done before implementing the system and launch it to the business. |
| 2. Technical issues needs to be addressed and supported by a party. |
| 3. The time for the staff to adapt with the new system may vary. |

Table 18 - Staff Leave Management - Assumptions & Constraints

4.1.3 Staff Record Management Process - Brian Kim

| Assumptions |
|--|
| 1. Staff can provide their information via digital form not paper-based one |
| 2. A monthly staff report will be generated properly without manual task by HR department |
| 3. All staff detail will be stored without incorrect or outdated so that staff planning available properly |
| Constraints |
| 1. How will the paper-based data be migrated to the database (Technical issue) |
| 2. Education for adapting new staff record management system for all staff in Little Stars (Time consuming & Cost) |
| 3. High cost of database usage & maintenance |

Table 19 - Staff Record Management - Assumptions & Constraints

4.1.4 Inventory Management Process – Dennis Edmunds

| Assumptions |
|---|
| 1. Staff will have the capabilities to use solutions following appropriate training |
| 2. Time taken for end level tasks shall see an increase in efficiency |
| 3. Training budgets implemented for new starters and current staff as needed |
| Constraints |
| 1. Resistance to solution due to process change being implemented |
| 2. Existing Couriers and Suppliers will need to comply with new solution |
| 3. Business cashflow must be adequate for inventory management process to operate |

Table 20 - Inventory Management - Assumptions & Constraints

4.2 Prioritised Solution Requirements

4.2.1 Student's Special Arrangement Process – Diether Pastulero

4.2.1.1 Business Requirements

| BR ID | Source | Requirement |
|-------|---------------------|--|
| BR1 | Administrator | The paper-based records shall be migrated into digital records within a year. |
| BR2 | IT Department | Special request arrangements will be able to be completed online |
| BR3 | Child's Room Leader | As of now, failures occur when arranging requests. The new system must prevent failures to slip through to ensure the well-being of children |

Table 21 - Student's Special Arrangement - Business Requirements

4.2.1.2 Stakeholder Requirements

| SR ID | Source | Requirement |
|-------|---------------------|--|
| SR1 | Parents | A request shall be able to be submit through a device |
| SR2 | General Staff | Requests information shall be able accessible through a device |
| SR3 | General Staff | Children medications shall be kept in a single locker per room |
| SR4 | General Staff | Searching an allergy in the database will output children names with the allergy |
| SR5 | Child's Room Leader | The child's room leader will ensure the requests are fulfilled correctly |

Table 22 - Student's Special Arrangement - Stakeholders Requirements

4.2.1.3 Functional Requirements

| FR ID | Source | Requirement |
|-------|---------------------|---|
| FR1 | Parents | Requests must be able to be updated through a device |
| FR2 | General Staff | The system must be able to notify new requests and updates to the staff's devices |
| FR3 | General Staff | All medications must be labelled with a child's name to be found easier. |
| FR4 | General Staff | The requests database must be able to be filtered. |
| FR5 | Child's Room Leader | Temporarily requests shall be marked by the room leader upon completion. |
| FR6 | General Staff | Staffs could update the records but must be approved the room leader. |

Table 23 - Student's Special Arrangement - Functional Requirements

4.2.1.4 Non-Functional Requirements

| NF ID | Source | Requirement |
|-------|---------------|--|
| NF1 | Administrator | The special request forms shall be digitally stored and encrypted using AES-256 (Advanced Encryption Standard) |

| | | |
|------------|---------------|--|
| NF2 | IT Department | The system shall have an uptime of 99% |
| NF3 | General Staff | The medications are labelled correctly and readable |
| NF4 | Parents | Submission of the request shall be received by the system with a 99% success rate. |
| NF5 | IT Department | The system shall give all results corresponding to the filter 99% of the time. |

Table 24 - Student's Special Arrangement - Non-Functional Requirements

4.2.2 Staff Leave Management Process – Cham Jazdan

4.2.2.1 Business Requirements

The business requirements are based on the business internal and external analysis & on the project's goals and objectives.

| BR ID | Source | Requirement |
|------------|----------------------|--|
| BR1 | CEO | Decrease 45% of the staff workload within the next 18 months. |
| BR2 | Branch Manager | Retain 20% more parents and increase the current parents satisfaction by 90% in the next 18 months |
| BR3 | Executive Management | Digitalise the systems to reduce process inefficiency by the end of 2023. |

Table 25 - Staff Leave Management - Business Requirements

4.2.2.2 Stakeholder Requirements

Stakeholders' requirements are purely based on the surveys that was sent out to the business.

Please refer to section 3.2.2.

| SR ID | Source | Requirement | BR ID Ref# |
|------------|----------------|---|------------|
| SR1 | Staff Member | Access all colleagues' calendars to check their availability. | BR3 |
| SR2 | HR Officer | Track all current leave request forms status | BR1 |
| SR3 | HR Officer | Delegate approvals responsibility to other staff member | BR1 |
| SR4 | HR Manager | Past and current forms to be saved on a cloud-based platform | BR3 |
| SR5 | Branch Manager | Generate reports based on the submitted forms | BR1 |
| SR6 | Branch Manager | Receive reminders about outstanding approvals | BR1 |

Table 26 - Staff Leave Management - Stakeholders Requirements

4.2.2.3 Functional Requirements

Functional requirements are based on the stakeholders' requirements above, and they have been prioritised based on MoSCoW technique, which prioritise requirements in four categories: Must Have, Should Have, Could Have & Won't have.

| FR ID | Source | SR ID Ref# | Requirement | Priority |
|-------|----------------|------------|--|-------------|
| FR1 | Staff Member | SR1 | The system shall display the staff calendar on request for other staff members to view in real-time | Should Have |
| FR2 | HR Officer | SR2 | The system shall provide the HR officers the ability to track <i>in-progress</i> forms to follow up with the outstanding approver. | Should Have |
| FR3 | HR Officer | SR3 | The system shall provide HR officers the ability to delegate approvers' role to other staff member. | Should Have |
| FR4 | HR Manager | SR4 | The system shall be secured with AES encryption algorithm. | Must Have |
| FR5 | HR Manager | SR4 | The system shall be maintained on a cloud-based platform | Must Have |
| FR6 | Branch Manager | SR6 | The system shall send reminders to approvals with a list of outstanding approval requests every 3 business days | Could Have |

Table 27 - Staff Leave Management - Functional Requirements

4.2.2.4 Non-Functional Requirements

Also, Non-functional requirements are based on the stakeholders' requirements and prioritised based on MoSCoW Technique.

| NFR ID | Source | SR ID Ref# | Requirement | Priority |
|--------|----------------|------------|--|------------|
| NFR1 | Branch Manager | SR5 | The system shall generate reports based on the submitted forms | Could Have |
| NFR2 | HR Officer | SR3 | The system shall delegate approvers roles to their supervisor when they are on leave | Won't Have |
| NFR3 | HR Officer | SR2 | The system shall provide HR Officers the ability to contact the current approver of a form to chase them up. | Could Have |

Table 28 - Staff Leave Management - Non-Functional Requirements

4.2.3 Staff Record Management Process - Brian Kim

4.2.3.1 Business Requirements

| BR ID | Source | Requirement |
|-------|--------------------------------------|---|
| BR1 | HR department administrator | Currently, the staff record management systems is paper-based. Usually, HR department spends a lot of time to find information or manage every sheet of paper which decreases work efficient. |
| BR2 | HR department administrator Staff | Currently, sometimes staff records are incorrect, so we have to request staff to submit another information form, and this makes staff record management process is delayed. |
| BR3 | Executive management team | We have difficulties to do the future staff planning due to outdated or incorrect staff information. It takes too much time and we need to spend more money for conducting task. |

Table 29 - Staff Record Management - Business Requirements

4.2.3.2 Stakeholder Requirements

| SR ID | Source | Requirement |
|-------|-----------------------------|---|
| SR1 | HR department administrator | As a HR department administrator, I want staff record management process to be easier than current one so that I do not have to spend a lot of time to manage all staff information. |
| SR2 | Executive management team | As an executive manager, I want paper-based report to be digitalised so that I can do future staff planning properly with precise information. |
| SR3 | Staff | As an employee of Little Stars, I want paper-based staff record process to be converted to digital-based one so that I do not repeat submitting personal information form and focus on my job properly. |

Table 30 - Staff Record Management - Stakeholders Requirements

4.2.3.3 Functional Requirements

| FR ID | Source | Requirement |
|-------|------------------------|--|
| FR1 | HR department | Currently, staff monthly report is produced by HR department in paper-based. The digitalised staff record management system should produce regularly based on the information in a database. |
| FR2 | HR department Staff | The new system must alert date to staff to complete professional development programme and maintain their skills. |

| | | |
|------------|---------------------------|--|
| FR3 | HR department | The new system should manage quitted staff record as well. Once the record is classified as quitted staff, then it needs to be deleted once a particular period passed. |
| FR4 | HR department | The new system should store and maintain safely within a database. The database needs to backup data to prevent staff information loss. |
| FR5 | Executive management team | Currently, future staff planning is conducted based on paper-based monthly report and it makes difficult to do it due to outdated and wrong information. The digitalised staff record management system should provide recommendation function which assists executive management team to do future staff planning properly. |
| FR6 | Staff | The new system should have edit personal information function for every staff. Once a staff wants to change or update his record, then he can do it on the system right away. |

Table 31 - Staff Record Management - Functional Requirements

4.2.3.4 Non-Functional Requirements

| NFR ID | Source | Requirement |
|---------------|------------------------|---|
| NFR1 | Project Manager | All staff must be fully trained how to use new system and equipped with appropriate authorisation |
| NFR2 | HR department Staff | All HR department and staff must be trained how to operate staff record management system and how to update and maintain each information |
| NFR3 | HR department | The system must ensure all staff information is secured |

Table 32 - Staff Record Management - Non-Functional Requirements

4.2.4 Inventory Management Process – Dennis Edmunds

In line with standard Business Analyst practice, the following have been reviewed and designed around the concept of providing Cohesive, Complete, Consistent, Clear, Correct, Feasible, Modifiable and Testable business requirements.

The requirements in this section have been determined based off outcomes identified through findings from our elicitation plan, data collection and requirement analysis of “As-is” process.

4.2.4.1 Business Requirements – Inventory Management Process

| BR ID | Source | Requirement |
|--------------|----------------------|--|
| BR1 | Executive Management | Increase employee morale by decreasing 45% of their workload within the next 18 months |

| | | |
|------------|----------------------|--|
| BR2 | Executive Management | Increase Parent Satisfaction by 90%, within the next 18 months |
| BR3 | Executive Management | Increase process efficiency within Little Stars by digitising the system by end Q4, 2023 |

Table 33 - Inventory Management - Business Requirements

With identification of the above key Business Requirements (BRs), the following Stakeholder requirements (SRs) were ascertained.

4.2.4.2 Stakeholder Requirements – Inventory Management Process

| SR ID | Source | Requirement | BR ID Ref# |
|------------|--------------------|---|------------|
| SR1 | Staff | Track all Inventory requests from request to delivery | BR1 |
| SR2 | Staff | Create a digital inventory request in real-time | BR3 |
| SR3 | Branch Manager | Approve an inventory request in real-time | BR3 |
| SR4 | Purchasing Officer | Perform a search on group inventory in real-time | BR1 |
| SR5 | Operations Manager | Update/Manage approved suppliers list in system | BR3 |
| SR6 | Purchasing Officer | Create Supplier Purchase Order from system | BR3 |

Table 34 - Inventory Management - Stakeholders Requirements

Following identification of the above Business and Stakeholder requirements, and subsequent meeting and discussion with Executive Management, the following functional (FR) and non-functional (NFR) requirements were identified and prioritised as per the following tables.

4.2.4.3 Functional Requirements – Inventory Management Process

| FR ID | Source | SR ID Ref# | Requirement | Priority |
|------------|--------------------|------------|--|----------|
| FR1 | Staff Member | SR1 | The system shall communicate information of all inventory requests for stakeholders to view in real-time | 5 |
| FR2 | Staff Member | SR2 | The system shall provide the ability to create inventory requests for staff to request supplies or equipment | 1 |
| FR3 | Branch Manager | SR3 | The system must include functionality for the Branch (or authorising) manager to approve requests in real-time | 2 |
| FR4 | Purchasing Officer | SR6 | The system must include the ability for the Purchasing Officer to create a new Purchase Order for approved suppliers | 3 |
| FR5 | Purchasing Officer | SR4 | The new system must have the capability to produce a real-time report on Little Stars group Inventory (stock) | 4 |

Table 35 - Inventory Management - Functional Requirements

4.2.4.4 Non-Functional Requirements – Inventory Management Process

| NFR ID | Source | SR ID Ref# | Requirement |
|--------|--------------------|------------|---|
| NFR1 | Operations Manager | SR5 | The system shall produce a printable list of approved suppliers for the Staff when creating a new inventory request |
| NFR2 | Branch Manager | SR3 | The system shall produce notifications for the authorising manager when new requests are entered for approval. |
| NFR3 | Purchasing Officer | SR6 | The system shall provide the ability to directly email purchase orders to approved suppliers |

Table 36 - Inventory Management - Non-Functional Requirements

MoSCoW Prioritisation technique

Following stakeholder engagement meetings with Executive Management and CEO as Sponsor / key stakeholder, the above functional (FR) and non-functional requirements (NFRs) were reviewed and prioritised using the MoSCoW method per the following table:

| Requirements | FR1 | FR2 | FR3 | FR4 | FR5 | NFR1 | NFR2 | NFR3 |
|---------------|-----|-----|-----|-----|-----|------|------|------|
| MoSCoW Rating | M | M | M | S | S | C | C | C |

Table 37 - MoSCoW Technique

Note: BR items were identified from all initial works to understand the business and opportunities. and ensure everything is aligned to these objectives.

4.3 Prioritised Requirements Traceability Matrix

4.3.1 Student's Special Arrangement Process – Diether Pastulero

| Requirement Traceability Matrix | | | | | | | |
|---------------------------------|--|-------|--|-------|---|----------|--|
| Special Arrangement Process | | | | | | | |
| BR ID | Business Requirements | SR ID | Stakeholder Requirements | FR ID | Functional Requirement | Priority | Non-Functional Requirements |
| 1 | The paper-based records shall be migrated into digital records within a year. | 2 | Requests information shall be able accessible through a device | 2 | The system must be able to notify new requests and updates to the staff's devices | 3 | The special request forms shall be digitally stored and encrypted using AES-256 (Advanced Encryption Standard) |
| 2 | Special request arrangements will be able to be completed online | 1 | A request shall be able to be submit through a device | 1 | Requests must be able to be updated through a device | 5 | Submission of the request shall be received by the system with a 99% success rate. The system shall have an uptime of 99% |
| 3 | As of now, failures occur when arranging requests. The new system must prevent failures to slip through to ensure the well-being of children | 3 | Children medications shall be kept in a single locker per room | 4 | The requests database must be able to be filtered. | 1 | The system shall give all results corresponding to the filter 99% of the time. |
| | | 4 | Searching an allergy in the database will output children names with the allergy | 3 | All medications shall be labelled with a child's name to be found easier. | 4 | The medications are labelled correctly and readable |
| | | 5 | The child's room leader will ensure the requests are fulfilled correctly | 5 | Temporarily requests shall be marked by the room leader upon completion. | 2 | |
| | | | | 6 | Staffs could update the records but must be approved the room leader. | | |

Table 38 - Student's Special Arrangement - Requirement Traceability Matrix

Prioritise BR 1 -> BR 3 -> BR2

Reducing the workload of the organisation must be prioritised as it is one of the problems that limits the workers to do tasks correctly. BR 3 is next as it'll be a detriment to the organisation if the government regulators identified the mismanagement as a health risk. Online System should be prioritised last as the organisation can delay its implementation while prioritising other BRs

4.3.2 Staff Leave Management Process – Cham Jazdan

| Requirement Traceability Matrix | | | | | | | | | |
|---------------------------------|--|--------------------------|---|-------------------------|---|-------------|-----------------------------|--|------------|
| Business Requirements | | Stakeholder Requirements | | Functional Requirements | | | Non-Functional Requirements | | |
| BR ID | Business Requirement | SR ID | Stakeholder Requirement | FR ID | Functional Requirement | Priority | NFR ID | Non-Functional Requirement | Priority |
| BR1 | Decrease 45% of the staff workload within the next 18 months. | SR1 | Track all Inventory requests from request to delivery | FR1 | The system shall display the staff calendar on request for other staff members to view in real-time | Should Have | | | |
| | | SR4 | Perform a search on group inventory in real-time | FR4 | The system shall be secured with AES encryption algorithm. | Must Have | | | |
| | | | | FR5 | The system shall be maintained on a cloud-based platform | Must Have | | | |
| BR2 | Retain 20% more parents and increase the current parents satisfaction by 90% in the next 18 months | | | | | | | | |
| BR3 | Digitalise the systems to reduce process inefficiency by the end of 2023. | SR2 | Create a digital inventory request in real-time | FR2 | The system shall provide the HR officers the ability to track in-progress forms to follow up with the outstanding approver. | Should Have | NFR3 | The system shall provide HR Officers the ability to contact the current approver of a form to chase them up. | Could Have |
| | | SR3 | Approve an inventory request in real-time | FR3 | The system shall provide HR officers the ability to delegate approvers' role to other staff member. | Should Have | NFR2 | The system shall delegate approvers roles to their supervisor when they are on leave | Won't Have |
| | | SR5 | Update/Manage approved suppliers list in system | | | | NFR1 | The system shall generate reports based on the submitted forms | Could Have |
| | | SR6 | Create Supplier Purchase Order from system | FR6 | The system shall send reminders to approvals with a list of outstanding approval requests every 3 business days | Could Have | | | |

Table 39 - Staff Leave Management - Requirement Traceability Matrix

4.3.3 Staff Record Management Process - Brian Kim

| Requirement Traceability Matrix | | | | | | | |
|-------------------------------------|---|-------------------------|---|---------------------------------------|--|----------|--------------------|
| Business Requirement Document (BRD) | | Stakeholder Requirement | | Functional Requirement Document (FRD) | | | Test Case Document |
| BR ID | Business Requirement | SR ID | Use Case | FR ID | Functional Requirement/Use Case | Priority | Test Case ID |
| BR1 | Currently, the staff record management systems is paper based. Usually, HR department spends a lot of time to find information or manage every sheet of paper which decreases work efficient. | SR1 | As a HR department administrator, I want staff record management process to be easier than current one so that I do not have to spend a lot of time to manage all staff information | FR2 | The new system must alert date to staff to complete professional development programme and maintain their skills. | High | TC-001 |
| | | | | FR3 | The new system should manage quitted staff record as well. Once the record is classified as quitted staff, then it needs to be deleted once a particular period passed. | | |
| | | | | FR4 | The new system should store and maintain safely within a database. The database needs to backup data to prevent staff information loss. | | |
| BR2 | Currently, sometimes staff records are incorrect, so we have to request staff to submit another information form, and this makes staff record management process is delayed. | SR3 | As an employee of Little Stars, I want paper-based staff record process to be converted to digital-based one so that I do not repeat submitting personal information form and focus on my job properly. | FR6 | The new system should have edit personal information function for every staff. Once a staff wants to change or update his record, then he can do it on the system right away. | Med | TC-002 |
| BR3 | We have difficulties to do the future staff planning due to outdated or incorrect staff information. It takes too much time, and we need to spend more money for conducting task. | SR2 | As an executive manager, I want paper-based report to be digitalised so that I can do future staff planning properly with precise information. | FR1 | Currently, staff monthly report is produced by HR department in paper based. The digitalised staff record management system should produce regularly based on the information in a database. | High | TC-003 |
| | | | | FR5 | Currently, future staff planning is conducted based on paper-based monthly report and it makes difficult to do it due to outdated and wrong information. The digitalised staff record management system should provide recommendation function which assists executive management team to do future staff planning properly. | | |

Table 40 - Staff Record Management - Requirement Traceability Matrix

In the prioritised requirements traceability matrix above shows which stakeholder requirements and functional requirements are directly related to business requirement.

- BR 1 is about work efficiency based on paper-based staff record management system. This is prioritised as High since this requirement is the most important part of staff record management system. The stakeholder requirement 1 and functional requirement 2, 3, 4 follow BR1 as they are about digitalisation of current system.
- BR 2 is about information loss and incorrect record and SR 3 and FR 6 are related to the business requirement. This part is prioritised as Medium since it is not the major requirement of the current system.
- BR 3 is about future staff planning conducted by executive management team and followed by BR 2, FR 1, and FR5. This is also ranked as High one to improve business requirement for staff record management system.

4.3.4 Inventory Management Process – Dennis Edmunds

| Requirement Traceability Matrix | | | | | | | |
|---------------------------------|--|--------------------------|---|-------------------------|--|----------|---|
| Business Requirements | | Stakeholder Requirements | | Functional Requirements | | Priority | Non-Functional Requirements |
| BR ID | Business Requirement | SR ID | Use Case | FR ID | Functional Requirement/Use Case | P | NFR Description |
| BR1 | Increase employee morale by decreasing 45% of their workload within the next 18 months | SR1 | Track all Inventory requests from request to delivery | FR1 | The system shall communicate information of all inventory requests for stakeholders to view in real-time | 5 | |
| | | SR4 | Perform a search on group inventory in real-time | FR5 | The new system must have the capability to produce a real-time report on Little Stars group Inventory (stock) | 4 | |
| BR3 | Increase process efficiency within Little Stars by digitising the system by end Q4, 2023 | SR2 | Create a digital inventory request in real-time | FR2 | The system shall provide the ability to create inventory requests for staff to request supplies or equipment | 1 | |
| | | SR3 | Approve an inventory request in real-time | FR3 | The system must include functionality for the Branch (or authorising) manager to approve requests in real-time | 2 | The system shall produce notifications for the authorising manager when new requests are entered for approval. |
| | | SR6 | Create Supplier Purchase Order from system | FR4 | The system must include the ability for the Purchasing Officer to create a new Purchase Order for approved suppliers | 3 | The system shall provide the ability to directly email purchase orders to approved suppliers |
| | | SR5 | Update/Manage approved suppliers list in system | | | | The system shall produce a printable list of approved suppliers for the Staff when creating a new inventory request |
| BR2 | Increase Parent Satisfaction by 90%, within the next 18 months | | | | | | |

Table 41 - Inventory Management - Requirement Traceability Matrix

Inventory Management Process Analysis Summary:

As per the above traceability matrix, the following business requirements have been identified and prioritised in line with identified business requirements, data collection and requirement analysis conducted on the Little Stars group “As-is” Inventory Management Process. The identified Functional Requirements (FR) and Non-Functional Requirements (NFR) have been identified and assigned priorities from 1 to 5. In this table, 1 being the highest priority, and 5 being the lowest priority. The highest assigned priorities will be first to be prioritised in any budgeting with the client, with the following sections of lower priorities then actioned as timeframe or budgetary constraints allow.

5.0 Conclusion

Within the scope of this business analysis report, Group 29 Consultants have detailed a wide range of findings following a comprehensive review of Little Stars Group, Brisbane, Australia.

Through conducting a thorough business analysis which included market research, needs assessment, requirements elicitation, in-depth data collection techniques and a range of other activities, the Group 29 project team have analysed the current operating environment, assessed initial and perceived problems and have presented a range of findings based on what can be improved via updating the groups information systems.

Research and analyses conducted by the project team within the scope of this document have identified that the business' most pressing needs are updates to its current processes and systems, which have contributed to reduced productivity to a significant extent. Group 29 Consultants recognise Little Stars Groups business philosophy and primary business aims, which are to provide high quality pre-school education and caregiving, and can assist to meet the business goals of the CEO and Executive Management to achieve these aims and efficiency targets.

From the findings collected, it is evident to the consulting team that with the appropriate digital solution to update the businesses operations to improve efficiency and implement cost effective processes, Little Stars Group is in a strong position to fulfill requirements of its targeted efficiency increases, leading to significantly higher levels productivity, staff morale and ultimately, business growth.

A modern, digitised business system solution such as an appropriately selected Learning Management System (LMS), and/or Enterprise Resources Planning System (ERP) will alleviate many of the identified problems, and provide many years of service for a reasonable initial first cost. These solutions, approach, scope, assessment and summary recommendations will be discussed in a solutions proposal delivered following submission of this report, at a date to be determined with the client.

On behalf of the team at Group 29, we greatly thank you for the opportunity to be of assistance with your business solutions, and we hope you have gained a lot of value from the insights detailed in this report. Thank you, and we look forward to assisting you select the business systems right for your business in the report to follow.

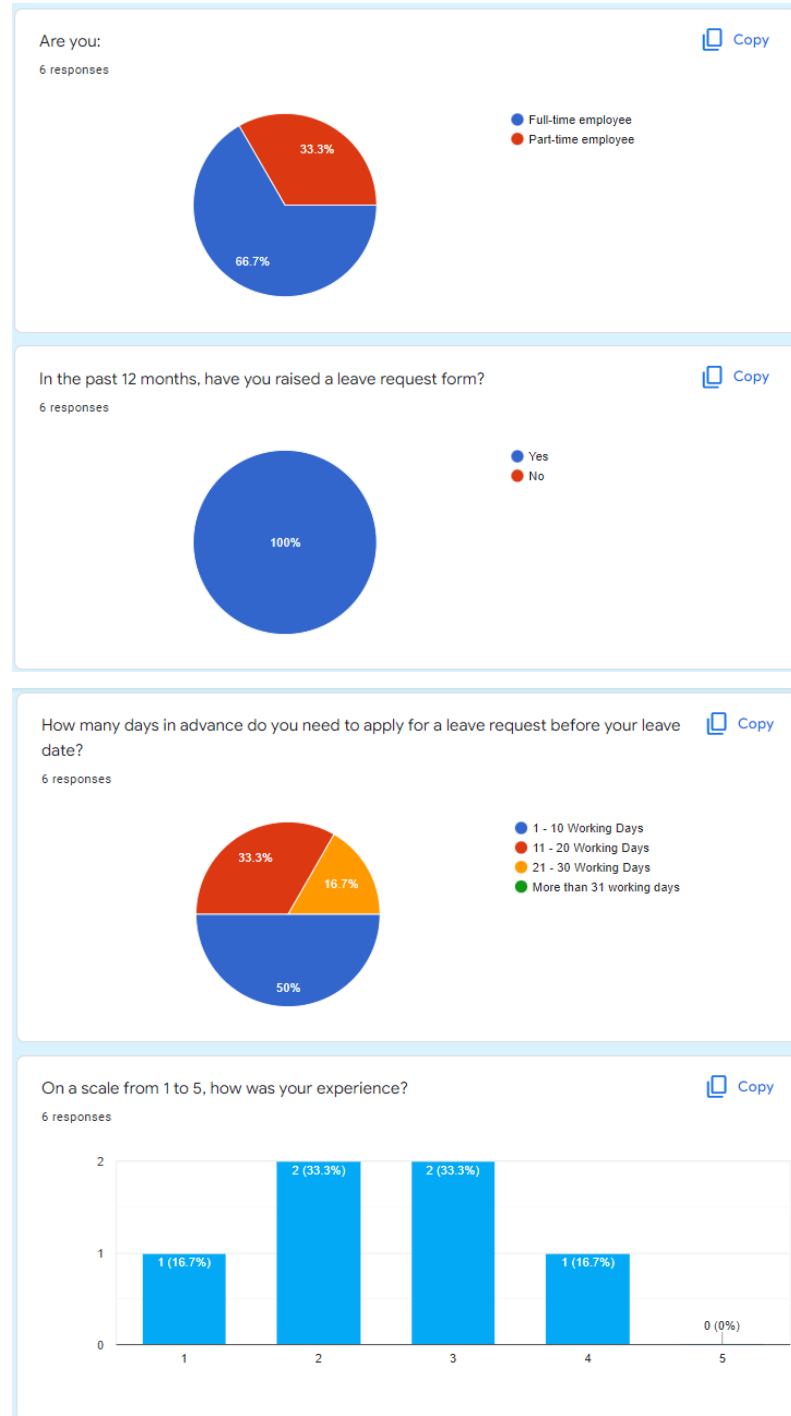
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7.0 Appendices

7.1 – Additional Data – Staff Leave Process Management Questionnaire – Cham

7.1.1 Staff Leave Management – Staff Questionnaire Results



What are the difficulties you went through with the current process?

6 responses

Many!! going around and asking other teachers if they can fill in for you is really annoying. And I don't like the fact that I need to repeat my information all the time whenever I'm applying for a leave

The processing time is so long

Because I'm a part-time teacher, I had issues finding a substitute, especially that there are more teachers I don't get to meet because of our different shifts. Also, the time to approve my request was way too long

Nothing too difficult, but I find it annoying that I need to call HR to find my leave balance

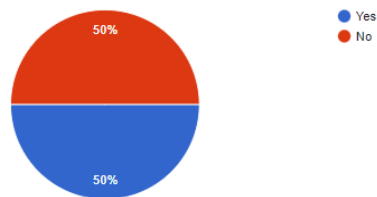
My form got lost, so I had to submit another form

Lots of things went wrong!! I wasn't able to get my leave approved because my supervisor was on leave, and no one was delegated the responsibilities of my supervisor. And it was difficult to maintain my productivity when I need a holiday so bad

Has any of your submitted leave requests got rejected, or not fulfilled?

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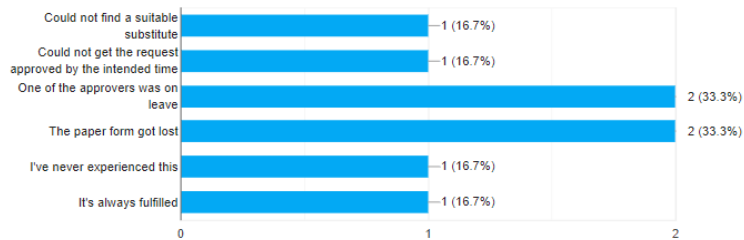
6 responses



If known, what are the reasons your request got rejected, or was not fulfilled?

 Copy

6 responses



How did the experience impacted you?

4 responses

Previously one of the forms got lost, and I thought that the management hasn't decided on my leave request yet. I was so stressed and my productivity decreased significantly

I had to cancel my family visit to NSW

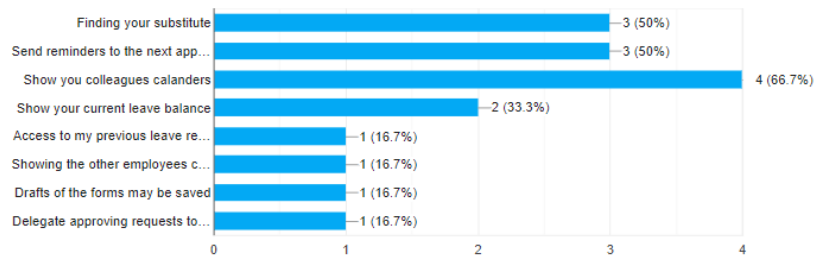
I needed the break from work as I was burnt out. Applying for the same leave wasn't helping my situation

I was so stressed all the time, and burnt out. This reflected so bad on my relationship

If we are looking into implementing a digital system for the Leave Request, what are the features you wish to be available with the system?

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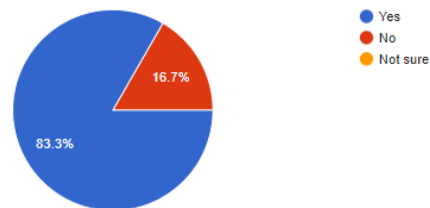
6 responses



Have you ever used a web-based application to submit a request?

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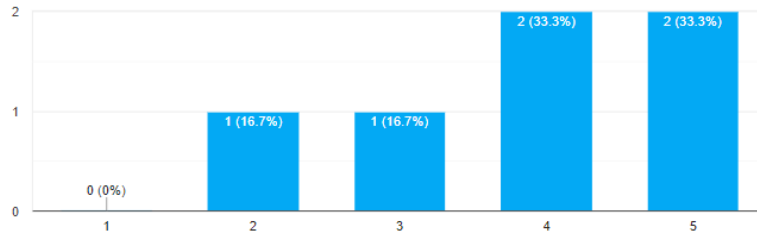
6 responses



On a scale from 1 to 5, how confident are you with using technology and digitalised forms?

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6 responses

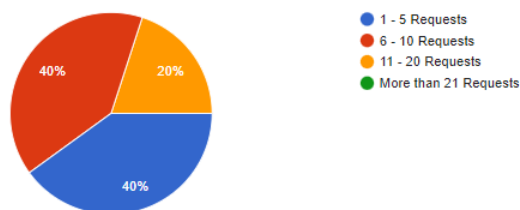


7.1.2 Staff Leave Management – HR Department Questionnaire Results

On monthly basis, around how many Leave Request forms do you receive?

 Copy

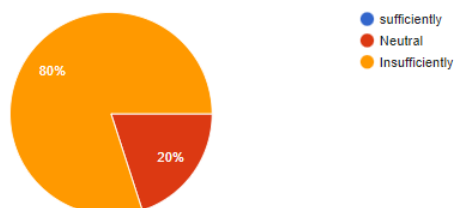
5 responses



How you you find the HR department handling the current process

 Copy

5 responses



What makes the current process insufficient to the HR department?

5 responses

It's so disturbing to receive multiple phone calls from staff asking about their leave balance. I also struggle with maintain the approved forms securely.

The number of calls the HR department receives regarding checking leave balance. also we get asked a lot about finding a suitable substitute for their leave period.

I would say that the forms being paper-based makes the idea of saving them securely seems mission impossible. We lost few leave forms during transforming the physical form form an approver to another. Losing the forms makes our reports inaccurate.

With so many leave request forms we receive, it becomes so difficult to track the approver of each form, and follow up with them to approve it. Also we receive lots of calls from staff regarding their leave balance

I just think it's annoying to receive so many calls regarding the staff leave balance. and I also struggle with creating reports for our branch

If we are looking into implementing a digital system for the Leave Request, what are the features you wish to be available with the system?

5 responses

Staff may access their leave balance by themselves and reposts are saved securely on the cloud

The ability for staff to check their own leave balance would be superb.

Generate accurate reports and the ability to save the digital forms in the cloud

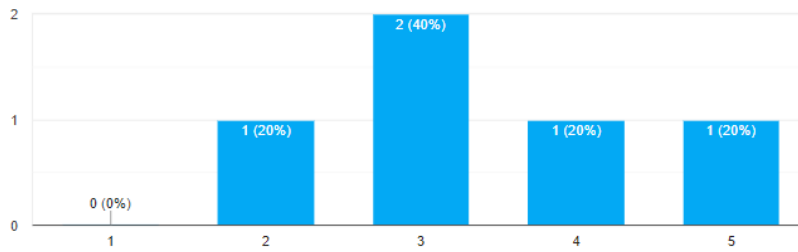
Staff to access their leave balance by themselves. Also, it will be a good idea to allow staff to add their availability to a digital calendar

Generate reports automatically would be great!

On a scale from 1 to 5, how confident are you with maintaining and managing digitalised forms?

 Copy

5 responses

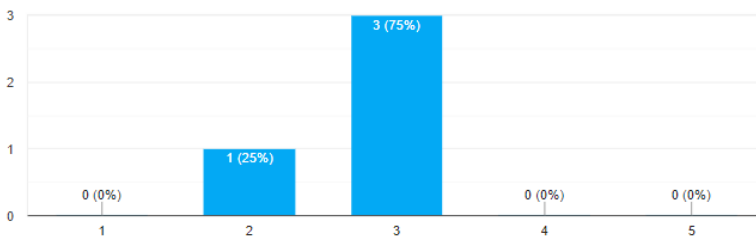


7.1.3 Staff Leave Management – Management Questionnaire Results

On a scale from 1 - 5, how is your experience with the current Staff Leave Request process?

 Copy

4 responses



If there is any, what are the difficulties you experienced, as an approver to the forms?

4 responses

I notice my team's morale and productivity so low - Not having their leave requests approved is one of the reasons.

The process time to get the request approved is so long as well

As a branch manager, I deal with heaps of forms, so it becomes difficult to maintain the leave request forms and potentially, some of them got lost

I receive all the approved leave requests forms from all the branches, it's difficult to maintain them and access them as they are not saved on one place.

It's difficult to maintain the forms I receive, as I receive lots of form daily for different business operations

How did this impact you?

4 responses

My morale is low when my team's morale is low as well. It makes me feel stressed that I'm a bad supervisor

It impacted the staff at the branch and the productivity is so low

Whenever I want to right a report, finding the forms takes a long time

It impacts the whole business not only myself, but being a reason why the employees are feeling down, makes me stressed

If we are looking into implementing a digital system for the Leave Request, what are the features you wish to be available for the approvers with the system?

4 responses

I would like to access my reporters balance leave, to make sure they make a use of them. Also I would like to access all of my reporters current and past leave request forms

Maintaining the forms securely on a cloud is an amazing idea! I would also love to receive notifications to remind me of the outstanding forms

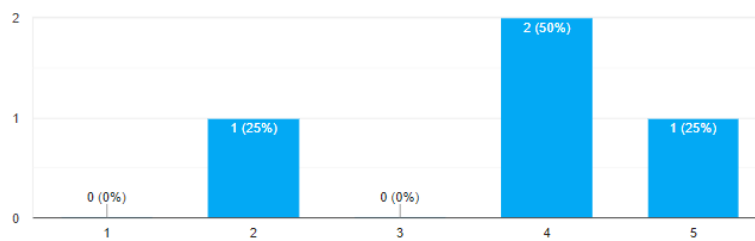
I would love the ability to access all the forms on one place, and also being able to generate reports based on the submitted forms

Reminder emails to remind me of the forms I need to approve/ reject.

On a scale from 1 to 5, how confident are you with using technology and digitalised forms?

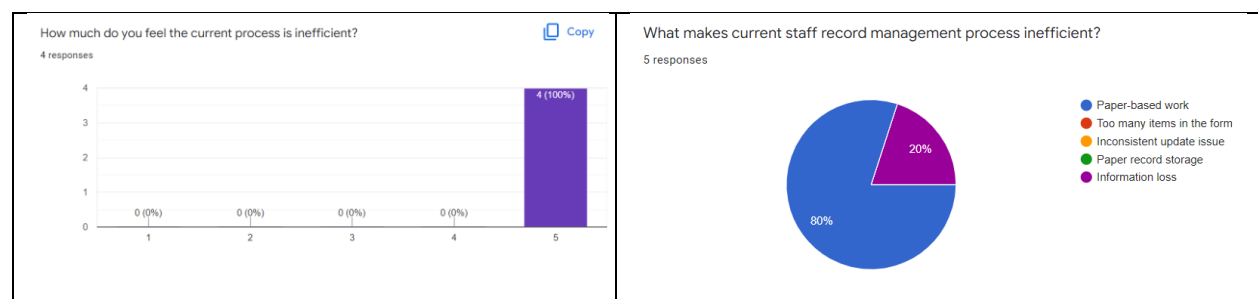
 Copy

4 responses



7.2 – Additional Data – Staff Record Management Questionnaire – Brian Kim

7.2.1 Staff Record Management Questionnaire – HR Department Results



| | |
|---|--|
| <p>Provide other difficulties with staff record management process</p> <p>5 responses</p> <div><div>Incorrect information generated sometimes</div><div>Monthly report for executive management team</div><div>Alert insufficient information for staff detail</div><div>Monthly report preparation</div><div>Producing monthly report & find out missing part of staff record</div></div> | <p>What can be done if information loss or incorrect issues occurs?</p> <p>5 responses</p> <div><div>I request to the employee to submit another form of his information</div><div>Staff needs to resubmit record form manually</div><div>We need to contact employee and ask to re-submit staff record form</div><div>We need to find out what is wrong and request new form to staff</div><div>We need to find paper</div></div> |
| <p>In the current staff record management process, which one is the most overloaded and inefficient?</p> <p>5 responses</p> <div><div><div>100%</div></div><div><div>Maintain 300 employees detail records</div><div>Produce monthly report for executive management team</div><div>Update every single staff record after they finish professional development programme</div><div>Edit or reorganise because of wrong information of employees</div><div>Future staff planning for the school</div></div></div> | <p>Is paper-based process stressful when handling every change of staff detail?</p> <p>5 responses</p> <div><div><div>100%</div></div><div><div>Yes</div><div>No</div><div>Maybe</div></div></div> |
| <p>Do you feel uncomfortable when preparing report for executive management team?</p> <p>5 responses</p> <div><div><div>100%</div></div><div><div>Yes</div><div>No</div><div>Maybe</div></div></div> | <p>What kind of functionalities of digitalised staff record management system are required? (Max 3 items)</p> <p>5 responses</p> <div><div><div>Auto report generation (Monthly)</div><div>Accessibility to report for executive management team</div><div>Staffs can update any changes</div><div>Staff professional skills management</div><div>Professional development programme</div><div>Overview and analysis report for staff</div><div>Incorrect or outdated information</div></div><div><div>5 (100%)</div><div>3 (60%)</div><div>4 (80%)</div><div>1 (20%)</div><div>1 (20%)</div><div>1 (20%)</div><div>0 (0%)</div></div></div> |
| <p>Provide other functionalities you want to add</p> <p>5 responses</p> <div><div>Management for employee who had left a company</div><div>Regular update for all staff in Little Stars and check if additional information needed</div><div>Future staff planning assisting tool (Recommendation etc.)</div><div>None</div><div>Recommendation while conducting future staff plan</div></div> | |

7.2.2 Staff Record Management Questionnaire – Staff Results

Have you repeated same paperwork task because of incorrect or outdated information?

10 responses

A pie chart with two segments. The larger segment is blue and labeled '70%' with a legend entry 'Yes'. The smaller segment is red and labeled '30%' with a legend entry 'No'. There is also a legend entry 'Maybe' with a yellow circle, but it is not represented in the chart.

| Response | Percentage |
|----------|------------|
| Yes | 70% |
| No | 30% |
| Maybe | 0% |

How much stressful with paper-based staff detail recording process?

10 responses

A bar chart with five bars representing stress levels from 1 to 5. The y-axis ranges from 0 to 6. The bars for 4 and 5 are purple and both have a value of 5 (50%). The bars for 1, 2, and 3 are white and all have a value of 0 (0%).

| Stressful Rating | Count | Percentage |
|------------------|-------|------------|
| 1 | 0 | 0% |
| 2 | 0 | 0% |
| 3 | 0 | 0% |
| 4 | 5 | 50% |
| 5 | 5 | 50% |

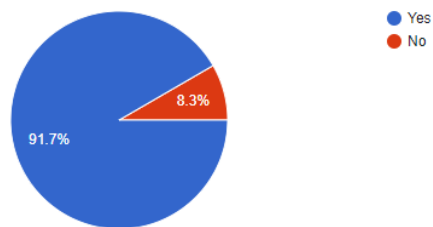


7.3 – Additional data – Inventory Systems Questionnaire - Dennis

Further reading of collected information and data from Section 3.2.4, Inventory Management Process

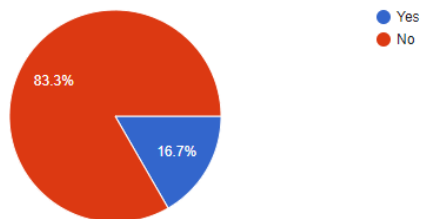
In your role at Little Stars Group, have you ordered any equipment or supplies in the last 18 months

12 responses



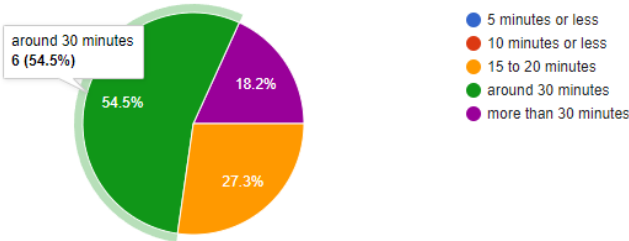
Have you ever had a request lost or not actioned before?

12 responses



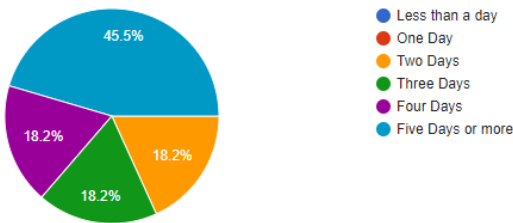
On average, what amount of time does it take you to complete EACH inventory request?

11 responses



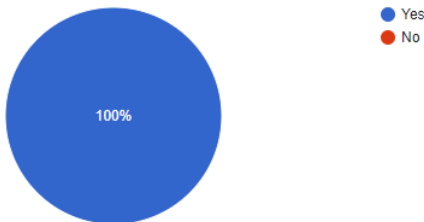
Assuming your request is approved, from sending your request, how long does it take for the Inventory you have ordered to arrive?

11 responses



Do you believe the process of requesting Inventory should be simpler / more efficient?

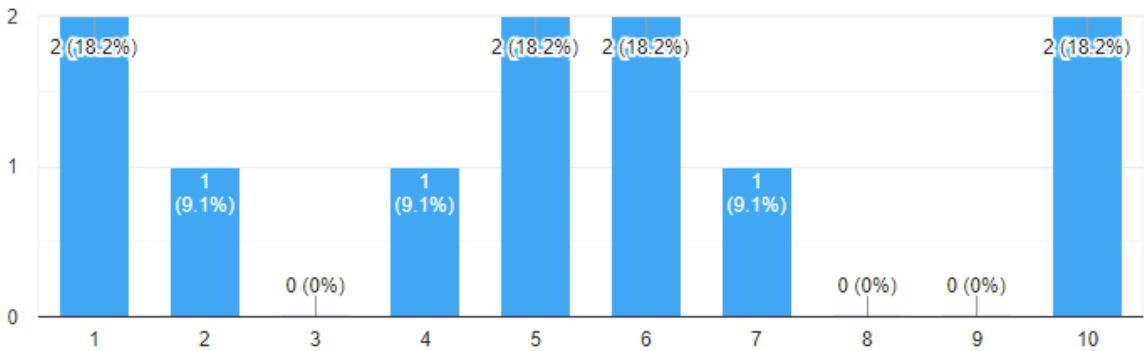
11 responses



If yes, how many times have you placed orders in the same time period (last 18 months)

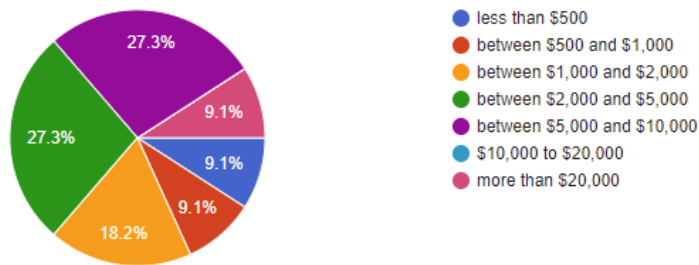
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11 responses



What would you estimate the TOTAL monetary value of your requests at over the last 18 months?

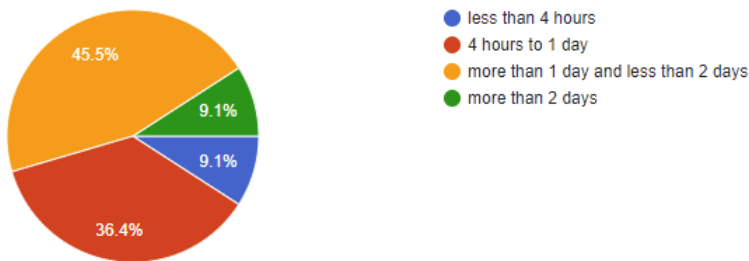
11 responses



On average, what amount of time does it take for approval of an inventory request?

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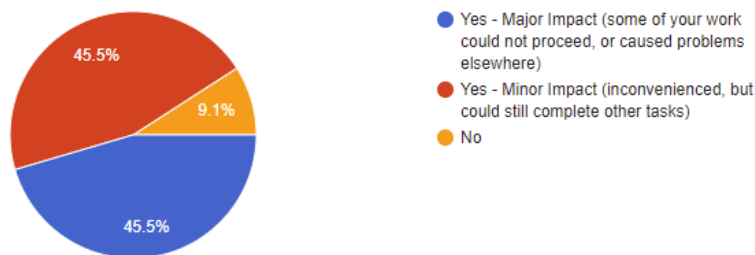
11 responses



Has delayed arrival of Inventory you requested affected your work before?

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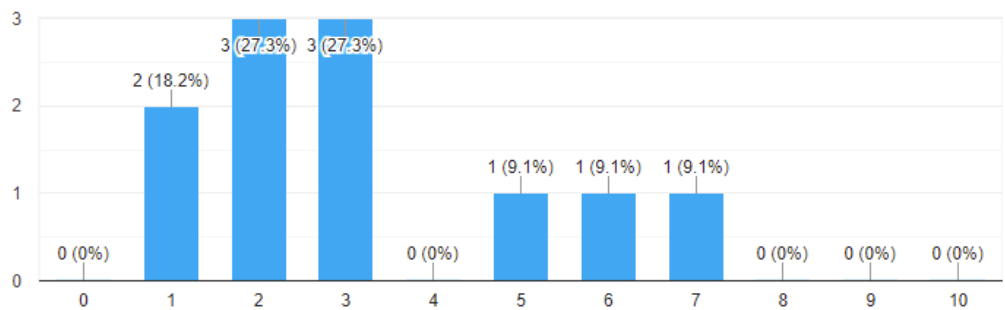
11 responses



On a scale of Zero to Ten, how satisfied are you with the current Inventory Request Process?

[Copy](#)

11 responses



Do you have any general feedback or information on the existing Inventory Management process which you would like to pass on?

6 responses

Our system needs to be updated

Impacts our ability to provide quality early childcare services.

We should be able to order from the work PCs or iPads

The couriers are tardy and not careful with our deliveries.

the delivery delays have increased ever since the pandemic started. We need to reorder stock earlier to ensure we don't run out

No one trained me on how to do the ordering. It took me a long time to fill in the form.

7.4 Additional Data – Inventory Management BPM (Executable) -

Dennis

The following Business Process Model was developed as a more in-depth “As-Is” process following the elicitation process. The conceptual model is attached as per section 4.2.4 of this document.

