FIT3138 Assignment 2 – Business Case for an ERP implementation

Business Case for <Top Gear Bikes>
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Contents

1.0 Introduction/ Background

Top Gear Bikes (TGB) started in 1989 and is a company that manufactures and distributes racing bikes. They base their research and development and manufacturing in Melbourne while sourcing materials from China and some local Australian suppliers. TGB is a medium-sized company with 2,000 employees. This includes 1500 users of the system.

In consideration of their plans to expand operations into other countries such as India and Vietnam, they are considering implementing an enterprise system. This will help them to be more agile across all bases of the company allowing more accurate and timely information to help make better-informed decisions.

2.0 Business Objective

TGB's objective is the continued growth of the business through expanding operations into other countries, and refinement of their operations to improve profitability through improving the efficiency and transparency of processes for stakeholders.

The objective is supported as the project will enable greater coordination with dealers by providing relevant information to them in a timely manner. This can improve control of their demand and inventory management on a global scale.

Profitability is also supported through improved tracking of profitability and manufacturing costs through the financial tools and predictive analytics provided by an enterprise system. This enables better strategic planning and decision-making.

3.0 Current Situation and Problem/Opportunity Statement

TGB primarily operates in Australia and currently utilises a variety of legacy systems. However, they are looking to expand operations overseas.

This presents a problem as these systems are outdated and the lack of agility in them leads to irrelevant, incorrect, untimely data, and ultimately poor decision making. With the plans of expansion of operations, there is also a lack of coordination and standardisation as a result of the legacy systems.

There is an opportunity for an enterprise system to be implemented in order to be more competitive in the current landscape. Top executives and middle managers will be able to make better-informed decisions. Operations in other countries can be more connected to each other rather than having isolated systems.

4.0 Critical Assumptions and Constraints

Top management support

Without this, there will be a lack of leadership and resources, which culminates in poor planning, performance, and lack of belief in the project. If staff do not believe in the project, it is difficult to motivate them and there is likely to be pushback. There are many levels of computer expertise, roles, and possible locations so top management need to ensure that everyone is committed to having a coordinated and successful implementation and expansion

Alignment with the business plan

TGB has their strategic direction and drivers for the implementation, so choosing the system which fits these will ensure these are more likely to be achieved. Straying from these will result in a system that does not provide an adequate return for the company. It also needs to be chosen with respect to aspects such as budget, time, risks etc. to ensure that the chosen system is most suited.

Expertise / Support from vendors

Having many levels of computer literacy and a lack of ERP experience likely means that the process will be difficult for many staff to go through. Implementing the system without support is likely to lead to a poorly implemented system with bugs, incorrect data etc. Having vendor support can help ensure that the implementation is done smoothly and correctly. They can also guide staff through the processes to make them feel comfortable and develop their skills.

Business process reengineering

TGB has used legacy systems for a long time and processes currently in place may not be compatible with an ERP system. Therefore processes may need to be re-engineered to gain greater integration, which can reduce errors in the system and greater consistency between the system and business processes. The company should have a deep understanding of their own processes to ensure the reengineering is done correctly.

Employee training

Many employees at TGB may be inexperienced, so training is necessary. A new system will have a large impact on staff and operations, so staff need to know how to operate the system so that it provides the benefits expected from it. If staff are left lacking skills to use the system, it will have a negative impact on the performance of the company.

Effective project management

TGB is a growing company and processes are possibly very complex, so effective project management is imperative to identify potential problems, monitor the implementation, and ensure high-risk possibilities are avoided. Not doing this from the early stages will result in negative consequences that are costly and difficult to fix.

5.0 Analysis of Options and Recommendation

Summary + Recommendation

Recommendation: Microsoft Dynamics 365 (Weighted score = 4.5)

This provides the most benefits in terms of what TGB aims to achieve in implementing an ERP system while also being the most cost-effective. It provides an easy-to-use system that has automated and/or guided functions, and implementation is backed up by strong technical support and tools. While it is not the most versatile in terms of functionality, it meets most of TGB's needs as it has mobile functionality, and cloud and on-premise capabilities and provides effective support for the supply chain management.

SAP Business One (2.7)

While being cost-friendly, it does have limited functionality compared to other options which makes it less optimal for tasks such as forecasting and inventory management that TGB aims to improve. Furthermore, the system suits small-sized companies more than an expanding medium-sized company like TGB.

Oracle Netsuite (4)

This meets many of TGB's needs as the wide range of functionality and tools allow for improved analytics and decision-making. It also supports cloud infrastructure and multi-subsidiary management which suits the plans to expand operations. However, the price was deemed to be high compared to other systems and not seen as cost-effective. Other systems offer the same benefits that TGB looks for but at a better price.

Infor LN (3.2)

Infor LN is designed to serve the manufacturing industry as an advanced cloud ERP system solution. Although TGB is a manufacturing company, there will be several problems after implementing Infor LN. First of all, Infor LN is designed for small to medium-sized enterprises. If TGB continues to expand in the future, it is likely that the number of users will exceed the maximum number of users that the Infor LN system can handle. Secondly, if the company needs to change or increase the professional services business in the future, the system will be incompatible with the new business.

Software as a service (SaaS)

SaaS involves cloud-based apps which can be used over the Internet, usually a web browser. It is maintained by a cloud provider and is offered on a pay-as-you-go basis. The infrastructure of the system, app data, app software and security is handled by the cloud provider (Microsoft Azure, n.d.; Oracle, n.d.). TGB can still get the same benefits as an ERP system. However, as there is no need for TGB to install and maintain software, they can save installation and maintenance costs, reduce complex software and hardware management, and realise the benefits of an ERP system sooner.

Cloud ERP

SaaS rises in popularity coincide with the rise of cloud ERP. Cloud ERP would provide many benefits for TGB, including quick and accessible communication on a global scale as well as allowing manager access to information at any time and location. This is beneficial for TGB as they look to expand operations overseas. Cloud ERP more easily provides a standardised method of inventory management. Communication is more effective between suppliers and TGB will have more accurate, up-to-date information. This optimises the customer experience and coordination of all elements in the supply chain and also improves decision-making and planning.
(European Business Review, 2022)

In-memory Computing (IMC)

IMC also meets the growing need for companies to have access to data in real-time to make data-driven insights. Data is stored in the RAM rather than hard disks, which reduces layers to data access and further allows more data to be processed at a quicker speed (Buss et al, 2013). This results in improvements in finding trends, forecasting, inventory management, and decision-making (Grieg, 2017).

6.0 Preliminary Project Requirements

Microsoft Dynamics 365

1. Is able to be adopted locally on the premise and in the cloud. Data can be stored either way allowing relevant information to be easier to access and be used in analytics decision making etc.
2. Mobile and tablet support for real-time, on-the-go access to the ERP system
3. Guided and automated functions to help users understand the system and it is used in an efficient and effective manner
4. Strong system integrity and security to protect data and information
5. Functionality for Warehouse management, Asset management, and Supply Chain management
6. Strong expansion capability, in the future, if the company wants to expand the business, the system can be easily modified

7.0 Budget Estimate and Financial Analysis

A preliminary estimate of costs is $2,287,000. This is based on the following estimated figures

- The project manager's salary for undertaking the project is $72,800
- The rest of the team's salary total is $208,000
- Implementation is $1,900,000 (Panorama, 2021)
- Licences are $107,000 in total

Expected benefits are estimated to be $2,852,500 by the end of year 4. Benefits are expected to come from:

- Reductions in inventory expenses, operating expenses, transportation costs etc.
- Improved profitability tracking
- Increased staff productivity

Other assumptions are stated in Exhibit C

An NPV of $115,708.97 as shown in Exhibit C means that within a 4-year timeframe, the Microsoft Dynamics 365 ERP system will be a profitable investment and will provide good value to TGB. Overall the benefits the system provides will outweigh the costs.
A Return on Investment of 6% backs up the positive value the system will bring as such a high value indicates that the gains from investing in it are highly favourable compared to the costs.

Based on Exhibit C, this investment would be worthwhile

8.0 Schedule Estimate

Estimated time required

Implementation typically takes six months to two years to complete with factors such as company size, the number of users etc. affecting the duration (Microsoft, n.d.). In the case of TGB which has 2000 staff, and has relied on the same legacy systems for many years, it is estimated that the time required to implement the system would be **roughly 1 year.** This is because the system needs to accommodate many users who may also need training and the assumption that data migration will be a difficult process due to large amounts of data to be sorted and transferred. Quicker implementation would be beneficial as TGB plans to expand soon but rushing it could have detrimental effects on performance as well as the increase in the costs and timeframe.

Estimated go-live date: **17th October 2023**

Milestones

Milestone 1: Planning and requirements gathering complete

The project team is assembled and comprises staff from different departments to give different perspectives.
Current business practices are evaluated and how the ERP system will improve processes is identified. The requirements of the implementation are clearly stated and are aligned with the requirements of TGB as well as the constraints of stakeholders.
Necessary resources (tools, funding etc.) are obtained.

Milestone 2: Existing data prepared

Relevant and useful data is identified and verified within the old system to ensure accuracy and completeness. The data is prepared by being separated from useless information and being cleaned.

Milestone 3: Staff Training

A training program is outsourced from an approved vendor to ensure staff know how to use the system. There will be practice cases and examples for staff to follow and complete. When staff are able to complete these, they will be able to apply their skills to TGB's operations. The training may be very time-consuming and expensive as there are 1500 end users of the system. Incentives to motivate staff through the process could be given.

Milestone 4: User testing successful

The system pre-release has been tested by users and the performance has met the requirements of the staff and the company. User experience can be determined through a short survey. User focus groups can be used over the course of a few days giving sufficient time to test and collect feedback.

The final outcome of the system can be better and more beneficial to the consumer as more time is allocated to allow any final changes to be made to the application before release.

Milestone 5: ERP system launched

The system is available for the whole company and to be used in day-to-day operations. The project team and vendor expertise are available in the weeks' post-implementation to deal with possible issues.
Performance evaluation of the system needs to be conducted to determine if it fulfils the requirements of TGB. If not, changes to the system may be necessary.

9.0 Potential Risks

Based on Exhibit D:

Top 4 Risks

Insufficient Computer Literacy (R2)

Many of the staff may not have the necessary computer skills to operate the new system effectively or find it difficult due to long-standing use of legacy systems reducing the need to upskill/train. A response to this could be to train staff although this is subject to the number of staff and cost of training. Another response is to hire more skilled staff but this is also subject to the company budget and possible termination of employment which could be costly.

ERP Project Over Budget (R6)

Incorrect estimates lead to the project exceeding budget constraints, which can arise from a lack of experience in project implementation and a lack of technical understanding of ERP systems leading to underestimating costs. A response is to be proactive and create a detailed plan with viewpoints from other parties. Management should ensure sufficient funds are available and also have a contingency budget in case of going over budget.

Exceeding Time Constraints (R5)

Unexpected delays may result in failure to complete the project within the timeframe, which may be due to the team not considering possible technical or service issues or underestimating the complexity of the system. In response, the project schedule should be re-estimated and compressed. In addition, outsourcing tasks such as data migration may help to reduce the workload of the project team.

Staff Pushback (R1)

Refusal from staff to adopt the system as they may resent the additional workload of having to move away from legacy systems. They view it as unnecessary and not worth the effort to adopt. This will lead to the system not having the desired effect as low morale negatively influences performance. It is unlikely this risk can be avoided so a response is for top-level management to explain the changes and why they will be beneficial to the company as well as the staff themselves. Training can also help staff to feel more comfortable with the system which reduces resistance.

Risk Matrix

Low = 1-3
Medium = 4-6
High = 7-10

Probability	High		R2, R5	R1
	Medium		R3, R7	R6
	Low		R4	R8
		Low	Medium	High
	Impact			

Cell colour key
Red = Critical
Yellow = Moderate
Green = Minor

10.0 Exhibits

- Exhibit A: Factors for a successful ERP implementation

Factor	Description	Team Member
Top management support	This is critical as it provides both leadership and necessary resources (Al-Fawaz et al., 2008). Skills and resources are especially relevant as TGB is a sizable company and this project affects a lot of users. Lack of top management support will lead to inadequate implementation resulting in failure to meet constraints (time, scope, budget), poor performance and user dissatisfaction. This culminates in expansion being more difficult to make a success. Management can also align employees towards the same goals and belief that the ERP project will be successful and beneficial (Fang & Patrecia, 2005). With 2000 staff of varying roles and computer literacy, many of them may find it difficult or be unwilling to move away from legacy systems. Top management needs to reduce any pushback and ensure that all staff are aware of the benefits and committed (Reitsma & Hilletofth, 2018). This is especially	Clyde

	prevalent as all locations of operations should be coordinated to make expansion more successful.	
Alignment with the business plan	It is important to implement a system that aligns with the TGB's plan and vision, as deviating from them will result in goals and stakeholder expectations being more difficult to achieve (Al-Fawaz et al., 2008). Goals and the ways in which they can be achieved should be identified to provide direction and help choose the most relevant system (Al-Fawaz et al., 2008). TGB have outlined their strategic direction as well as business drivers for the implementation and so choosing a system that aligns with these is imperative to meeting its objectives. Using a business plan also provides TGB with information such as cost & benefits, risks, and a timeline (Reitsma & Hilletofth, 2018). This helps to ensure that they are keeping within the components of the triple constraint and to help them balance the risk of a project with the benefits. For example, as this system will affect a lot of users on a global scale, they may decide to implement a system with fewer risks but is more expensive and established.	Clyde
Expertise/support from vendors	This will be the first time TGB has implemented an enterprise system so a lack of experience and in-house skills could make the process more difficult. Many skills are required such as change management, business process reengineering etc., and these can be provided by consultants (Fang & Patrecia, 2005). Furthermore, consultants can develop the skills of existing employees to ensure they are capable and they are using the system correctly. This will make the implementation smoother, reduce pushback and employees can be more comfortable and confident. However, TGB needs to refrain from over-relying on consultants as they have less knowledge of the inner operations of the company (Fang & Patrecia, 2005). Blindly following consultant suggestions can be detrimental as they may provide something that is not in line with the goals and processes of the company.	Clyde
Business process reengineering	TGB hasn't changed its business processes since it was founded. Given that systems need to achieve a higher level of integration to ensure proper functioning, companies need to reengineer their business processes when implementing ERP systems. The reason is that reengineering can reduce system errors and make the system more consistent with the company's business processes (Nah & Lau, 2001). Therefore, when implementing the ERP system, the company needs to have a deep understanding of the company's business processes and reengineer its imperfections. Otherwise, highly complex and unclear business processes will lead to the system not fitting into the business processes (Al-Salti, 2008).	Rui

Employee training	Since TGB has a lot of employees, it may have a large number of inexperienced system users. Therefore, staff training is very important. Changes in the system have a great impact on the work of employees (CNET, 2002), so employees need to learn how the system will change the operation of the company and learn about how to operate the system (Nah & Lau, 2001). At the same time, if employees learn more knowledge about the system, the company's ERP system will be easier to implement successfully (Al-Salti, 2008). Otherwise, improper staff operations may have a huge negative impact on the performance of the company (Nah & Lau, 2001).	Rui
Effective project management	Since the TGB has multiple departments and the complexity of its business processes is unknown, the implementation of an ERP system requires efficient project management to identify potential problems before implementation. Moreover, since the operation of the company is relatively complex, efficient project management can ensure the controllability and monitoring of the project implementation. Excellent and efficient project management can have an impact on the arrangement of the project, and it can identify the size and risk of the company's project, which can avoid high-risk areas in the project implementation and guide the implementation of a successful ERP system (Al-Salti, 2008). If the company does not work well in this part, it will be too late to discover that project planning and implementation are not comprehensive or that the pitfalls have not been considered (Weston, 2001).	Rui

- Exhibit B: ERP Options and recommendations

Scored 1 (Poor) - 5 (Excellent)

Team Member		Clyde	Clyde	Rui	Rui
Criteria		SAP Business One	Oracle Netsuite	Microsoft Dynamics 365	Infor LN
Price	15%	**4** Professional licence with full functionality = $2556 per year. Cheaper prices with less functionality are offered Administration and finance package implementation (the core of the system) is roughly $15k. Distribution rises up to $30k, Manufacturing to $45k (Cloud Factory, n.d.)	**2** Implementation can cost roughly between $39k - $157k. Can vary dramatically depending on customisation and specific business needs Licences start at roughly $1500 per year Training and support costs roughly $3900 - $23k (Techfino, 2022) Costs converted from USD to AUD	**5** Dynamics 365 can determine the price based on the features we need. Supply Chain Management costs $2965.2 per year. Option: Guide - $1070 per year; Intelligent - $4944 per year (Microsoft , 2022) The implementation cost was $1.9 million, the lowest of the four systems (Panorama, 2021)	**3** The implementation cost was $1.5 million, which is the second lowest of the four systems (Panorama, 2021) The price range is 70 thousand to 1000 thousand US Dollars The distribution fee is around 15000 US dollars. (Top, 2022)
Ease of use	20%	**3** Suits small businesses seeking only core ERP functionality. Less need for experienced users TGB is outside this range as they have 2000 staff. However, it can be assumed they have many staffs who have low levels of computer literacy due to old, unchanging processes. This system may benefit them.	**4** Can be industry-specific and easy to customise. Makes it easier to understand. Training and support can help users to understand the system.	**5** Dynamics 365 supports cloud usage, which allows users to operate their systems from anywhere. The guide function is very comprehensive and has a good guiding role. This function is very good to help users use the system, and can even guide users who have not used the system. The Power Automate function allows users to set automatic scripts to automate system operations	**3** The Infor system has a mobile app, which can allow users to access current information at any time. (Infor, 2022) This system has no internal configuration guidance function, and it needs a lot of staff training before it can be used, and employees need to use the staff manual when they need the operating system. This can have a negative impact on the ease of use. (Infor, 2022)
Ease of implementation	20%	**3** As it is suited for core functionality, less complicated functions are included making it easier to implement Limited in add-ons and integration with existing software	**4** Can integrate with other business software providers. Netsuite can be implemented with minimal change to other software. Large range of add ons However, it is unclear if	**4** The system is highly scalable with a strong focus on system integrity and security. At the same time, it also has strong technical support. It has a lot of different tools to help the implementation of ERP systems, and can widely	**3** Provide pre-built functionality. Things like workflows, integrations, and analytics are all pre-built, which is easier to implement (Panorama, 2022). It connects suppliers,

		An easier understanding system may result in less pushback from staff	it can be integrated with the TGBs legacy systems Netsuite's dedicated team can assist in implementation as well as future support (Fallon, 2021)	adapt to new changes. The implementation of the system gives a lot of data strategy, which gives more help to enterprises to implement data migration. The configuration data plan for Dynamics 365 is not very good, the wrong use can be devastating, and there is only one stage that can do the retraction. (Microsoft, 2022)	manufacturers, logistics providers and banks in the supply chain (Panorama, 2022). Based on the internal modelling tool, the system can quickly implement an ERP system setup (Top, 2022).
Functionality	15%	**2** Provides integration across Accounting, Sales, Purchasing, Inventory Management, and Production. Encompasses CRM to Distribution to Service to Production to the Warehouse Some functions are restricted to being add-ons (e.g., expense reporting), have limited functionality (e.g., forecasting), or are not included (e.g., sales planning)	**4** Includes applications for managing accounting, order processing, inventory management, production, supply chain, and warehouse operations Provides real-time visibility at local, regional and headquarters levels, and standardised business processes across all divisions and subsidiaries. Meets the need for real-time information and expansion into overseas	**3** Due to the company focusing on SCM, compared with SAP, Oracle and Infor, its SCM strategy only ranks third. (Panorama, 2021) Dynamics 365 features warehouse management capabilities for complex environments and equipment and asset management capabilities with asset management capabilities The system provides mixed-mode and sophisticated manufacturer management capabilities that can be adapted to complex or simple business processes (Panorama, 2022)	**2** Infor LN can only support a maximum of 2500 users, but the company has more users The system's solution does not target professional service companies such as banking and healthcare. And the solution isn't specific to some companies that use the recipe and blending operations such as pharmaceutical companies (Top, 2022).
Fit with the scope of TGB	30%	**2** Suits small business which is outside of the TGB range as they have 2000 staff Cloud hosted which is ideal for expanding overseas Not ideal for tracking profitability and costs.	**5** Enterprise edition allows for over 1000 users which suits TGB who have 1500 users of the system. Supports multi-subsidiary management and multiple currencies. Useful as they plan to expand operations	**5** With mobile phone and tablet support, employees can operate the system anywhere any time There are many types of software available to generate reports using data in the cloud	**4** Infor LN mainly serves discrete manufacturers, such as automotive, component manufacturing, machinery and other industries. The system supports warehouse storage management, logistics management,

		Lack of expense reporting and forecasting functionality harms supply management and decision making Mobile app for their Business Areas Sales Managers (Stellar Consulting, n.d.)	Multi-tenant (one big database that stores all customer data) and uses cloud infrastructure Provides role-based, out-of-the-box dashboards, KPIs and reports. Improves predictive analytics and decision making Mobile app for their Business Areas Sales Managers (Fallon, 2021)	It has local and cloud data storage capabilities Have AI systems that can be used to automatically adjust supply chains With the script setup function, it can be more convenient for employees to operate the system	financial management, and after-sales management. This enables companies using Infor LN to reduce their total cost and increase their agility in the supply chain Infor LN owns cloud systems, and its Industrial cloud suite is deployed on the Amazon AWS system, which provides data security and operational security. (Top, 2022)
Total	100%	2.7	4	4.5	3.2

• Exhibit C: Cost-Benefit Analysis

Discount rate	9%				
	Year				
	1	2	3	4	Total
Costs	(2,287,800.00)	0	0	0	(2,287,800.00)
Discounted factor	0.92	0.84	0.77	0.71	
Discounted costs	(2,098,899.08)	-	-	-	(2,098,899.08)
Benefits	0	1000000	950000	902500	2,852,500.00
Discounted factor	0.92	0.84	0.77	0.71	
Discounted benefits	-	841,679.99	733,574.31	639,353.75	2,214,608.05
Cash flow	(2,287,800.00)	1,000,000.00	950,000.00	902,500.00	
Discounted cash flow	(2,098,899.08)	841,679.99	733,574.31	639,353.75	115,708.97
Cumulative Disc cash flow	(2,098,899.08)	(1,257,219.09)	(523,644.78)	115,708.97	
				NPV	$115,708.97
				ROI	6%
Costs					
PM annual salary	72800				
Team annual salary	208000				
Implementation	1900000				
Licenses	107000				

Assumptions (*are subject to change)

- Finished within 1 year
- Project manager working 20 hours per week for 12 months at $70/hour
- Other team members working a total of 80 hours per week for 12 months at $50/hour
- License including CRM, SCM, Finance, Commerce costs $267.50 per user/month (EmpowerIT, 2020).
- Will purchase license for 400 users (can purchase more in future if sucessful)
- Customisation cost are $0
- Implementation cost includes Implementation partner's expertise and time, System configuration, Planning and project management, Training development, Testing and Support.
- implementation total cost is $1.9 million
- Assume discount rate is 9%
- Assume benefits do not begin until year 2 and are $1000000
- Benefits decrease by 5% each year as biggest benefit is seen in first year after implementation
- Benefits include reductions in inventory expenses, operating expenses, transportation costs, improved profitability tracking, and increased labour productivity

- Exhibit D: Risks Analysis – likelihood and impact and response strategy

Ref no.	Risk	Description	Category	Root cause	Triggers	Potential responses	Impact	Probability	Risk Score
R1	Staff pushback towards the new system	Staff refusal to adopt a new system. Unwilling to change from legacy systems as that is what they are accustomed to. May also fear additional workload. Ultimately can lead to decreased motivation and effectiveness of staff	People	Staff don't believe a new system is necessary Do not want to put in extra effort to adopt the new system	Refusal from staff to use the new ERP system Low morale around the workplace Staff may even leave TGB	Show support for the system from top-level management Staff training Prepare the company for upcoming changes and ensure staff are aware of them in advance. They should also be kept updated through effective communication	7	7	49
R2	Insufficient computer literacy	Varying levels of computer literacy can lead to some users finding it difficult to use. This may result in pushback and low morale	People	Lack of training/ upskilling Continued use of old systems (no reason to learn new skills)	Staff find it difficult to use the new system. Feedback from staff is poor Expectations of increased effectiveness from the new system are not met	Staff training + Vendor support Hire staff with higher computer literacy	5	8	40
R3	Poor data integration/ migration	Data migrated from old systems is difficult to do. Poor migration can result in data that is inaccurate, duplicated etc.	Technological	Data may be hard to find as it is not centralised. Lack of data entry standards	Data is messy, contains errors etc. Staff find it difficult to perform their tasks, do not trust the system, and their output is below standard	Implement data standards and guidelines Migrate only relevant, useful information. Lots of historical data is not useful in the present day. (Invoices from 15+ years ago may not be necessary to migrate)	6	4	24
R4	Scope creep	Including extra features which are unnecessary in the system can lead to more difficult, expensive implementation.	Strategic	Poor planning Requirements may not have been communicated well	Management begin asking for extra features during implementation which	Go through a detailed planning process to clearly state the requirements Communicate the essential	6	3	18

Ref no.	Risk	Description	Category	Root cause	Triggers	Potential responses	Impact	Probability	Risk Score
				between management and stakeholder. Disagreements can also lead to scope expanding as different perspectives are included to compromise	was not discussed during the planning	needs of the ERP system to the project team Leaders in the project team have the authority to reject requests for features that are seen as unnecessary			
R5	Exceeding time constraints	Some unexpected technical and/or service issues occurred during the development, which may have taken more time than anticipated to resolve, resulting in a failure to complete the project on time.	Process/ Technological	The project team did not consider possible technical or service problems when developing the project plan, or the team underestimated the complexity of the technology, thus extending the project time	Too much time was spent on hardware or data migration, resulting in ERP system project milestones not being met on time.	The project schedule can be re-estimated, and a project compression plan can be prepared in advance to compress the number of tasks that can be compressed to ensure that the project is completed on time. Outsource tasks Incremental rollout. Priority to critical needs (e.g. forecasting)	5	7	35

Ref no.	Risk	Description	Category	Root cause	Triggers	Potential responses	Impact	Probability	Risk Score
R6	ERP project over budget	The project team did not consider the funding for a portion of the development when making the project plan, or the project team did not do a similar project, so the cost estimate was wrong. And getting the cost estimates wrong can lead to over budget. If management does not intend to invest more money, it will cause the ERP project to fail.	Financial	The inexperience of the project manager or project team in estimating funds can lead to incorrect cost estimates. The project team's lack of understanding of the ERP system or lack of technical experience will also lead to technical vulnerabilities in the implementation process of the ERP system, which can result in an increase in the cost of system implementation.	The actual cost exceeds the earned of the ERP system during the implementation of the project	Management needs to prepare sufficient funds and firmly select the ERP system Create a detailed, well-researched cost estimation Have a contingency budget	8	6	48
R7	Project team member's resignation	The project team member may leave the team or leave the company during the ERP implementation.	People	The team members need to leave for some personal reasons (eg. car accident). However, it is possible that the team members do not feel satisfied with the culture of the company or their work (eg. underpaid, lack of work-life balance, or members only care about their own work).	More than one project team member resigns at the stage of implementation of the ERP project	The HR manager has to ensure that the number of project team members is greater than required and that the team management keeps track of the team's performance	6	5	30
R8	System instability	Customising the ERP system too much to fit the needs of the business. This can result in the	Technological	Rather than adapt processes to the new system or train, the	Future updates become increasingly difficult to implement	Keep customisation to a minimum.	8	3	24

Ref no.	Risk	Description	Category	Root cause	Triggers	Potential responses	Impact	Probability	Risk Score
		system being less compatible with software updates and being harder to maintain stability. This leads to disruptions in business operations and increases in maintenance costs		system is customised to reduce the need for change. May have short-term benefits such as ease of use but can harm TGB long term.	New software becomes incompatible or increases the risk of system/customisations breaking	Attempt to reconfigure current business processes to fit the new system instead of customisation Ensure support from vendors to determine whether customisations are beneficial overall Train employees to be better suited to the new system rather than customising the system to fit them.			

Reference

Section 4.0

Al-Fawaz, K,. & Al-Salti, Zahran & Eldabi, Tillal,. (2008). *Critical success factors in ERP implementation: A review*. Retrieved from: https://www.researchgate.net/publication/49401950_Critical_success_factors_in_ERP_implementation_A_review

Reitsma, Ewout,. & Hilletofth, Per,. (2018). *Critical success factors for ERP system implementation: a user perspective*. European Business Review, 30(3), 285–310. Retrieved from: https://doi.org/10.1108/EBR-04-2017-0075

Fang, L., & Patrecia, S. (2005). *Critical success factors in ERP implementation*. Retrieved from: http://www.diva-portal.org/smash/get/diva2:3922/fulltext01.pdf

Fiona, Fui-Hoon, Nah,.& Janet, Lee-Shang, Lau,. Jinghua, Kuang,. (2001). *Critical factors for successful implementation of enterprise systems*. Retrieved From: Critical factors for successful implementation of enterprise systems | Emerald Insight

Zahran, Al-Salti,. & Tillal, Eldabi,. (2008). *Critical success factors in ERP implementation: A review*. Retrieved From: (PDF) Critical success factors in ERP implementation: A review (researchgate.net)

F.C. Weston,.(2001). *ERP implementation and project management*. Retrieved From: ERP implementation and project management - Document - Gale Academic OneFile

CNET,. (2002). i2-Nike fallout a cautionary tale. Retrieved From: i2-Nike fallout a cautionary tale - CNET

Section 5.0

Cloud, Factory,. (n.d.). *SAP Business One pricing.* Retrieved from: https://www.cloudfactory.co/sap-business-one/pricing

Stellar, Consulting,. (n.d.). *Sap Business Bydesign Vs. Sap Business One – What's The Difference?* Retrieved from: https://www.stellaroneconsulting.com/blog/business-one-vs-business-bydesign

Techfino,. (2022). *The Ultimate NetSuite Pricing Guide*. Retrieved from:https://www.techfino.com/blog/netsuite-pricing-guide-netsuite-pricing-model

Fallon, Nicole,. (2021). *Oracle NetSuite Accounting Software Review*. Retrieved from: https://www.businessnewsdaily.com/oracle-netsuite-review.html

Panorama, Consulting, Group,. (2021). *2021 Clash of the Titans*. Retrieved from: 2021 Clash of the Titans - Panorama Consulting Group 3.pdf (hubspotusercontent40.net)

Microsoft,. (2022). *Dynamics 365 pricing*. Retrieved from: Pricing | Microsoft Dynamics 365

Microsoft,. (2022). *Dynamics 365 Implementation Guide*. Retrieved from: Dynamics 365 Implementation Guide (d365implementationguide.com)

Panorama, Consulting, Group,. (2022).*Top 10 ERP Systems Report* . Retrieved from: Top 10 ERP Systems Report (hubspotusercontent40.net)

Infor,.(2022).*User Guide for Manufacturing*. Retrieved from: User Guide for Manufacturing (infor.com)

Top, 10, ERP,. (2022). *Installing Infor LN Mobile Apps*. Retrieved from: Installing Infor LN Mobile Apps

Top, 10, ERP,. (2022).*Infor LN ERP Software*. Retrieved from: Infor LN ERP Software (Baan ERP Software) - Easy to Use Cloud ERP (top10erp.org)

European Business Review. (2022). *7 Benefits of Cloud-Based ERP Software*. Retrieved from: 7 Benefits of Cloud-Based ERP Software - The European Business Review

Oracle. (n.d.). *What is SaaS (Software as a Service)?* Retrieved from: *What Is SaaS? | Oracle Australia*

Microsoft Azure. (n.d.). *What is SaaS?* Retrieved from: *What is SaaS? Software as a Service | Microsoft Azure*

Greig, Andy. (2017). *How In-Memory Computing Is Revolutionising ERP Sourcing in the Cloud.* Retrieved from: *How In-Memory Computing Is Revolutionizing ERP Sourcing in the Cloud | SAP News Center*

Section 7.0

EmpowerIT. (2020). *Dynamics 365 Pricing Australia*. Retrieved from: Dynamics 365 Pricing Australia - Empower IT Solutions

Section 8.0

Microsoft. (n.d.). *A 5-step guide to ERP implementation*. Retrieved from: ERP Implementation Guide | Microsoft Dynamics 365