

KIT713

**MULTI-PERSPECTIVE
ICT PROJECT**

RECOMMENDATION REPORT



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PREPARED BY

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EXECUTIVE SUMMARY

This report was commissioned to provide recommendations and action plans for PTE Magic, an English center located in Hobart, Tasmania to improve its performance based on the analyses from (1) Organizational context and (2) Opportunity identification and ranking reports. Recommendations and action plans in this report are divided into two categories: Short-term (0-90 days) and Long-term (91+ days) so that the firm can better allocate human and financial resources to facilitate the recommendations. Most of the suggestions in this report are directly relates to the application of ICT or adopt the use of ICT solutions to help achieve business goals.



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INTRODUCTION

Following the organizational operating context and opportunity identification and ranking report, this document will provide specific recommendations for the issues and opportunities with high priorities and the associated actions plans for PTEMAGIC to implement these suggestions. Firstly, this report will provide descriptions of six recommendations, dividing into two categories: short-term (0-90 days) and long-term (91+ days). Then, a detail action plan for each recommendation will be outlined, including the required changes to, impacts on personnel, technology, process, procedures, organizational strategy and timelines for implementation.

A. THE RECOMMENDATIONS

Following the organizational analysis and opportunity ranking from previous reports, there are certain areas that PTEMAGIC can improve to enhance its operational performance and achieve its business goals. This report will provide detailed recommendations for the company, dividing into two categories: ***Short-term recommendations*** (less than 90 days) and ***long-term recommendations*** (greater than 90 days). The categorization of recommendations are based on the following factors:

- The urgency of the problems/ opportunities
- The complexity of the recommendations
- The availability of manpower and resources to execute the recommendations

The separation of two recommendation sets will help the company grasp a better vision of how the recommendations strategically harmonized with their short-term and long-term strategies. In addition, it also allows the firm to allocate human and financial resources to facilitate the associated phases in the action plan of these recommendations more effectively.

1. SHORT-TERM RECOMMENDATIONS

1.1 Provide trial classes for potential students

In relation to Opportunity #01, it is recommended that PTEMAGIC should follow the trend in the English training industry to provide trial classes for potential students (both online and offline). Ideally, the center should organize some special weekly sessions to provide trial training to prospective students with different English backgrounds and targets. The reason why PTEMAGIC should not integrate trial classes with ongoing sessions is that it is harder for trainers to take care of new students while teaching new skills to current students. In addition, by designing a weekly special session for potential students, PTEMAGIC can better design the content and assign a senior trainer to always hold the trial class to improve the chance of students signing the contract after the trials. The IT team, trainers, and marketing team will need to cooperate in organizing trial classes for students. The estimated cost of providing one trial class each week is approximately \$500/month, excluding the extra marketing expense to promote the program. The effectiveness of implementing trial classes can be measured by the ratio of the number of students attending trial classes and the number of students signing up.

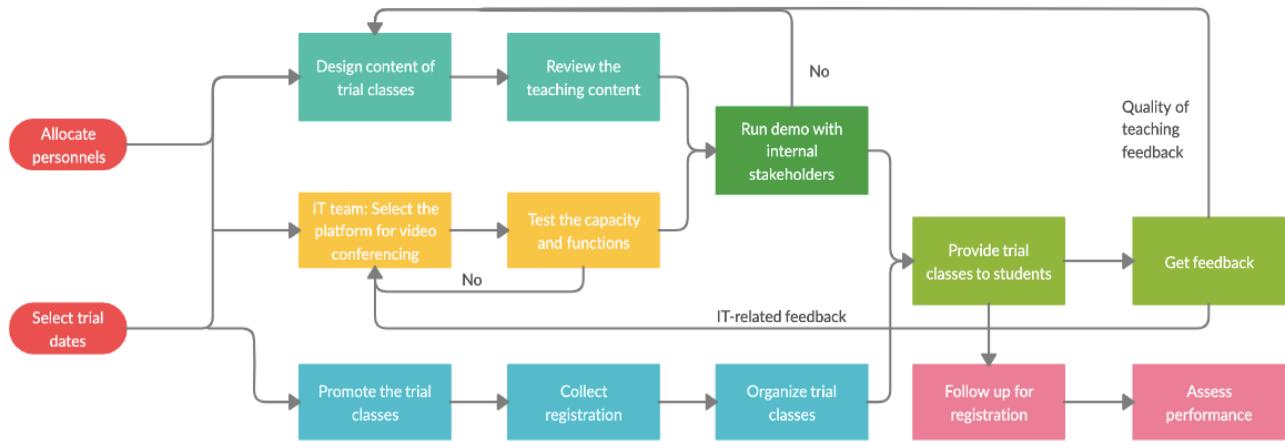


Figure 1. The process of providing trial classes for potential students

1.2 Conduct usability tests on digital platforms

The company is going to launch a mobile app in the next 3 months (O#21) and might need to redesign the online platform (O#18) after that. As identified in both the organizational context and opportunity ranking reports, the company is suffering from negative feedback and financial implications because of a lack of end-user involvement in the design process of digital assets. Therefore, PTEMAGIC should urgently perform usability tests to gain a better understanding of what students expect of training platforms and how they assess the current designs. To be cost effective, it is recommended that PTEMAGIC should combine the two tests of mobile apps and existing website platform simultaneously and the results will be used to enhance the mobile app in short-term and assist the redesign of the training website in long-term. In addition, the company can also save the cost of participant recruitment by inviting current and ex-students to participate in the tests. The minimum number of participants for each test should be approximately 20 students, delivering a right balance between sex, age and technology-savvy level.

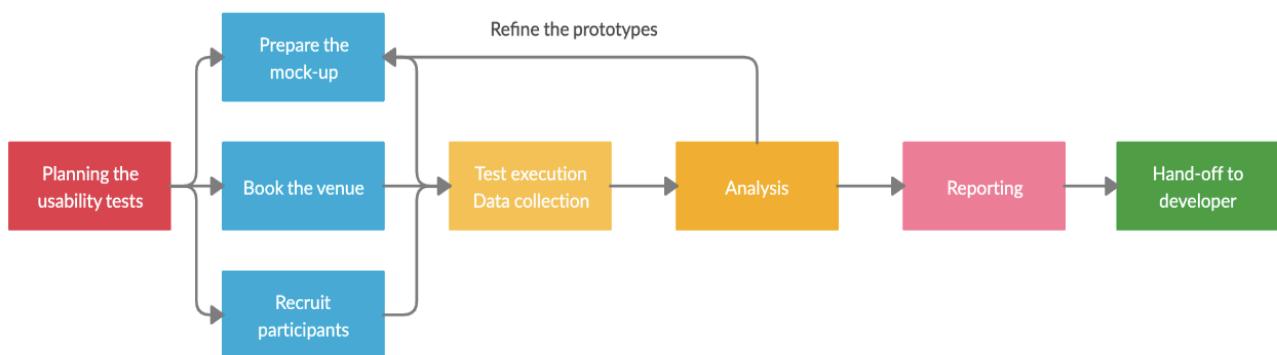


Figure 2. The process of conducting usability tests for web and mobile platforms

1.3 Develop master class list and student tracking system

The use of an integrated system to track student's performance, attendance, learning progress and staff's allocation will help PTEMAGIC' s data system become well-organized, eliminate data replication and assist trainers and marketing team to respond more efficiently to requests from students. In the short run, the system should provide basic functions of recording and updating student's personal information, checking attendance, staff allocation and differentiate the access rights of different stakeholders within the company. In the long run, the system should be upgraded to retrieve real-time data from the web platform and the mobile app and use BI functions to assist trainers with reviewing and tracking the performance of students. Based on the requirements of storing and using data from internal stakeholders, the IT team will need to either build a new customized data management system (if the requirements are complex and specialized for the operations of the company), or purchase available solutions.

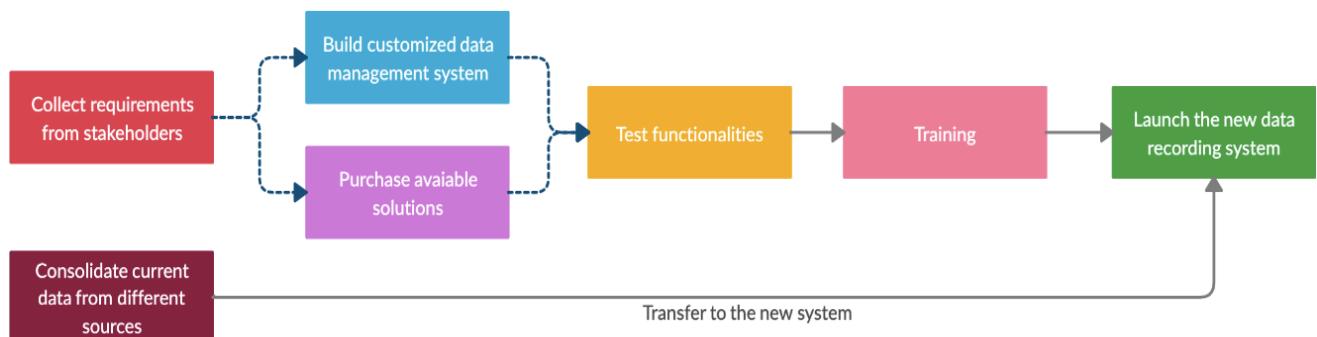


Figure 3. The process of launching a new student tracking system

2. LONG-TERM RECOMMENDATIONS

2.1 Establish data and knowledge management strategy

It is fundamental for PTEMAGIC to have a solid strategy to manage data and knowledge. According to the problems and opportunity ranking report, many current issues (#P6,8,24,24,25) will be solved if the company has an IT governance framework and data policies to protect its intangible assets and gain competitive advantages, especially when the company aims to shift their revenue ratio towards the online business. This recommendation is categorized as long-term because it is a strategic investment and the strategy must be carefully designed and planned accordingly to the company vision and long-term business plan.

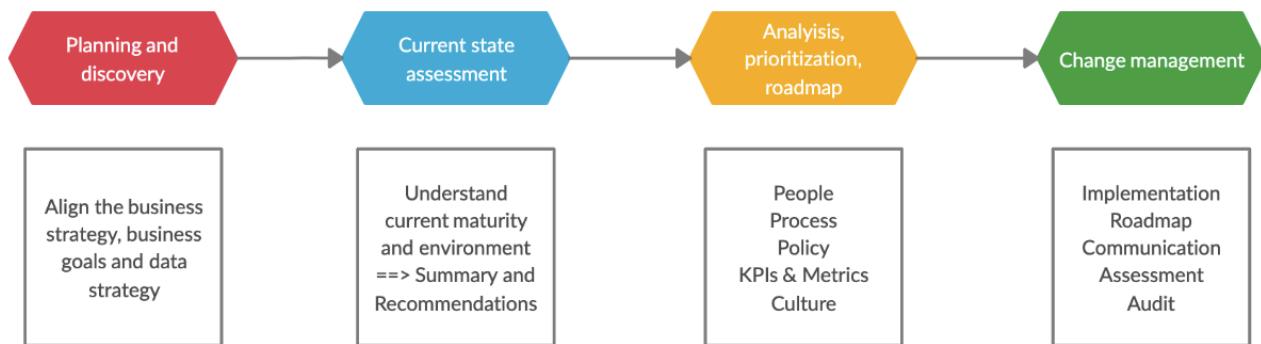


Figure 4. The process of establishing data and knowledge management strategy

2.2 Redesign the website platform

Redesigning the current platform to enhance both the UX, UI functions is critical to the training quality and customer satisfaction of PTEMAGIC. However, it should not be dealt urgently in the short-term due to two reasons. Firstly, this is a huge investment and would significantly affect the competitive advantage of the company. Thus, it takes more time for the IT team and the academic team to cooperate and develop a platform that can outperform all current learning platforms from competitors. Secondly, the top priority of the IT team at the moment is to complete and launch the mobile app as the project is under progress and requires the high concentration and commitment of the IT team. As a result, it would be ideal for PTEMAGIC to progressively implement the project of redesigning the web platform after the launch of the mobile app.

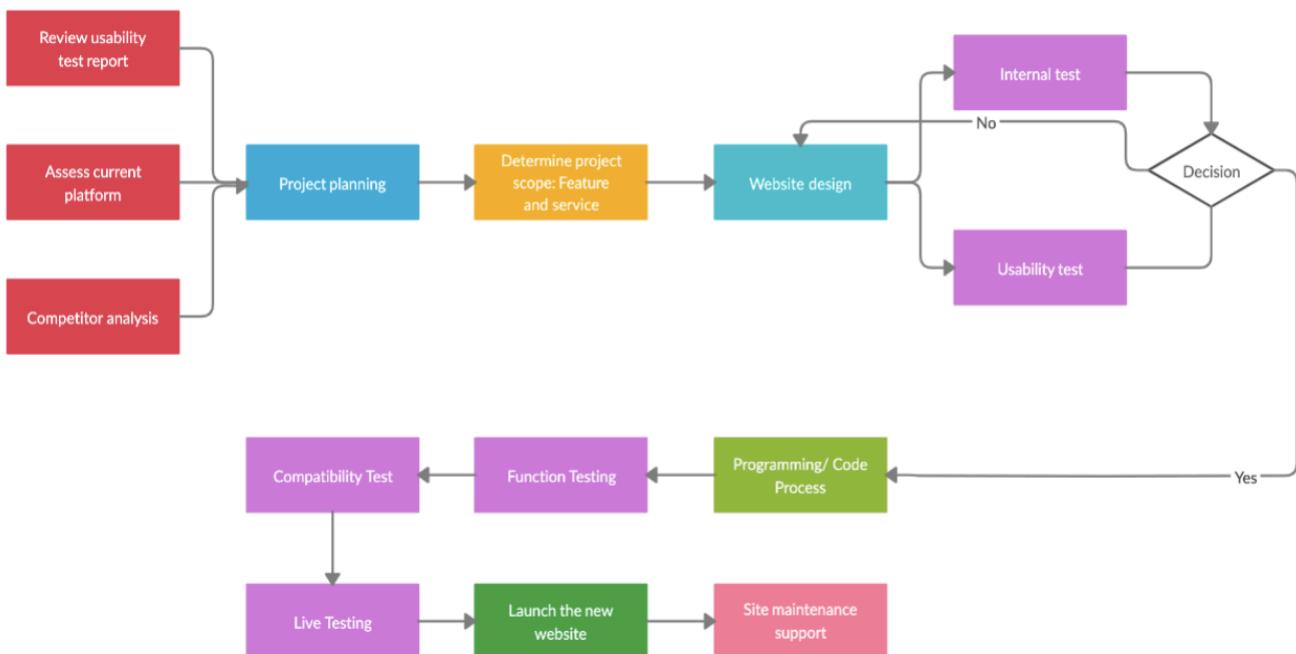


Figure 5. The process of redesigning the website platform

2.3 Develop an IT support team to support students and trainers

Currently, the teaching staffs and administration teams are responsible for assisting students with queries regarding the functions of the web platform and teaching materials. Because PTE MAGIC is planning to grow constantly in terms of the number of students and online teaching activities, especially with the introduction of new mobile app, it is crucial to have an independent team of specialists to provide IT assistance to both internal and external IT-related issues. This recommendation is categorized as a long-term solution because it will involve recruiting new employees, reorganizing IT team and multiple training sessions. This recommendation will involve recruiting new IT staff and training sessions to ensure the support team understand the ICT infrastructure of the company, data management strategy, and IT support policies.

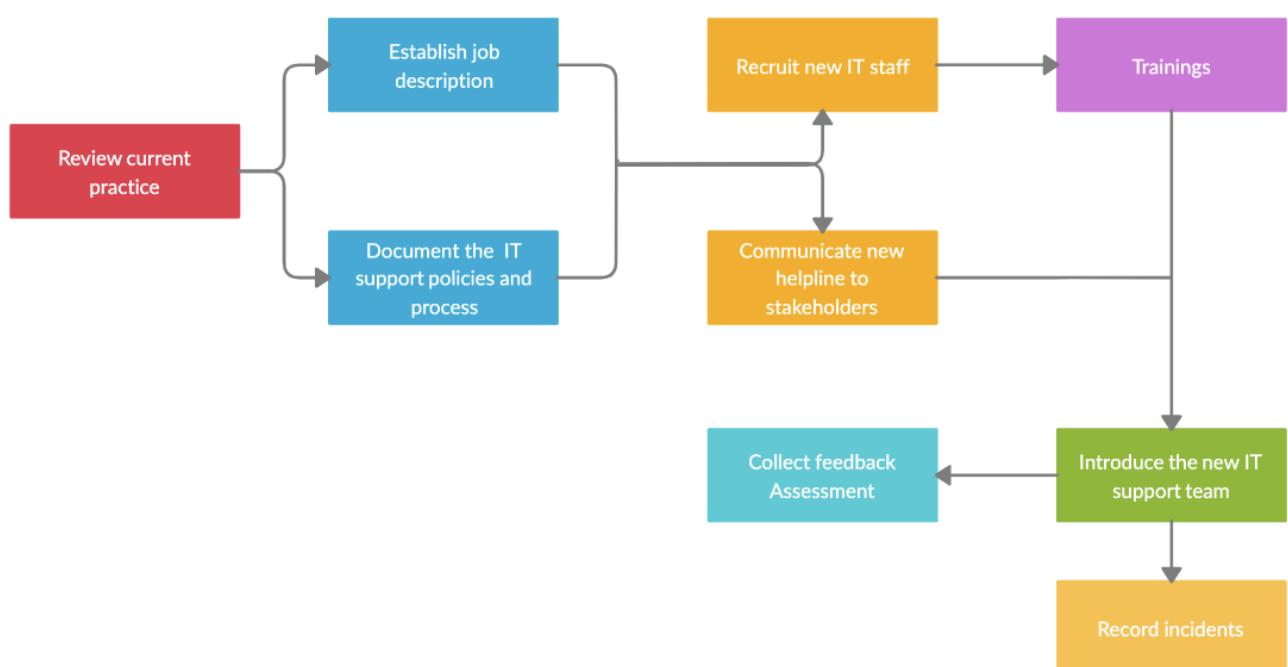


Figure 6. The process of introducing an IT support team



B. THE ACTION PLAN

1. SHORT-TERM ACTION PLAN

1.1 Provide trial classes for potential students

Recommendation 1: Provide trial classes for potential students

Description: PTEMAGIC is planning to organize some individual weekly sessions to provide trial training to potential students with different English backgrounds and targets.

Requirements (Changes to current operation):

- The IT team, trainers, and marketing team will need to cooperate in organizing trial classes for students.
- Upgrade video conference software account (Zoom/ Microsoft Team) to accommodate extra classes.
- Extra budget on promoting, organizing trial classes and following up with registration

Impact:

- More workload for IT, teaching and marketing staff
- New procedure of recruiting and following up with potential students (new sales KPI)
- Extra personal data to be recorded, thus increase the pressure on network security

Action step description	Party/ Dept responsible	Date to begin	Date due	Resources required	Desired outcome	Success criteria	Notes
1. Allocate staffs for the project	CEO	01/06	02/06	Staff list Teaching calendar Availability	1 IT staff 1 Marketing staff 2 Teaching staff	No clash in working calendar and availability	
2. Select trial dates	Marketing team	03/06	07/06	Teaching calendar Survey	1-2 slots per week	Most suitable schedule (according to survey and teaching availability)	
3. Design content of trial classes	Academic team	03/06	17/06	Academic staff meeting Survey	1-2 key skills Teaching materials Time allocation of the trial session	A balance between advertising the and encouraging activities related to exam	
4. Review the teaching content	Academic team, CEO	17/06	24/06	Teaching slides	Final teaching slides	Same as above	
5. Select video conferencing platform	IT Department	03/06	10/06	Estimated participants	Final accounts used for teaching	Balance the cost and quality effectiveness	

6.Test the capacity and functions	IT Department	10/06	17/06	Estimated participants Teaching activities	Finalize the accounts used to teaching	Good video conferencing quality and security	
7.Run demo class internally	Project team	25/06	26/06	All teaching staff Ex-students & current students	Feedback to improve the teaching activities	No major issues in delivering the content	
8.Promote trial classes	Marketing team	20/06	10/07	Extra marketing budget	More than 30 students for each trial class	More than 30 students for each trial class	
9.Collect registration	Marketing team	20/06	10/07	Google sheet Facebook registration	Personal information & preferences	80% of registered accounts are real (can be verified)	
10.Provide trial classes to students	Academic team	15/07	22/07	Participant lists Schedule	Students feel attracted and confident with PTEMAGIC	Good feedback from participants High registration rate	
11.Get feedback	Marketing team	16/07	30/07	Google sheet Participant lists	At least 70% respondents/participants	70% of participants submit survey and data could be used for analysis	
12.Follow up for registration	Sales team	16/07	30/07	Participant lists Email, messages	Encourage students to sign up and pay the fee	Approach and remind each students at least 2 times	
13.Assess effectiveness	Marketing team	30/07	05/08	Survey result Registration list	Effectiveness analysis Feedback on the teaching content	50% of the students participated in trial classes register full course	
14. Communicate the result	Project team	06/08	15/08	Analysis report	Plans to improve trial classes	All related staffs attend and contribute	

Expected impact on the organizational strategy:
 Providing trial classes will help PTEMAGIC maintain and boost competitiveness in the English training industry. Also, it is expected to help reach more potential customers and enhance the chance that these students will agree to sign up the full course after the trial classes. It will positively assist the business strategy regarding shifting towards the online teaching environment because it provides customers with real experience of the service before making purchasing decisions. Moreover, it will boost the internal communication and integration between departments when working on the same project.

1.2 Conduct usability tests on digital platforms

Recommendation 2: Conduct usability tests on digital platforms

Description: PTEMAGIC is planning to perform usability tests to gain a better understanding of what students expect of training platforms and how they assess the current designs.

Requirements (Changes to current operation):

- New software development procedures: more end-user involvement through survey and testing
- Extra mock-up, prototypes, testing materials
- Extra budget to conduct the test

Impact:

- More workload for IT, marketing staff and the CEO
- New role (marketing or teaching staff) to act as project leader
- Longer software development timeline
- Establish new recruiting procedures and analysis, reporting activities

Action step description	Party/ Dept responsible	Date to begin	Date due	Resources required	Desired outcome	Success criteria	Notes
1.Establish new software development procedure	CEO, IT Department	10/06	17/06	Best practice Company structure	New procedure	Reflect best practice: user-oriented and reasonable tests involved	
2.Communicate the new procedure to staffs	CEO	18/06	20/06	Newsletter, weekly meeting	Everyone understands the new procedure	100% attendants are sure about the new design procedure	
3.Allocate staffs for the project	CEO	21/06	22/06	Staff list Availability	1 leader (IT) 1 Marketing staff 1 Teaching staff	No clash in working calendar and availability	
4.Plan for the usability test	Head of IT	23/06	30/06	Teaching calendar Survey	Goals Format and setting Number of users	Detailed (SMART) Related to the business goals and cost-efficiency	
5.Recruit the right participants	Marketing team	01/07	10/07	Use case, persona Estimated number	List of participants Test sessions	80% of registered users are real (can be verified)	
6.Prepare mock-ups	IT Department	01/07	07/07	Usability test plan Mock-up simulation software, sketches	Mid-fi and Hi-fi mock ups Tutorial video	Reflect 70-80% the expected UX & UI of the final product	
7.Conduct a pilot study	Head of IT	08/07	10/07	All staffs of the company Test plan	Feedback to improve the test activities	No major issues in the test procedures and mock-ups	

8.Conduct usability tests	Head of IT	11/07	17/07	Test plan Participant list Final mock-ups Camera, Microphones, Test venue	Data collected from users' interaction and their opinions of the mock-up design	Test flow is conducted as planned Users understand and follow the test scenarios Data is collected correctly, without errors and bias	
9.Analyze the results	IT team	18/07	25/07	Test plan Collected data	Answers to the questions in test plan	More than 30 students for each trial class	
10.Report	Head of IT	01/08	10/08	Results from analysis	Relevant insights Suggestions for improvement	80% of registered accounts are real (can be verified)	
11. Communicate the result	Project leader	06/08	15/08	Analysis report	Plans to improve trial classes	All related staffs attend and contribute	
Expected impact on the organizational strategy: Changes in the procedures of designing digital assets (web, app), with the assistance of user testing methods will help the company in the long-run. Firstly, it will help boost the performance and design of the developing mobile app. Then, the result will be used when the company upgrade the website, test platform or create new interactive channels. This approach is well aligned with the core values of the company (continuous improvement) and allows the company to perform better when shifting the business towards online delivery.							

1.3 Develop master class list and student tracking system

Recommendation 3: Develop a master class list and student tracking system

Description: PTEMAGIC is planning to adopt an integrated system to track student's performance, attendance, learning progress and staff's teaching allocation.

Requirements (Changes to current operation):

- Collect all current data from different sources/ department.
- Establish software design requirements
- Purchase a centralized software
- Changes in data management policies and practices (more training sessions)

Impact:

- More workload for IT, finance officer
- Avoid duplications, increase data security by centralization
- Faster and more precise data retrieval process
- Support sales and teaching activities better

Action step description	Party/ Dept responsible	Date to begin	Date due	Resources required	Desired outcome	Success criteria	Notes
1. Evaluate current system	IT Department	10/06	17/06	Survey & reports from all departments	List of issues with current system & inputs for new system	100% response rate from all stakeholders	
2. Identify the requirements	IT Department	17/06	27/06	Survey, meetings with all stakeholders	Requirement document	Reasonable scope, fit with short and long term business goals	
3. Select software development company	IT, Finance	28/06	12/07	Requirement document, Quotations References	Software development contract	Sign contract with a company that provides reasonable price, timeline, proved quality)	
4. Develop the new system	IT Department, 3 rd party	13/07	05/08	Requirement document, contract Interaction with 3 rd party	Final data management system (functions, usability, security & scalability)	At least satisfy all the requirements in the requirement documents	
5. Define stages of implementation	IT Department	01/08	05/08	Software guidance document Company's schedule	3 phases: Pilot, migration, operation	Clear timeline with person in charge, no time clash	

6.Make a communication plan	Head of IT	05/08	15/08	Software guidance document Company's schedule	Communication plan	Include communication via different channels (email, face-to-face, workshop,...)	
7.Test the new system	IT officer	06/08	15/08	Test cases Test scenarios	Testing report List of flaws to be fixed	Follow through all test cases and test scenarios	
8.Training	Head of IT	15/08	20/08	All staffs of the company Training document	Stakeholders know how to use the new system	Mini test and survey after training sessions	
9.Migrate data	IT Department	15/05	20/08	Current database Transfer protocols and procedures	Old data is successfully transfer to new system	No duplication, missing or altered data	
10.Go live with the new system	IT Department	25/08	-	Final software installed in all devices	New system works properly	Fast and precise data input and data retrieval	
11.Support and maintenance	IT Department	Ongoing		Software guidance document Audit schedule	Keep the new system secured and efficient	Response to queries shortly No data breach	
Expected impact on the organizational strategy: By adopting a new centralized data management system, PTEMAGIC will enhance its performance and customer satisfaction through faster response time and fewer errors from unorganized data. In addition, it will assist the business plan of expanding the number of students and opening a new branch in Launceston because the company can manage customer database more efficiently and reduce the need to transfer isolated data between departments and branches.							

2. LONG-TERM ACTION PLAN

2.1 Establish data and knowledge management strategy

Recommendation 4: Establish a solid data and knowledge management strategy

Description: PTEMAGIC is planning to build a solid strategy and framework to manage its data and knowledge

Requirements (Changes to current operation):

- Addition personnel: Head of IT, with IT governance and data security background
- New data and knowledge management strategy

Impact:

- Recruitment new Head of IT, training for CEO about data management
- Update policies related to teaching, sales and marketing activities

Action step description	Party/ Dept responsible	Date to begin	Date due	Resources/ actions required	Desired outcome
1.Recruit new Head of IT	HR, CEO	15/06	15/07	Job description	At least 3 interviews, 1 new Head IT
2.Planning and discovery	Head of IT	15/07	30/07	Interviews Current policies & practices briefing	The data flow within the company The vision of data management
3.Current state assessment	Head of IT	01/08	15/08	Survey, meetings with all stakeholders, industry practice benchmark	List of issues with current system & inputs for new system
4.Design/ Develop KM strategy/governance	Head of IT, CEO	16/08	08/09	Report from Step (1) & (2) Consulting with IT experts Successful case study	Detailed KM governance strategy, with new policies and procedures. All are well documented
5. Prepare for change (Communication)	IT Department, CEO	09/09	23/09	Materials to convey the new strategy and policies (pictures, email, video,...) Workshop sessions	CEO and Head of IT clarify the vision and the plan via multiple channels, both face-to-face and via email, video conferencing,...
6.Manage change (Employee feedback Recognize success)	IT Department, CEO	24/09	24/12	Setting KPIs Survey Data audit	Successfully implementation activities in the change plan Regularly interact with stakeholders
7.Reinforce change (Corrective action After-project review)	IT Department, CEO	Jan/2021 Feb/2021		Performance records Feedback Board of assessment	Individual performance Organizational performance Change management performance

Expected impact on the organizational strategy:

It is crucial for PTEMAGIC to have a proper data and knowledge management plan as the company is expanding to be a medium-size business.

This will help the company manage data better. Especially, data and knowledge are the key factors that determine competitive advantages in the teaching and training industry and would directly impact the business performance

2.2 Redesign the online platform

Recommendation 5: Redesign the web platform

Description: PTEMAGIC is planning to rebuilt (design and functions) of the web platform from 9/2020 – 3/2021

Requirements (Changes to current operation):

- New software development procedure
- Replace the use of current platform
- More technology used (AI) to improve functions

Impact:

- Data transfer from old to new platform
- More workload for IT, marketing teams
- New procedure to train users with new system

Action step description	Party/ Dept responsible	Date to begin	Date due	Resources/ actions required	Desired outcome
1.Ideation: Review current platform usability test (1.2) + competitors' products + brainstorming	Head of IT, CEO, Teaching team	10/09	20/09	Usability test result Brainstorming session Defining the goal of new platform	Relevant ideas to improve the platform: At least 10 new functional ideas & 5 design ideas
2.Requirements: Formally document project requirements	Head of IT	21/09	28/09	Ideas from brainstorming sessions Formal inputs from stakeholders in written forms	Requirement trace matrix (RTM) Include both functional and non-functional requirement
3.Design: Build the architecture of the platform and its elements	IT Department	01/10	01/11	RTM Prototyping software Best design practices	List of issues with current system & inputs for new system
4.Development: Building the platform with programming languages	IT Department	02/12	15/01	Source code of current platform AI functions & plugins purchased from 3 rd party	Include all use cases from the RTM Include sufficient comment in codes for further development & maintenance
5. Testing: Evaluate the quality through: Internal pilot with staffs Usability test	IT Department, Marketing team	16/01	25/01	Test cases (function, compatibility, live testing) Prototypes/ High-fi platform Participant recruitment Data collection & analysis	Test result report IT team fix bugs and enhance UX/UI based on feedback Ensure security of the system
6.Deployment: Prepare and launch the new platform	IT Department, Marketing team	26/01	15/02	Change management plan <ul style="list-style-type: none"> • Ensure business readiness • Training (internal & external) • Communicate to stakeholders • Trial period 	Great awareness of the new platform and its implementation time among internal & external parties Continuously monitor deployment Quickly response to incidents

7.Maintenance: Update and support after its launching stage	IT Department	On going	Survey/ Feedback form IT Support team records/logbook Frequent audit/ maintenance period	Quickly response to incidents Frequent update to ensure system security and functionality
Expected impact on the organizational strategy: The new platform with additional functions and better user experience will help boost the company's competitive advantages, increase customer satisfaction and support the business strategy of shifting towards online teaching and promoting platform account sales.				

2.3 Develop an IT support team to support students and trainers

Recommendation 6: Develop an IT support team to support students and trainers

Description: PTEMAGIC is an IT support team (at least 1 IT officer in the next 6 months) to responsible for assist students & teachers with queries regarding the functions of web, app platforms and teaching materials

Requirements (Changes to current operation):

- Addition personnel: 1 IT officer and additional tasks for 1 current IT staff
- Reduce the tasks of administration staff and teachers
- New hotline/ process for IT assistance

Impact:

- Recruitment new IT staff
- Update job descriptions of admin/ trainer
- Additional procedure: Design new system to record IT issues

Action step description	Party/ Dept responsible	Date to begin	Date due	Resources/ actions required	Desired outcome
1.Design job description for new role	Head of IT, CEO	15/07	30/07	Scope of work Company structure design	Job description
2.Recruit new IT staff	Head of IT	30/07	30/08	Job description, interview questions	At least 3 interviews, 1 new staff
3.Reorganize IT team structure	Head of IT	20/08	05/09	List of employee & expertise Vision of IT roles in the company	New team structure New task allocation for IT staffs
4.Develop IT support protocol and procedure	Head of IT, new IT staff	10/09	30/09	Reference from best practices Review the workflows of the company	IT support protocol and procedure
5. Trainings & pilot new IT support system	Head of IT	01/10	15/10	Establish new IT helpline Training materials Pilot period Sharing from current staffs in charge	Clarify the tasks and appropriate response for new IT staff Fix any flaws in the designed procedure
6.Communicate new IT support method to internal and external stakeholders	Head of IT, new IT staff, Marketing	10/10	30/10	Materials to convey the new strategy and policies (pictures, email, video,...)	Introduce the operation of new support team via multiple channels, clear messages delivered
7.Reinforce change (Corrective action After-project review)	IT Department, CEO	01/11 – 30/12		Performance records Feedback Board of assessment	Individual performance Organizational performance Change management performance

Expected impact on the organizational strategy:

The introduction of a separate IT support position will help the company improve customer satisfaction by increasing the response time to queries from customers. It is well aligned with the current impressive growth rate of the business and the plan of expanding in the next 3 years.

CONCLUSION

Based on the evaluations and findings from the two previous reports: operating context and opportunity identification, this recommendation report has outlined the recommendations and detailed action plans for PTEMAGIC to implement these suggestions. The short-term recommendations are expected to be implemented in the next three months and will prepare the company for further changes to be introduced in the long-term action plan. For every recommendation, change management always plays a critical role and should be cautiously considered by PTEMAGIC to ensure that the implementation stages of all action plans are conducted correctly and yield positive impacts on the firm's operational performance.

