

# Strategic Information Systems Planning for the Improvement of RS Top Pizza's Business Process

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## Abstract

Determining, resolving, and eliminating weak points in a business is integral for it to succeed. Hence, this gives an utmost significance to the existence of proper Information Systems Planning. This paper is a case study for the small pizza franchise based at the locality of Pampanga: RS Top Pizza. Although not officially huge and established, it consistently competed with its contenders for the past ten years and grew to have multiple branches across the province. This paper utilizes several ISP techniques to analyze the processes of the business, determine its possible weaknesses, and recommend strategies to eliminate and resolve said issues. These strategies include but are not limited to: the utilization of industry analysis (Porter's Five Force and External Force Model), business analysis (value chain and mapping of BP), synthesizing SWOT and TOWS matrices, creating a Gap Analysis, and IS/IT strategy recommendation. Using the strategies mentioned, a new Financial Management System is recommended to improve the restaurants' current system as its more inclined with the businesses' current needs.

## Keywords

Porter's Five Force Model, External Force Model, Value Chain Analysis, SWOT and TOWS matrix, Gap Analysis, IT/IT Strategic Planning

## 1. Introduction

Competition in the fast-food industry is tight, especially since it's one of the fastest-growing industries in the market. Each business utilizes different strategies to gain an edge against the competitors, with leading brands operating on massive scales. Despite that, smaller companies still attain a significant part in the market share, with customers constantly looking for newer and better options, with preferences varying for each person. But fast-food innovation does not strictly pertain to having a unique food menu. The utilization of information technology is still integral to making the business process flow seamlessly (ERP systems, financial recording system, etc.) and establishing a better reputation for the business (marketing, promotions, etc.).

Rosana Sanchez (RS) Top Pizza is a pizzeria restaurant with multiple chains located around the province of Pampanga. Apart from various pizza flavors, they also offer other Western-appealing food on their menu, including burgers, salads, fries, tacos, and baked mac. The restaurant was first founded on July 19, 2011, by Mrs. Rosana Sanchez. Their first branch was established on Stall 9, 10/27 Gas Station, Juan Luna Street, Barangay Minane, Rosepark 2316 Concepcion, Tarlac. Currently, the pizzeria has multiple chains scattered around Pampanga, namely in Apalit, Arenas, Capas, Concepcion, Balibago, Lakandula Dau, Hensonville, San Antonio Mexico, and in 13 more locations. Mrs. Rosana Sanchez was a former Shakey's employee. This became the inspiration of her partaking in the pizzeria business venture, which had eventually succeeded and grown as reflected by its current state. What made the pizzeria business so appealing to the mass is its affordability. RS Top Pizza attempts to create a menu specifically catered for the common mass, at a price-point less than the value it offers.

### 1.1 Objectives

This study aims to understand and assess the current IT/IS situation of RS Top Pizza and its business process and give recommendations for improvements. Specifically, the researchers are aiming to:

- Analyze the current business process, objectives, organizational structure, and restaurant's current IT/IS situation.
- Determine the best strategy for improvement and propose a new system to RS Top Pizza.

## 2. Literature Review

To better understand synthesizing proper strategic information systems planning, the team used reference materials available in the course inventory. The baseline of the idea in creating an IS strategic plan is Basri and Suryani's (2018) article on Datu Sanggul Hospital and Lestari et al's. (2019) strategic IS planning using the ward method.

Data with connection to fast food industries that could be used for the success of the project as well as additional reference materials were gathered from multiple sources, such as Allah et al. (2013), article on accounting IS on the fast-food industry, which provides data on success and survivability of small businesses in the industry, as well as the impact of current situations on the progress of the fast-food industry by Ilagan (2021).

Center's (2020.) the article gave massive reference towards industry analysis, and Adamanski's (2019) model gave ideas to creating the Five Force analysis for the project. Current trends in the fast-food industry were acquired from different online articles such as Franchisee Resource Centers 2020 Industry Analysis, MBB Management's Consumer Trends, and Businesswire's Fast Food industry trends that shape the future.

Several other concepts were considered for this project concerning industrial analysis, such as human resource management as stated by Qin and Pybutok (2009), which suggests that Fast-food restaurants should train their employees in terms of service recovery standards and guidelines. The result of He et al's. (2013) study shows that pizza chains mainly use social media to promote their product actively; doing this not only promotes their restaurant but the engagement with their customers helps create a bond. Similarly, Fondervila-Gascon et al. (2017) agree a social media presence is essential. However, they also state that it is more important to communicate effectively and that a vast audience does not guarantee a successful social media presence.

Data concerning customer satisfaction was acquired from Gilbert et al's. (2004) article was used as reference for one of the considerations in proposing a proper system for the project.

The group strictly followed Hakim's (2017) case study format to construct the article's body.

## 3. Methods

Following Hakim's (2017) research framework, the team utilized the following methods for the data acquisition of the project:

- a. **Internal Business Analysis** - The internal business analysis is carried out to study the company's vision and mission. Through this data acquired from the analysis of related documents, a value chain analysis is then used for an internal investigation to map various critical and supporting business processes. The SWOT analysis created then shows the different strengths and weaknesses of the business, which could be shared for both internal and external business analysis.
- b. **External Business Analysis** - The external business environment analysis is carried out through two analyses: the SWOT/TOWS analysis and the Gap Analysis.  
In SWOT analysis, the diagram considers opportunities and threats, both of which show positive and negative external aspects of the business. Data was then carried out and transferred to the more detailed TOWS matrix, which utilizes all of the given factors to determine the best possible outcome.  
A gap analysis was done using McKinsey's 7S framework, which analyzes the company's current situation from different shared values.
- c. **Internal IS Analysis** - Internal IS analysis was conducted by gathering the businesses' portfolios. The firm is under the consideration of 2 significant factors, the two beings: (1) the company is not yet operating on a large scale, and (2) the company is based in a rural area in a province. The business provided the best information systems that they could offer, which the team based their research and suggestion. Data here was similarly utilized in Gap Analysis.
- d. **IS/IT Strategy Planning** - This segment of the paper defines the recommended strategic information systems crafted by the team for the business. These strategies were made in consideration to the current business situation, as defined by the data and analysis conducted in the earlier parts of the paper.
- e. **Implementation Plan** - The implementation plan shows how the recommended strategic project would be conducted. This part also contains a priority scale which evaluates the necessity of each of the recommended strategies, which allows it to be launched one at a time depending on its urgency/significance.

The model for criteria analysis is shown in the table below to determine which project is the most necessary to implement first.

Table 1. Project Implementation Criteria Analysis for RS Top Pizza

Criteria	Weight	Priority	Description
Benefit	25% or .25	1	This criterion makes sure that the prioritized strategy will give the utmost benefit to the company.
Difficulty	10% or .10	3	The difficulty of the project should be measured in order to ensure that the company would be able to handle the implementation of the strategy.
Development Time	10% or .10	5	The project should have a decent amount of time for its implementation. The length of the development should be lesser than the benefit that the company will have after its implementation
Running Cost	15% or .15	2	RS Top Pizza is by no means a small restaurant, but even so, the prioritized strategy should be affordable yet beneficial for the company.
Risk	20% or .20	4	The strategy should have little to no risk or bad effects on the company itself.
Capability to Compete	20% or .20	6	This criterion measures how the new strategy will be able to compete against its fellow competitors.
<b>Total Weight = 100%</b>			

Table 2. Project Implementation Scoring Model for RS Top Pizza

Criteria	Measurement Scale (1 - 5, with 5 being the highest)				
	5	4	3	2	1
Benefit	The company will benefit from the implementation of the project. It will show clear signs of improvement within the company.	The company will fairly benefit from the implementation of the project. It will show some signs of improvement within the company,	The company will slightly benefit from the implementation of the project. It will show some signs of improvement but may take a long time to show growth.	The company will receive some benefit from the implementation of the project. The benefit of the project is only slightly noticeable.	The company will not receive any benefit from the project.
Difficulty	The company will be able to implement the project with no difficulty.	The project will be implemented with little to no difficulty, albeit with a few trials and errors.	The company will have some difficulty with implementing the project but will overall have good benefits from it.	The project will be implemented with many difficulties but the company will still have some use with the project.	The company will be able to implement the project with many difficulties that will overpower its benefits.
Development Time	The company will be able to implement the project in a short amount of time. The estimated time of completion would be within the next few months to half a year.	The project will be implemented within a considerable amount of time. The estimated time of completion would be within the year to one year and six months.	The company will be able to implement the project within a few years. The estimated time would be within the next two to three years.	The project will be implemented within four to six years.	The project will not be implemented or will be implemented but it would be within the next ten years.
Running Cost	The project is cost-effective and is within the company's budget.	The project is a bit pricey but is still within the company's budget.	The project is pricey and is a bit over the company's budget.	The project is way over the company's budget but is still worth the price.	The project is too pricey and way over budget. The project will not be worth the price.

Risk	The company will receive no risk from implementing the project.	The company will receive some risk from implementing the project.	The company will receive a lot of risk from implementing the project.	The company will have many risks from implementing the project with little to no benefit.	The project will be implemented with many risks and no benefits.
Capability to Compete	The project will help the company grow and rise above its competitors,	The project will somewhat help the company grow and compete against its competitors.	The company will have some stepping ground with competing against its competitors.	The project will give a small chance for the company to compete against its competitors	The project will not help the company compete against its competitors.

#### 4. Data Collection

Data used in this study can be categorized into two namely primary and secondary data. Secondary data are mostly for reference, such as articles and journals obtained from verified sources that are used for related literature. Primary data are data obtained directly from the client business, namely application portfolio, vision and mission, and the like.

Acquiring primary data are done through the following:

- a. **Interview** - Due to pandemic restrictions and quarantine, the interview was done exclusively through voice chat. The client and researcher used the Facebook Messenger application to communicate, where all essential queries were discussed.
- b. **Direct Observation** - This is a validation method to verify the legitimacy of the acquired data, and to manually get necessary data as instructed by the client.

#### 5. Results and Discussion

##### 5.1 Graphical Results

##### 5.1.1 Value Chain Analysis

The Value Chain Analysis is used to map the internal business model. As defined by the value chain, activities are split into two categories: main and supporting activities. The figure below shows the value chain analysis diagram of RS Top Pizza.

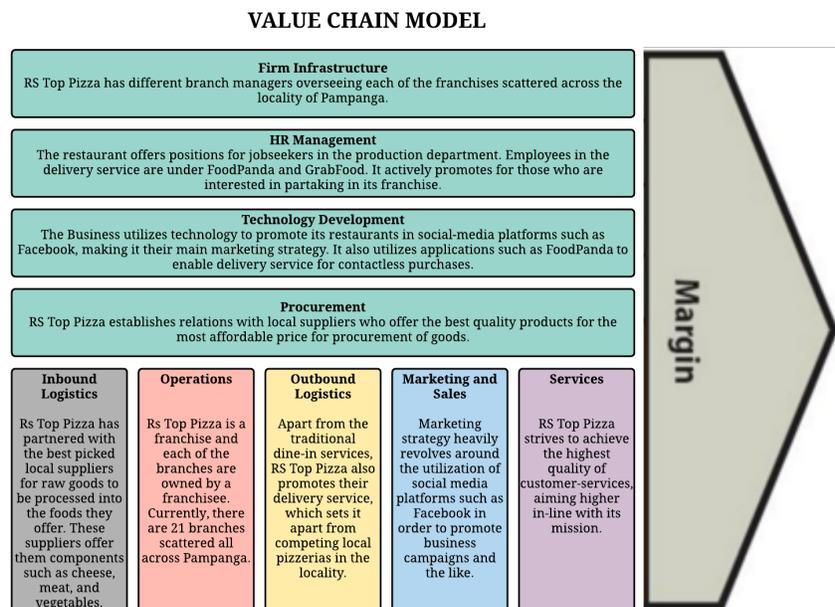


Figure 1. Value Chain Analysis of RS Top Pizza

As seen in the Figure above, the Inbound Logistics of RS Top Pizza consists of partnering with the local suppliers within Pampanga. The raw goods provided by these suppliers consist of cheese, meats, and vegetables, which helps the restaurant provide fresh meals for their customers. Operations of RS Top Pizza are handled by franchisee owners, who oversee managing the many branches that RS Top Pizza currently has. The Outbound Logistics of the restaurant is done by promoting the business further by providing delivery services. This helps the restaurant compete with other local pizzerias around the area. The Marketing and Sales of RS Top Pizza are mostly seen throughout social media, such as Facebook. The restaurant promotes its business daily through campaigns and posts. The Services of RS Top Pizza are given the highest quality of customer service. The Procurement of the restaurant is done by establishing relationships with the local suppliers of Pampanga who offer the best quality products at an affordable price. The Technology Development of RS Top Pizza mostly consists of promoting the restaurant through social media, as well as using food delivery apps such as FoodPanda and GrabFood. Human Resources is continuously offering jobseekers positions in the restaurants' production department, as well as promoting positions for those interested in becoming a part of their restaurant. Lastly, The Firm Infrastructure of the restaurant consists of the family of the owner, who handles all the more important jobs of handling the restaurant, and the franchisee who handles the branch that they are in.

### 5.1.2 Porter's Five Forces Model

Porter's Five Forces Model was used to give an external analysis of the business.

#### **THREAT OF NEW ENTRANTS – MEDIUM**

**Cost of Entry** - Starting up a pizza restaurant business follows the same concept as every fast-food business. The initial finance of the entrepreneur must be evenly separated between the cost of operations, hiring of employees, and the raw goods to be processed. Depending on the capital in possession, the size of the pizzeria may vary. Starting a business in this industry does not necessarily require one to be on a large scale right off the bat, but having good facilities provides a head start in the competition.

**Economies of Scale** - Despite the cost of entry requiring only low to mid-level of financial investment, firms and franchises long present in the industry provide a barrier to entry for newcomers in terms of economies of scale. The spread of the costs over a large number of productions by pizza franchises would provide a pricing advantage.

Innovativeness must be applied by entrants to compete, such as considering the price for the quality of their product and having unique marketing strategies. The edge of experience, as well as the advantage of economies of scale, applies to RS Top Pizza since the business had started 10 years ago and had already become a franchise. The experience in the industry would most likely allow front-runners to maintain the lead.

**BARGAINING POWER OF SUPPLIERS – LOW** - As in every business in all industries, suppliers hold a considerable amount of bargaining power. Procurement of raw goods for pizza production is not very difficult for RS Top Pizza, considering the base of operations is located in the province of Pampanga where agriculture is one of the leading livelihoods. This provides a broader range of available suppliers for the business, having more options that offer the best price point which yields the best profit for the company.

**BARGAINING POWER OF BUYERS – HIGH** - The main challenge that RS Top Pizza would face with consumers is how they perceive the product quality in terms of its price. The low switching cost and the number of competitions in the industry allow customers to find other alternatives, which heavily influences the pricing of the menu. The product must maintain affordability while being at its best quality in order to sell well. Hence, the bargaining power of customers is high.

**THREAT OF SUBSTITUTE PRODUCTS – MEDIUM** - In the case of the pizza industry, the substitute products to be considered would be other fast-food items that consumers would most likely prefer over pizza. But RS Top Pizza had eliminated that problem by expanding its menu of products by offering other fast-food items such as burgers, nachos, tacos, and fries. This strategy had allowed them to attract customers outside the pizza-preferring group. The threat remaining now would-be rivals, most notably the ones with the bigger brands in the industry.

**COMPETITION IN THE INDUSTRY – HIGH** - The fast-food industry is a fast-growing industry, making the competition extremely tight. Aside from the abundance of local pizzerias in Pampanga (Tripadvisor's top 10 includes Al Bacio and Paizano, as well as other more similar franchises such as Didi's and Goodboy), there are also the more popular international franchises such as Pizza Hut, Dominos, and Yellow Cab, all of which offers unique strategies and recipes to consistently keep up with competitiveness. This makes the competition in the industry high.

### 5.1.3 Vision, Mission, Objectives, and Organizational Structure

The current organizational structure of the business is shown using the figure below.

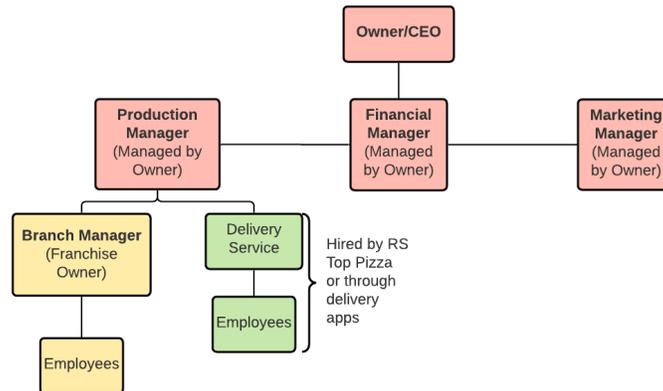


Figure 2. Organizational Structure of RS Top Pizza

RS Top Pizza is a family-run business that has been up and running for years, because of this, most of the employees that have a higher or direct position of power are within their family ties. The business is mainly being handled by the Owner/CEO, who in turn also manages the Financial and Marketing side of the business. The Financial Manager handles all money going in and out of the business, since it is being handled by the owner, the only people with direct access to their finance is their family. This works well with making sure that financial stability is ensured and that they have close access to where the business's money is going.

Marketing Managers handle advertisements and making sure that the business is known and gain more customers. As it is handled by the Owner, it makes it easier for them to advertise their business as they know every aspect of their business. Three of the higher positions are held by their family, which helps the business earn and save more money. RS Top Pizza would not need to pay or keep higher outside employees to handle big positions in the business. The Branch Managers vary from each branch of RS Top Pizza and handle the operations of each branch. While being the Branch Manager, they also handle the Production Managing task. They handle the employees in the business such as the kitchen staff or waiters.

The Delivery Services in the business is being overlooked by the Branch Managers as well, making sure that every delivery goes smoothly. The Delivery Service for the business may be from the hired employees by the business itself, or from a delivery app that they are part of, such as Food Panda and Grab Food.

The vision, mission, and objective of the business are:

#### Vision

- To expand the franchise on a nationwide-scale, and to be one of the leading pizzerias in the industry.

#### Mission

- To deliver the best value pizzas at the most affordable prices: by the common mass, for the common mass.

#### Objectives

- Utilize technology to promote business on various platforms, as well as to make non-face-to-face transactions possible (through delivery services).

### 5.1.4 Business Process with Failure Points

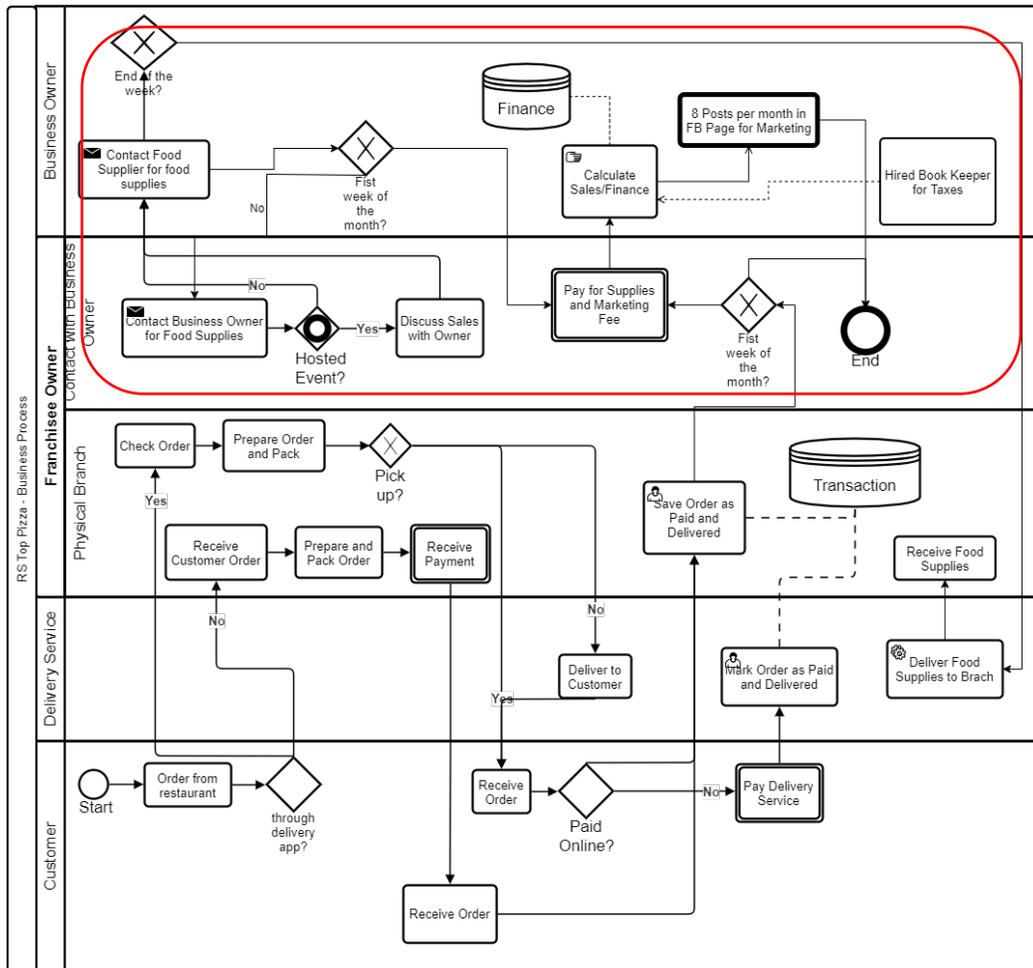


Figure 3. Business Process of RS Top Pizza

Using the information given by the restaurant owner of RS Top Pizza, the following business process was made. Highlighted with the red box is the failure point of the businesses current business process. This was identified with the help of the business owner expressing the current problem that they face because of their business process. As seen above, there is a lengthy process wherein it only includes the communication between the two parties—franchisee owner and the business owner. Although both parties would only need to communicate by in a scheduled time, this may still cause problems and delays with data sharing. All financial management are also done by the owner to reduce cost, but when the business continues to grow and gain more branches, it may cause miscalculations and loss of money.

### 5.1.5 Gap Analysis

RS Top Pizza’s current system relies mainly on manual inputs when it comes to data storage and financial management. The data for each branch is passed to the owner simply by using any available messaging apps that the Franchisee Owner and the Business Owner has agreed upon. This can cause problem with dissemination of information especially during the current problems that the world is currently facing. The information being given may be wrong or misinterpreted if it was only mentioned through a messaging application.

The researchers find that continuing with their current process of financial management may cause future problems with handling sales. Man-made errors can be easily made especially since the restaurant owner manually calculates the sales of the business. This can lead to unnecessary problems as they further grow their business and build more branches. The main gap to their system, which was mentioned prior, is the dissemination of information from the franchisee manager to the restaurant owner. The restaurant owner had previously mentioned in an interview that the

main problem that they see is the communication aspect of their process. Sharing of information through messaging applications can be hard especially with the number of branches that the restaurant has. Both problems mentioned can lead to possible bigger problems in the future especially as the business grows more. A proper financial management system and communication or data sharing tool can lead to a better progress to the restaurants future growth.

### 5.1.6 SWOT Analysis

This SWOT Analysis features the current Strengths, Weaknesses, Opportunities, and Threats of the restaurant.

	Helpful	Harmful
Internal Origin	<b>STRENGTHS</b> <b>S1.</b> Affordability - low price while maintaining good value <b>S2.</b> Accessibility - locations allow for easy customer access <b>S3.</b> Delivery System - allows business to resume amidst the pandemic <b>S4.</b> Scale - multiple branches located around the locality	<b>WEAKNESS</b> <b>W1.</b> Competition is large for this type of business <b>W2.</b> Lack of proper Information Systems
External Origin	<b>OPPORTUNITIES</b> <b>O1.</b> Expanding the business outside the locality <b>O2.</b> Establish a fully functional information systems for seamless communication between branches <b>O3.</b> Venture into a new market <b>O4.</b> Further expand the menu selections	<b>THREAT</b> <b>T1.</b> Pandemic-related retrictions <b>T2.</b> Competitions-related decline in the market <b>T3.</b> Inflation of general goods <b>T4.</b> Health-conscious customers

Figure 4. SWOT Analysis of RS Top Pizza

RS Top Pizza has multiple strengths that can be used to grow the business, their strengths include their affordability despite the good value. The business is accessible for their customers because of their number of branches and that their customers consist of Pampanga residents. The delivery system of RS Top Pizza allows the business to resume its work during the pandemic. Lastly, the business has multiple branches along Pampanga that helps them be accessible to more customers.

Because of the nature of the Pizza restaurant business, RS Top Pizza has a large competition that it needs to stand against. The lack of proper Information Systems also holds back the business from expanding to other localities. Despite this, the business has many opportunities that it can use to stand among its larger competitors. They can do this by expanding the business outside the locality, establishing a fully functional IS/IT system, venturing into new markets, and further expanding the menu. The threats of RS Pizza are easy to work with but should still have a backup plan, this is because the threats that follow include any pandemic-related restrictions that can seize the workflow of their business, competition-related decline that can lessen the number of customers that the business currently has, inflation of general goods that may cost them some of their loyal customers, and health-conscious customers that may not like the current menu items that the business has.

## 5.2 Proposed Improvements

### 5.2.1 TOWS Matrix

The figure below discusses the TOWS Matrix of the earlier shown figure, which was the SWOT Analysis. It further analyses the steps that RS Top Pizza could make using their combined Strengths and Opportunities, Strengths and Threats, Weakness and Opportunities, and their Weakness and Threats.

TOWS Matrix on RS Top Pizza		EXTERNAL FACTORS	
		OPPORTUNITIES	THREATS
		<b>O1.</b> Expand outside the locality <b>O2.</b> Establish IS <b>O3.</b> Venture into new market <b>O4.</b> Expand menu collection	<b>T1.</b> Restrictions from Pandemic <b>T2.</b> Market decline <b>T3.</b> General Goods inflation <b>T4.</b> Health-conscious customers
INTERNAL FACTORS	<b>STRENGTHS</b> <b>S1.</b> Affordability <b>S2.</b> Accessibility <b>S3.</b> Delivery System <b>S4.</b> Scale	<b>S1O4.</b> Create new affordable menu items <b>S2O2.</b> Create an Information for expanded business <b>S3O3.</b> Advertise business to other localities <b>S4O1.</b> Build branches outside locality	<b>S1T3.</b> Finding more cost effective ingredients <b>S1T4.</b> Adding affordable healthy options in the menu <b>S3T1.</b> Expanding Delivery Area
	<b>WEAKNESSES</b> <b>W1.</b> Competition in the business <b>W2.</b> Lack of proper Information Systems	<b>W1O1.</b> Expand to other cities <b>W1O4.</b> Create menu items to stand among the competitors <b>W2O2.</b> Establish a better Information System for the business	<b>W1T1.</b> Cover more delivery areas <b>W1T2.</b> Venture to other market <b>W1T4.</b> Add more menu to accomodate more customer types

Figure 5. TOWS Matrix of RS Top Pizza

RS Top Pizza possesses good Strengths and Opportunities that they could use to develop their restaurant further. The first step that the business could take is to create new affordable menu items, and this is because one of RS Top Pizza’s strength is that they sell many affordable food items that their customers enjoy. Adding new affordable menu items enables the business to gain more customers and give their existing customers more menu items to choose from. The second step that RS Top Pizza could do is to establish their own Information Systems. Currently, the business has no IS/IT systems aside from the delivery apps they use, which could cause problems once they decide to expand their business outside of Pampanga. Having an established IS/IT system can help their business with their expanded branch and receive and send data through the system itself, which they can analyze remotely through any device. Since the business delivers its foods through a delivery app, RS Top Pizza could advertise the business and open its delivery services outside of Pampanga. Doing this can help the business become known by surrounding cities before they even expand their business there. Being known outside of Pampanga can help with making sure that the business rises. Lastly, RS Top Pizza should expand its business outside of its locality. RS Top Pizza is pretty well known in Pampanga and gaining new customers outside of this city can help them earn and gain new customers.

The combined strengths and threats of the business will be used to suggest and implement strategies that can help the business further grow. In the case that General Goods becomes expensive, finding more cost-effective ingredients should be the top priority of the business. Since RS Top Pizza is known for its affordable and delicious food, they should have a backup plan of when their ingredients become expensive, such as partnering up with a new supplier that sells ingredients cheaper but still has the same freshness. This helps ensure that the business prepares the same affordable foods regardless of the inflation of the market. There are cases when existing and new customers are looking for healthy food options. Catering to their needs should be worked with by adding affordable healthy food options. Doing this helps the business gain more customers and cater to their food options. Adding to the earlier suggestion of advertising the business outside of their locality, the business can also expand its delivery area and reach more potential customers.

The Weakness and Opportunities of RS Top Pizza give steps that were already given prior. The first is the expansion to other cities/localities, followed by creating new menu items that help the business stand among its competitors, lastly, the business should establish its own better Information System. These steps enable the business to grow the business and gain more customers. The Weakness of Threats involves the drawbacks that the business can have. To ensure that the business continues to grow, RS Top Pizza should cover more delivery areas, venture to other markets,

and add more items to the menu to accommodate more customer types. Doing these steps ensures that RS Top Pizza continues to stand among its local competitors and grow outside its locality.

### 5.2.2 Proposed IS/IT Projects and Project Analysis Results

After careful analysis of the information above, the following projects are proposed. There are three proposed projects as outlined in the table below.

Table 3. Proposed IS/IT Projects for RS Top Pizza

Project	Description
1. RESTAURANT MANAGEMENT SYSTEMS	Since the company does not have a centralized information systems software, they can use any of the sixteen suggested software. This additional software can also reinforce the existing applications that the firm is already using. The several software is a wide variety of business management systems, anything from a POS system to a reservation system, to an accounting system, and up to an inventory management system. This sophisticated and easy-to-use software will bring many benefits such as increased efficiency and improved overall operation of the company.
2. FINANCIAL RECORDS SYSTEM - (TRANSACTION PROCESSING SYSTEM)	One of the objectives requires a system in which a reliable financial processing system would be required. The Transaction Processing System would be able to record every transaction or financial update that the business would be involved in. The system would focus on financial recordings such as purchases or orders made by customers, or expenses needed for the business endeavors. The system would improve the performance of the company by having a system that records the transactions or financial data that seem more efficient and less complicated for the management.
3. WEB APPLICATION DEVELOPMENT	RS Top Pizza has a pre-existing yet unmanaged website that has never been updated for the past year. Having a website outside the traditional marketing strategy would not only boost the PR capability of the business but could also be used by customers and establish transactions through this web application.

The scores for each project were given by the researchers using the project criteria and scoring model given before in Table 1 and Table 2. The results are as follows:

Table 4. Project Analysis Results using the Scoring Model for RS Top Pizza

CRITERIA	WEIGHT	PROJECT 1: Restaurant Management Systems		PROJECT 2: Financial Records System - (Transaction Processing System)		PROJECT 3: Web Application Development	
		Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Benefit	0.25	4	1	5	1.25	3	.72
Difficulty	0.10	3	0.3	3	0.3	3.5	0.35
Development Time	0.10	4	0.4	4	0.4	4.5	0.45
Running Cost	0.15	2.5	0.375	3.5	0.525	4.5	0.675
Risk	0.20	3.5	0.7	3.5	0.7	4	0.8
Capability to Compete	0.20	4.5	0.9	5	1	3	0.6
<b>Total</b>	<b>1</b>		<b>0.6125</b>		<b>0.6958</b>		<b>0.5991</b>

The results above show that a financial records system will give the restaurant more benefit with restaurant management system being second. Web application development is shown as the least difficult project to start with, this is understandable as the owner had already created a web application for the restaurant but could not maintain it, resulting to the website being abandoned. In terms of development time, Web application also scored the highest because of the pre-made website of the restaurant. The project that costs least is also the web application development, as well as the least risky project out of the three. With the criteria of the projects capability to compete with its competitors, the financial records system scored the highest with a 1.

The Financial Records System had scored the highest overall weight out of the three proposed projects. The benefits that it yields prove significantly useful to RS Top Pizza’s current status of handling most of the financial transactions manually, eliminating one of the pain points in its business process. Dener C. (2021) mentions that Financial Management Information Systems can significantly improve the efficiency of business operations. He further states that it supports automation, budget formulation, and accounting, which can greatly help RS Top Pizza.

The second significant system according to the findings is the Restaurant Management Systems. Oleynik et al. (2015), states that many companies use databases to store inventory, customer information, employee information, item, and pricing information. Implementing a database using the Restaurant Management System would help the restaurant handle more data especially when expanding to other cities. RS Top Pizza currently has its temporary restaurant management system but is mostly exclusive for delivery purposes, hence having a better and more functional tool would provide greater benefits for the franchise.

Lastly, despite having the highest score in 4 criteria, Web Application garnered the lowest weighted average out of the three projects. Nevertheless, there are still some benefits in implementing this project in the future. This tool would provide an outlet for consumers to access the business from a new platform, enabling more business-to-consumer interactions. However, its running cost, as well as the benefits that it brings is outweighed by that of the two proposed systems above. Hence, this project was deemed as the last one to be prioritized.

### 5.2.3 Flowchart of Proposed System

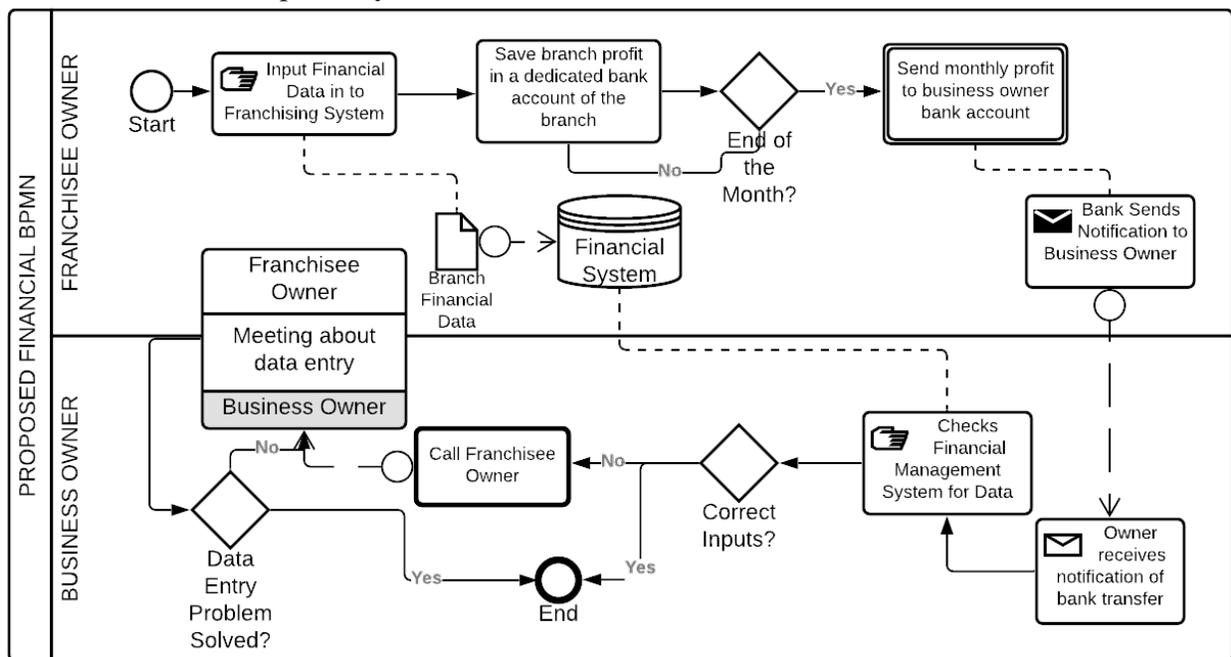


Figure 6. Proposed Projects' BPMN

Taking the results of the criteria analysis into consideration, the figure above showcases what the process of the new project would look like. This new system fixes the problem that was mentioned in the Gap Analysis. The new

financial management system will have a data sharing feature wherein the two parties will be able to view and save financial data. This will help the business owner with collecting necessary data from each branch without having to contact each franchisee owner and lessen the problems caused by the dissemination of information. Both parties will now only have to message or contact each other when there is a problem with any inputted data in the financial system or with any other business meetings. With this proposed system, both problems mentioned in the gap analysis as well as the failure points will be lessened.

## 6. Conclusion

Through the utilization of different strategic planning tools, the team was able to come up with the proposed projects that aim for the betterment of the current status of the company's information systems. Although not everything cannot be implemented immediately, it could be done in a sequential manner once the company has attained enough resources for the implementation of these projects. RS Top Pizza is still a growing business with a lot of potential to expand to a greater scaler. With the integration of proper information systems as outlined by this research project and an appealing business model under the fast-food industry standards, its goal of expanding to a nationwide scale may be realized sooner than it anticipates.

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**Jhustine C. Landingin** is a third-year Bachelor of Science in Information Systems student at Mapua University, Makati Campus, specializing in Enterprise Data Management, and is planning to pursue a Master's Degree in Information Systems. She had been awarded the Best Research Presenter during her 12th Grade in Senior High School at ABE International Business College – Makati. She was part of the Student Council for her department during her first year and worked as a committee member. During her second year, she was scouted to become the Financial Officer for a School Organization named Mapua Tabletop Gamers (MTG), where she is still currently the Financial Officer. She had learned quite a few skills during her stay at Mapua and aspires to learn even more things as time passes. She hopes to work and earn money in a big company wherein she can develop new skills and sharpen old ones.

**Grace Lorraine Intal** is a full-time faculty member at Mapua University. She is teaching Information Systems core courses in the School of Information Technology and Information Systems course in the School of Industrial Engineering. She obtained a BS degree in Management and Industrial Engineering from Mapua University, a Master in Business Administration from Pamantasan ng Lungsod ng Maynila, and a Master in Information Systems from Asia Pacific College respectively. At present, she is pursuing a Doctorate degree in Information Technology at the University of the Cordilleras. She is also an independent Management Consultant.