Catering Online Application

by

Ms. Niramon Pumwiwattanasirikul

A Final Report of the Six-Credit Course
IC 6998 E-Commerce Practicum

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Internet and E-Commerce Technology
Assumption University

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Academic Year	November 2002

The Graduate School of Assumption University has approved this final report of the six-credit course, IC 6998 E-Commerce Practicum, submitted in partial fulfillment of the requirements for the degree of Master of Science in Internet and E-Commerce Technology.

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ABSTRACT

SAKAE Sushi Co., Ltd. is a Japanese restaurant which provides catering service to a broad target group. Sakae Sushi is a new catering business, so a lot of procedures are required and it takes a longer time to respond to customers. Therefore, this project is developing an effective online application to facilitate the processes of catering services for Sakae Sushi.

The current existing catering services is based on the people. The manual way to present products and services included pricing which is unattractive and time consuming. It requires many people to handle the process, and has the problem of misunderstanding within the organization.

The new proposed online application; "Catering online application" is developed to replace the manual way of catering services. Products and services information are kept in the database and accessed through the online application. The customers can access through the web site for searching and ordering products and services. The online application delegates specific tasks to each department and keeps the record. It results in the reduction of the number of staffs, time and costs for the company.

ACKNOWLEDGEMENTS

The success of any project as extensive as this one involves the contributions and support of many people. I would like to acknowledge their efforts and thank them for their contributions.

I would like to thank Rear Admiral Prasart Sribhadung, my project advisor, for his valuable suggestions and advice given in the preparation of this project.

I extends my sincere thanks to Ms. Kanchalika Ruksakiati, General Manager, Ms. Nattida Kuibumrung, Purchasing officer, Mr. Somkrid Chatri, Chef, Sakae Sushi Co., Ltd. for their timely assistance and information provided to her while carrying out the data collection required for her project.

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I. INTRODUCTION

1.1 General Background

The world of professional selling is changing dramatically. Much of this change is driven by shifts in the way customers, particularly business customers, buy products. Customers are more sophisticated and more demanding than in the past. They no longer focus on just buying products; rather they are more interested in finding solutions to their problems. They expect suppliers and sales people to help them find solutions to their problems.

With less product differentiation and greater customer and competitive pressures, the selling task will become increasingly difficult and complex. Large accounts will require more sophisticated selling. Smaller and less profitable accounts will often be served through low-cost channels of distribution and communication, such as telemarketing; direct marketing, and electronic marketing. The sales force must be able to identify and develop relationships with the high profit potential accounts. Successful companies will distinguish themselves by the relationships they develop with their customers. It means that managing the sales force will become more important to the ultimate success of most companies. Sales management is primarily responsible for what happens when the salesperson or selling team meets the customer.

Today, most companies face wasting a lot of time in managing sales process and sales documents. They do not have the central database to keep the important information and the format of files and document stored. The managers are the key persons who must be responsible to solve and manage these problems. The companies can gain more competitive advantage when they can reduce overhead time in sales cycle and time to serve their customers.

In today's global business environment, information system, the Internet, and other global networks are creating new opportunities for organization coordination and innovation. Presently, information systems provide the communication and analytical power that companies need for conducting trade and managing businesses on a global scale. Information system is needed to keep all business transactions and business activities in order to manage the business by reduce time and cost and also easier to provide the information through the organization. Information system has to be available for everybody. It means everyone should have access to information from anywhere they might be. Information system helps in sales areas, so it is called sales force automation.

Catering business can help understand the sales force automation easily. Today, catering business is based on manual system that takes a longer time for processing sales cycle than sales force automation and information technology can help more in running the business. They can make a catering business an easy business.

1.2 Significance of the Study

The purpose of this study is concentrated on the development of online application for catering business from the knowledge of Sales Force Automation and Electronic commerce. The result will bring benefits as follows:

(1) Benefit to the restaurant

Increase service to customers: Competition of the world's industrial economies greatly enhances the value of information to the firm and offers new opportunities to businesses. Information technology or online application can help the restaurant increase a new line of service for customers and create awareness to prospects and Internet surfers. It also provides a 24 hours shop for customers and Internet surfers to travel.

Reduce time and costs: Online application will eliminate distance as a factor for many types of work in many situations. Salespersons can spend more time in the field with customers and have more up-to-date information with them while carrying much less paper. Salespersons can close sales at the customer site immediately. It is a 24 hours online shop and so the customers can get information and order products and services by themselves. Online application will reduce the cost of operations by displacing paper and the manual routines that accompany it. Improved workflow management from online application has enabled many corporations to not only reduce sales cycle time and costs but also to improve customer service at the same time.

Increase revenue: Because of online application, customers can shop for 24 hours a day, so it can increase revenue for the restaurant. With improved workflow management the restaurant can reduce cycle time so the productivity will be improved and costs of operation will be also decreased.

(2) Benefit to the customers

It will provide a 24 hours online shop for customers to shop anytime and any place and obtain reliable price and quality information 24 hours a day. Customers can get the information by themselves before deciding to purchase and have time to compare with other suppliers. An online application can improve workflow management that can reduce sales cycle, so customers will get comfortable in sales services.

1.3 Statement of the Problem

For catering service, almost all sales come from the visiting and calling of salespersons. When salespersons visit customers they have to carry a bulk of papers in

order to present products and services to customers. Almost all customers need to see the sample of products so the salespersons have to take the samples and return to the customers again. Telephone, transportation and a bulk of papers are the operation costs when salespersons visit the customers. Sometimes, the salespersons cannot answer the customers completely or they cannot make the decision in some cases immediately. The critical problem is the delay of service or response that may cause lost of sales. Lost of sales is a very serious problem for restaurant to be solved. When customers order products and services, the salespersons will give the information about that order to each department in order to move to the next step. It is time consuming and misunderstanding may happen in communication between departments. If these problems happened, the quality of products and services will be reduced.

In the face of intense competition, companies today are trying to improve their performance in every dimension of their operations. Companies have to streamline the business process in order to reduce the sales cycle time and processes. "Sales Force Automation" and "Information Technology" will improve work-flows that can reduce the sales cycle time and cost of operations by displacing paper and manual routines. Improved workflow management has enabled many corporations not only to cut costs and reduce cycle time but also to improve customer service at the same time.

Sales Force Automation (SFA) will provide more sophisticated selling for less product differentiation in a competitive world. It helps the company to provide the best products and services to customers. SFA provides the customer-oriented marketing to the company. To do this, the salespersons must understand their customers' needs and be able to satisfy the customers' needs. Presently with the world technology, an important tool for a very high-performance is Internet (Online application). Finally,

Internet (Online application) is an essential technology to deliver SFA concept to customers in the form of the best quality of products and services.

1.4 Limitation of the Study

The developer sets the limitations of the study as follows:

(1) The scope of this study is focused only on catering service for Sakae Sushi Co., Ltd.

(2) The application is focused on sales and marketing, purchasing, cooking, finance and accounting and delivery. It does not focus on human resource and other departments.

(3) Online application would only cover the people who use the Internet, including the customers and the Internet surfers (who usually surf the internet for their joy and knowledge).

1.5 Objectives of the project

To design and develop a prototype of catering online application for Sakae Sushi Co., Ltd. which consists of Sakae Sushi web site (Front office) and Intranet application (Back office).

1.6 Scope of Work

Analyze business processes of catering business in order to design online application. The application must be able to keep the customer's information since the salesperson generates sales transactions until he collects the money. Online application presents products and services information to customers in order to allow them to order by themselves. Recorded orders will be stored and shared in central database that the company can access to automate work processes. There are not necessarily printed documents internally. Those documents are included with sales activities, inquiries, quotation; purchase orders, delivery reports and billing documents.

Focus areas

Focus areas or business functions are included in the online application as follows:

(1) Sales and marketing

In this business function below, activities should be automated by online application as much as possible in order to reduce sales cycle time and communication within the company.

(a) Receive Order: There are two ways for receiving orders; customers order by themselves (customer self-service) and order through salespersons. Salespersons can receive customers' order through the online application after they select the required products shown on the online application. Salespersons can use the online application for presenting products and services to customers, or more, place customers' orders through application.

(b) Promotion plan: Marketing department can create the promotion plans and show them to customers through the online application.

(2) Operation

The operation activities should be aligned to sales and marketing activities then the application should integrate all information needed between front office, which is sales and marketing, and back office, which is operation.

(a) Purchasing: Purchasing department can create the purchase order from the online application automatically and can record or check the received raw materials through application also.

(b) Cooking: Cooking department can create cooking plans from the online application.

(3) Services

Services in catering business are concerned about quality of foods and services, and on time delivery. The company needs to optimize cost and maintain quality of services at the same time. A better planning is a better way to maintain cost efficiency.

(a) Delivery and services: Delivery persons can create delivery reports from the online application. This report shows the description of foods, tableware and accessories to be prepared for catering.

(4) Financial and accounting

Financial and accounting area for catering business is concerned with customer's payment on delivery. The company would like to ensure that the customer has to pay for foods and services on delivery. The online application allows the customer to pay for foods and services by credit card or cash on delivery.

(a) Billing and Collecting: Customers can pay for products and services by credit card or cash on delivery. Financial and accounting department can create the financial documents from the online application automatically.

(5) Management

Management team is concerned with monitoring the overall status. Management needs to know status for all departments in order to improve or develop the overall performance for company. For catering service, management would like to know status of sales volume, products and services.

(a) Management report: The management report will focus on sales status report and product portfolio report. These reports are generated by the online application automatically.

1.7 Project Methodology

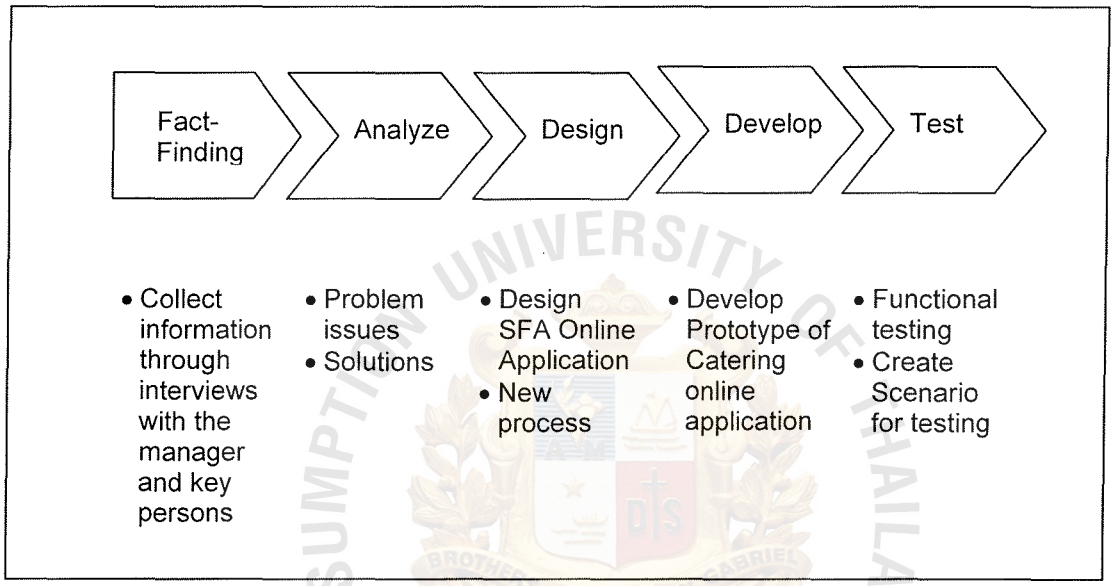

Figure 1.1. Project Methodology

The project methodology in developing "Catering online application" is shown in detail below:

Fact Finding

(1) Identify the scope of information to be collected, the method for collecting the information and the target group to be collected information from.

(2) Most of the information is qualitative data, and then an interview method is selected for collecting information from the manager and key persons.

(3) Identify the topics and questions for interview in order to meet the objectives or cover the scope of information needed.

(4) Select the suitable topics and questions for interviewing each interviewee.

(5) Collect and summarize all information completely.

Analyze

(6) Analyzing the collected information in order to describe the problems.

(7) Summarizing the problems to be described.

(8) Defining the solutions in order to solve these problems.

(9) Summarizing the results of each solution.

Design

(10) Identify the scope in designing according to the solutions.

(11) Design an application or screen design.

(12) Design the database by using Erwin software.

Develop

(13) Define scope of a prototype.

(14) Create database.

(15) Develop web page by using Active Server Page (ASP).

Testing

(16) Identify scenario for testing an online application.

1.8 Project Deliverable

(1) Project report

(a) Analysis of sales process and information needed.

(b) Application design includes functional design and screen design.

(c) Application specification.

(2) Prototype of the online application.

II. LITERATURE REVIEW

2.1 Fundamental of Sales Force Automation

In the face of intense competition, companies today are trying to improve their performance in every dimension of their operations. **"Sales Force Management"** is created for helping companies to improve their operations in order to provide the best products and services to customers. To do this, companies must understand their customer's needs and be able to discover and/or help customers solve their problems.

The world of professional selling is changing dramatically so customers are more sophisticated and more demanding than in the past. They no longer focus on just buying products or services. With less product differentiation and greater customer and competitive pressures, the selling task will become increasingly difficult and complex. Successful companies will distinguish themselves by the relationships they develop with their customers. This means that managing the **"sales force"** will become more important to the ultimate success of most companies. Sales management is primarily responsible for what happens when the salesperson or selling team meets the customer. Along with changes in their approach to customers, salespersons will change themselves. They will have more in-depth customer knowledge and more sophisticated selling and service skills.

To understand customer needs, salespersons must develop close, long-term relationships with their customers. These relationships are built on cooperation, trust, commitment, and sharing information. The process by which a firm builds long-term relationships with customers for the purpose of creating mutual competitive advantages is called "**relationship marketing,** or **relationship selling".**

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Relationship Marketing

Companies under relationship marketing must place a priority on four major components of their marketing and sales efforts:

(1) Understanding customer expectations. Companies must be able to identify what customers want and market a product to them that exceeds their expectations. To do this, it is necessary for companies to systematically collect precise information about their customers' needs and desires.

(2) Building service partnerships. Companies must work closely with their customers to add information and service beyond their traditional products to increase the value of their offerings to customers. This means that salespersons must develop close, collaborative relationship with their customers in which both parties work toward a common goal.

(3) Empowering employees. Companies must encourage and reward their salespersons for taking the initiative and using creativity in helping solve customer problems. Salespersons must have the skills, responsibility, and authority to make decisions that better serve their customers.

(4) Total quality management. This is the process by which the company strives to improve customer satisfaction through the continuous improvement of all its operations. Total quality management is based on the information that salespersons and selling teams collect from their customers and transmit back to the company for each department. The departments have to coordinate together in order to serve the best products and services to customers.

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If a company is successful in implementing a relationship-marketing program, it can expect to have higher quality products, higher customer satisfaction, more loyal customers, and greater profitability.

Sales and Marketing Concept

As businesspeople have come to recognize marketing's vital importance to a company's success, a way of business thinking-a philosophy-has evolved. This is called the **"sales and marketing concept"**, and it is based on three fundamental beliefs, as seen in Figure 2.1.

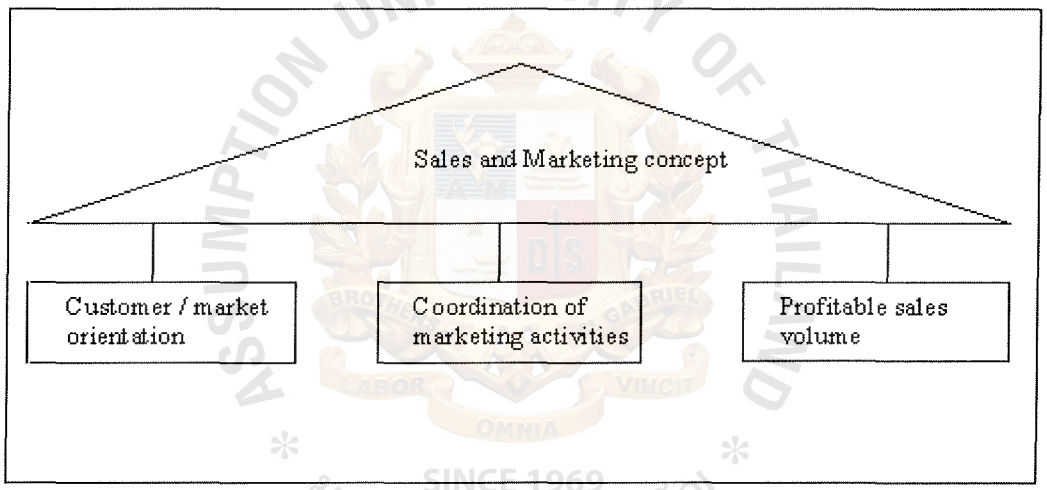

Figure 2.1. Sales and Marketing Concept's Three Foundation Stones.

(1) Company planning and operations should be customer or marketing oriented.

(2) Sales and marketing activities in a firm should be organizationally coordinated.

(3) The goal of the organization should be to generate profitable sales volume over the long run.

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In its fullest sense, the sales and marketing concept is a business philosophy that makes the customers' wants and satisfaction, the economic and social justification for the company's existence. Thus company activities should focus on finding out what the customers want, satisfying those wants, and making a profit over the long run.

Sales and marketing management is planning, implementing, and coordinating all sales and marketing activities and integrating them into the overall operations of the companies. Since the Industrial Revolution, sales and marketing management has evolved through four stages. The following diagram shows the four stages in the evolution of sales and marketing management:

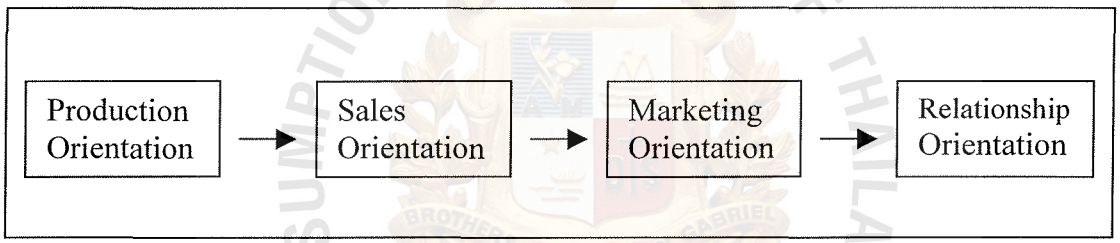

Figure 2.2. Evolution Stages for Sales and Marketing Management.

(1) **Production-Orientation Stage:** A company is typically production oriented. The function of sales department is simply to sell the production output at the price set by production and financial executives. At this stage, the sales department is very important but the marketing department is not recognized.

(2) **Sales Orientation stage:** The depression made it quite clear that the main problem in our economy was no longer the ability to make or grow enough products. This is the age of the "hard sales".

(3) **Marketing-Orientation Stage:** Companies use coordinated sales and marketing management directed toward the twin goals of customer satisfaction and profitable sales volume. It focuses on marketing rather than on selling.

(4) **Relationship-Orientation stage:** This stage is characterized by relationship building. The buyer and seller make a commitment to each other to do business over a long period of time rather than view each sale as a discrete transaction. Salespersons become consultants to their customers. This goal is to improve the customer's overall profitability rather than just sell products.

Sales Force Automation

When we combine new technology and Sales force management, the result is Sales Force Automation system. Sales Force Automation provides sales and marketing team a strong edge over competitors. It helps the quick response between customer and company. The company uses SFA to find out customers' interests and anticipate their future demands for future products and services that will greatly enhance customer relationship.

2.2 The Information System Revolution

In today's global business environment, information system, the Internet, and others global networks are creating new opportunities for organizational coordination and innovation. Information system will influence business because of the competitive business environment. The competition will force three powerful changes that have altered the environment of business. There are changes in Emergence of the global economy, Transformation of industrial economies and Transformation.

Emergence of the global economy the success of companies today and in the future depends on their ability to operate globally. Globalization of the world's industrial economies greatly enhances the value of information to the companies and offers new opportunities to businesses. Information systems provide the communication and analytical power that the company needs for conducting trade and managing business on a global scale. Because of globalization and information technology, customers can shop in a worldwide marketplace, obtaining price and quality information reliably 24 hours a day. To become effective and profitable participants in international markets, companies need powerful information and communication systems.

Transformation of industrial economies is the transformation from industrial economies to knowledge- and information-based service economies. In a knowledge- and information-based economy, knowledge and information are key ingredients in creating wealth. Knowledge and information are becoming the foundation for many new services and products. In knowledge- and information-based economy, information technology and systems take on great importance. Information systems are needed to optimize the flow of information and knowledge within the organization and to help management maximize the company's knowledge resources. Because the productivity of employees will depend on the quality of the systems serving them, management decisions about information technology are critically important to the prosperity and survival of an organization.

Transformation of the business enterprise is change in the nature of organization and management. The traditional business enterprise was a hierarchical, centralized, structured arrangement of specialists that typically relies on a fixed set of standard operating procedures to deliver a mass-produced product or services. The new style of

business enterprise is a flattened, decentralized, flexible arrangement of information to deliver mass-customized products and services uniquely suited to specific markets or customers. Information technology makes this style of management possible.

The information system is a set of interrelated components that collect, processes, store and distribute information to support decision making, coordination, control, analysis and visualization in an organization.

2.3 Internet, Intranet and e-Commerce

Internet is the largest electronic network that links thousands of individual networks all over the world. The Internet has a range of capabilities that the organizations are using to exchange information within the organization and externally.

Internet and e-Commerce, the Internet is low cost and widely used in e-Commerce to communicate between business to business or even business to individual. The Internet is available to users 24 hours a day and it creates new marketing and sales channel. Electronic transactions can reduce transaction costs and delivery time for some goods. Large and small companies are using the Internet to make product information, ordering, and customer support and to help buyers and sellers make contact. Internet electronic commerce initiatives represent automation of traditional paper based business processes. With the new channel of Internet, manufacturers can reach to customers directly:

(1) Direct sales channel: Manufactures can sell their products and services directly to customers. Eliminating middlemen in the distribution channel can significantly lower purchase transaction costs.

(2) Customer self-service: Web and other technologies are inspiring new approaches to customer services and support. Customers can get product information and communicate with manufacturers through the web site.

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Intranet is using the same technology as the Internet but it is used only within the organization. Since the Internet technology is inexpensive, scalable to expand and accessible from most computing platforms the Intranet provides instant connectivity, uniting all computers into a single, virtually seamless, network system. The company can connect their Intranet to company databases with the web, then it enables employees to take actions central to a company's operations. The Intranet provides a universal e-mail system, remote access, group collaboration tools, electronic library, application sharing system, and company communications network.

Intranet and Group Collaboration, Intranet provides a rich set of tools for creating collaborative environments in which members of the organization can exchange ideas, share information, and work together regardless of their physical location. Intranet makes all business processes integrate together electronically. This can reduce turn around time, be more efficient, and more accurate.

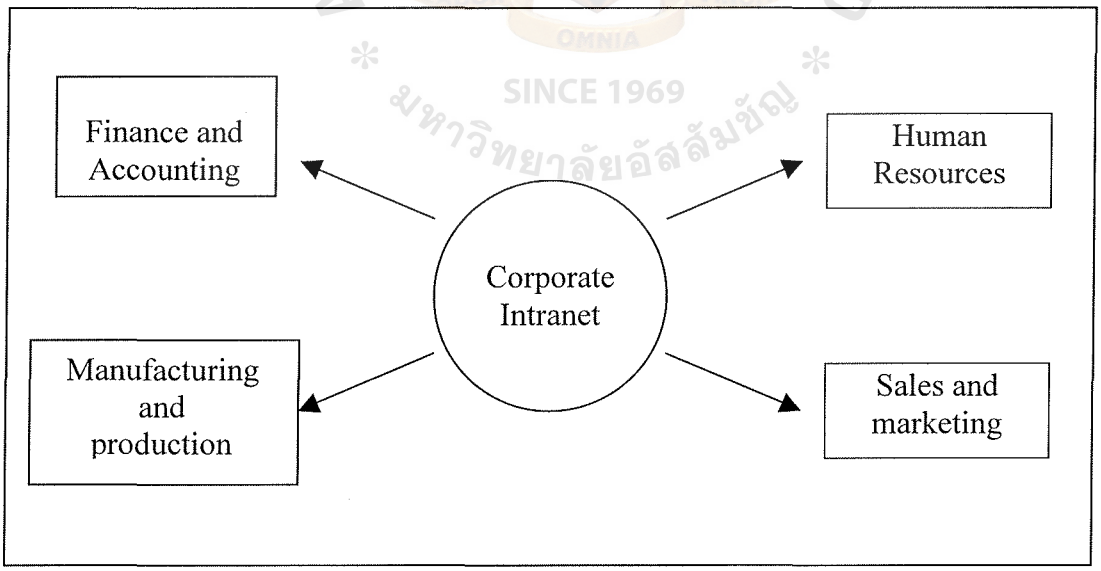

Figure 2.3. Integrated Business Functions with Intranet.

III. CURRENT SYSTEM AND PROCESSES

To develop "Catering online application" for Sakae Sushi Co., Ltd. more information about catering business is required so an interview is used for collecting the information. Because most information is qualitative information so an interview is suitable for collecting it. The supportive useful information is searched from the Internet and computer magazines.

3.1 Fact Findings

An interview method is used for collecting the information for gathering to develop catering online application for catering business. An interview methodology is shown below:

Interview Methodology

(1) Define the interview's objectives in order to control scope of information and to get the complete information required.

(2) Identify interviewees who are involved in the objectives to be interviewed.

(3) Define the topics for interview according to objectives for each interviewee.

(4) Identify questions for interviewing according to the topics.

(5) Interview each interviewee in order to collect the needed information.

(6) Summarize all information to be collected according to each topic to be defined.

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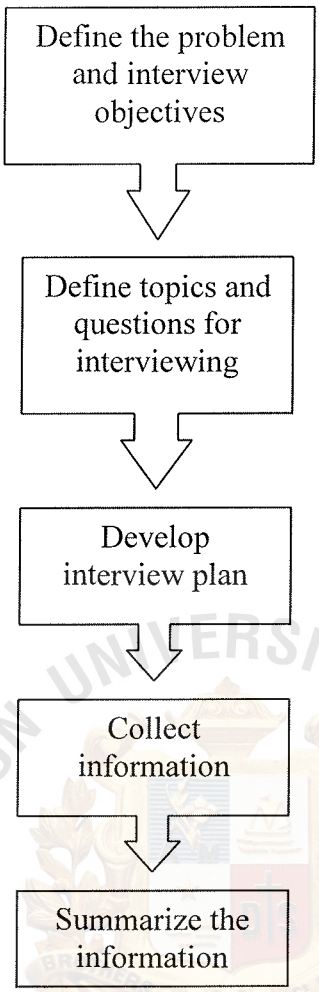

Figure 3.1. Interview Methodology.

Objectives for Interview

(1) Collect information about company background and catering overview.

(2) Collect information about target group, products and services.

(3) Collect information about price, distribution and promotion.

(4) Collect information about purchasing and stocking processes.

(5) Collect information about cooking and delivering processes.

(6) Collect information about order receiving and payment system.

The General Manager, the purchasing staff and the chef are chosen for interviewing and each person is interviewed on only the relevant topics.

The First Person

(1)	Name	:	Khun Kanchalika Ruksakiati
	Position	:	General Manager
	Company	:	Sakae Sushi Co., Ltd.

Topics for Interviewing

(1) Company background and business overview

(2) Target group

(3) Products and services

(4) Pricing, distribution, advertising and promotion

(5) Staffs and skills

(6) Order receiving

(7) Payment system

Interview Summary of the General Manager

Company Background and Catering Service

Sakae Sushi Co., Ltd. is a franchisee Japanese restaurant. It started the business in 2001. It is a new entrance conveyor belt (kaiten) restaurant that comes from Singapore. Sakae Sushi is managed and operated by Black Canyon (Thailand) Co., Ltd. and Apex-pal International Pte, Singapore that is a franchisor. Sakae Sushi has two branches: The Bangkok domestic airport and The Kadsuankaew shopping center, Chiangmai. Both branches provide an original Japanese food especially a unique taste of Sushi. The head office of the company is located in Bangkok province and the primary activities of the head office are purchasing and stocking raw material, managing the human resource, accounting and financial management, and marketing.

Sakae Sushi provides both the conveyor belt and takes order services. The catering business was started in the year 2002, because the company seeks more sales opportunities in some other markets instead of having only a restaurant. The catering service is new for Sakae Sushi but it is a good source of revenue for the company. Catering service is the full services provided by Sakae Sushi that included preparing foods, kitchenware, accessories and staff.

Today, Sakae Sushi uses a temporary leaflet, call and walk-in visits to create awareness for catering service and quote the price by manual. Sakae Sushi has three salespersons who can visit to present products and services to customers. During the peak time, the limited number of salespersons can easily make the company lose sales.

Presently, the restaurant calculates the price for catering service by manual basis so sometimes salespersons cannot estimate the price for customers immediately. In the price quoting, Sakae Sushi uses makeup method from cost of products and services. Sometimes, there is information that salespersons have no confidence to provide to the customer immediately. These take a longer time to respond to customers so, it may get loss sales or customers' dissatisfactions.

The forecasting in raw materials and ingredients is based on a manual system so, it may create raw materials and ingredient shortage or surplus.

Target Group

Sakae Sushi's main target groups for catering service are existing customers who usually come to restaurants (businessmen and tourists), associations, corporate, clubs and family. The prospects will come from salesperson wall-in. and advertising and promotion medias.

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Product and Services

The products are every kind of Japanese food such as sushi and sashimi. The vast variety of Japanese food is served on the conveyor belt and served by order. If the customers have less time to eat the restaurant serves the sushi on the conveyor belt and they can pick up from the belt immediately. The customers are now health conscious. They are interested in Sakae Sushi's products because of adding vitamin E ball in sushi rice and using a robot to prepare the sushi rice. These are the unique selling points for Sakae Sushi.

Catering service is a service in which restaurants will prepare foods according to customers' needs and serve them by staffs at the place where customers need. A restaurant is responsible for preparing the kitchenware, tableware and accessories.

Marketing Mix Strategy (product, price, place and promotion)

Sakae Sushi serves many kinds of Japanese foods with added vitamin E in sushi rice in order to give good health to customers. The sushi rice is produced by robots that can produce 3 pieces of sushi per second so the customers will get very fast produced sushi with sushi rice.

The pricing for catering service will be calculated by salespersons by using markup method. The salesperson will give the chef and the purchasing staff the calculated cost of products and then he will markup price from cost of products. The pricing will still use the manual and paper based system in calculating and communicating.

The marketing department takes care of advertising and promotion. Sakae Sushi concentrates on advertising in magazines, newspapers and television. Promotion will be produced in the form of leaflets, tent-cards, posters and bunting in order to attract the customers and create brand awareness.

Staff and Skill

Sakae Sushi does not separate staffs for taking care of only the catering service. Sakae Sushi uses the staffs at head office and restaurant to come to take care of the catering service, so now there are 40 staffs at the restaurant and 10 staffs at the office.

The staffs at the head office will be from the sales, marketing, purchasing and administrative department who are responsible for selling products and services. They will arrange the tasks according to each department. The chef and the restaurant manager will be responsible for controlling and directing staffs who have to take care of cooking, delivering and servicing to customers. The chef and the restaurant manager help to arrange and assign tasks and responsibilities to each staff.

Order Receiving

Orders received can be divided into orders from sales persons and directly from customers. The sales person will go to visit customers to present products and services. If customers are interested in the products and services, they can order by contacting the sales person or order directly at the restaurant or head office. The information for that order will be generated to each involved department.

Payment System

Sakae Sushi has the policy to receive cash and cheque on delivery. For catering service, the company has to ensure that the payment will be paid on delivery. Normally, Sakae Sushi allows customers to pay only cash on delivery except the corporate customers who order at high price and have a long relationship can pay by cheque.

<u>The Second Person</u>

(2)	Name	:	Khun Nattida Kuibumrung
	Position	:	Purchasing officer
	Company	:	Sakae Sushi Co., Ltd.

Topic for interview

(1) Purchasing and stocking processes

Interview Summary of the Purchasing Officer

Purchasing Process

The raw material for Japanese foods can be classified into fresh food, seafood and frozen food. Any kind of material needs different ways of purchasing. The kitchen staffs take care of ordering fresh food such as vegetables and fruits by themselves. The kitchen staffs send the list of seafood and frozen food to the purchasing officer for ordering.

When a customer places an order, the purchasing staff will give the information to the chef in order to forecast and calculate the amount of materials and ingredients needed, based on the recipe. The purchasing staff has the list of suppliers for each material and ingredient, then she will fax the purchase order to an exact supplier by specific amount, delivery date and time.

The chef may forecast incorrect amount of materials and ingredients and sometimes the suppliers deliver incorrect amount and quantity or deliver late. For the incorrect amount of materials and ingredients; if the amount is below the requirement, the chef will borrow materials and ingredients from the restaurant or purchase the rest if he has time. If the amount is over the requirement, the chef will give to the restaurant the fresh ingredients and keep for the next order the non-fresh ingredients.

Stocking Process

Stocking process is divided into stocking at the head office and the restaurant. The purchasing staff is responsible for order such as packaging, kitchenware and accessories. The purchasing staff will keep the record for all of them by stock cards before delivering to the restaurant. The stock card is used for controlling each material. At the

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restaurant, the restaurant manager and the chef are responsible for keeping the record of all of materials is delivered from the head office.

The Third Person

(3)	Name	:	Khun Somkid Chatri
	Position	:	Chef
	Company	:	Sakae Sushi Co., Ltd.

Topic for Interview

(1) Cooking and delivery processes.

Interview Summary of the Chef

Cooking Process

Normally, each product has different ingredients and processes and fortunately Sakae Sushi has a specific list of recipes for all products. It is convenient for the chef and the kitchen staff in preparing foods and forecasting raw materials. The forecasting is on manual basis and only the chef can do so as it takes time for ordering raw materials. It may be difficult serving customers who would like to have the catering service within a few days after placing an order.

The chef will plan in three things when getting the order from customers and these are food, staff and time. For food, the chef will plan the ingredients based on the recipe. The chef will prepare the list of required materials and ingredients including the required amount and time for the purchasing department. The Purchasing department will order them for us according to the list. The staff work by being assigned responsibility to each staff who is involved in each department. The chef and the restaurant manager will determine the time schedule for each task.

The chef will acquire raw materials and ingredients from the purchasing staff in order to prepare for cooking at the party site. Some kinds of foods have to be prepared

before going to the site, then the chef will assign the kitchen staffs to cook that food before going to the party.

For catering service, the chef will delegate specific tasks to each kitchen staff and the restaurant manager will be responsible for preparing the waiters and waitresses.

Delivery Process

The cooking department prepares the products to be delivered and served to customers. The chef and the restaurant manager will assign each staff a specific task and responsibility and brief about the service before going to the party. About the products, the chef will separate which food has to be prepared at the party or has to be made before.

The information collected from an interview can be summarized in the Table 3.1 as shown below:

Table 3.1. Interview Summary.

Interview Topic	Summary
Company background and business overview	• A franchise conveyor-belt Japanese restaurant from Singapore. • There are two branches; Bangkok airport and Chiangmai. • Catering service is started in 2002 as new sales channel. • Sakae sushi uses a temporary leaflet, call and walk-in visits to create awareness of catering service. • There are three salespersons that can visit to

Interview Topic	Summary
	present products and services to customers by using menus and brochures. • Using paper and manual basis in calculating pricing and forecasting raw materials.
Target group	• The existing customers (businessmen and tourists) • Associates, corporate and clubs • Family
Products and services	• Many variety of Japanese foods especially sushi and sashimi. • Concerned about healthy by adding vitamin E in sushi rice and using robots to prepare sushi rice to keep clean and be on time. • Catering service is delivering foods and prepares staffs, kitchenware and accessories to serve foods at places where customers need them.
Pricing	• The salesperson will give the chef and the purchasing staff calculated cost of products and then he will markup price from cost of products. • Using manual and paper-based system to calculate pricing and to communicate.

Interview Topic	Summary
Distribution/promotion and advertising	• The marketing department takes care of advertising and promotion. • Sakae Sushi concentrates on advertising in magazines, newspapers and television. Promotion will be produced in the form of leaflets, tent-cards, posters and bunting in order to attract the customers and create brand awareness. • Walk-in selling by salespersons. They visit customers to present products and services.
Staffs and skills	• Sakae Sushi did not separate staffs for taking care of only the catering service. Sakae Sushi uses the staffs at the head office and the restaurant to come to take care of the catering service, so now there are 40 staffs at the restaurant and 10 staffs at the office. • The head office consists of sales, marketing, purchasing and administrative departments who are responsible for selling products and services. • The chef and the restaurant manager help to arrange and assign tasks to each staff in cooking, delivering and servicing.

Interview Topic	Summary
Order receiving	• Order receiving can be divided into receiving order from customers directly and through salespersons.
Purchasing process	• The chef is in charge for forecasting and calculating amount of materials and ingredients to be used based on the recipe. • The kitchen staffs order fresh food such as vegetables and fruits but the purchasing staff orders seafood and frozen food that are requested by kitchen staffs. • The purchasing staff is responsible for ordering such as packaging, kitchenware, tableware and accessories.
Stocking process	• Stocking process is divided into stocking at the head office and the restaurant. • The purchasing staff will keep the record for all the packaging, kitchenware, tableware and accessories by stock cards before delivering to the restaurant. • The restaurant manager and the chef are responsible for keeping the record for all the materials delivered from the head office.
Cooking process	• The chef acquires raw materials and ingredients from the purchasing staff

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Interview Topic	Summary
	according to the requirement from recipes and prepares them for the party.
Delivery processes	• The cooking department prepares the products to be delivered and served to customers. • The chef and the restaurant manager will assign each staff a specific task and responsibility and brief about the service before going to the party.
Payment system	• Sakae Sushi has the policy to receive cash and cheque on delivery. • Sakae Sushi allows customers to pay only cash on delivery except the corporate customers who order at high price and have a long relationship can pay by cheque.

Summary of Current Processes

(1) The salesperson calls and visits customers in order to present products and services.

(2) The salesperson gets back to the office for checking requests from customers such as price and cost.

(3) The salesperson can create the purchase order and send it to a customer.

(4) The customer and the salesperson negotiate the details of the purchase order.

(5) The salesperson revises the purchase order and sends it to a customer.

(6) The customer accepts the purchase order and then faxes or sends back to the salesperson for acknowledgement and commitment in purchasing.

(7) The salesperson informs the chef, the restaurant manager and the purchasing staff about the details of the customer's order.

(8) The chef and the restaurant manager will estimate the raw materials and ingredients to be used and prepare staffs (for party service).

(9) The purchasing department will order the raw material and ingredients according to the estimation from the chef.

(10) The chef will inform the kitchen staffs to prepare and cook the food after receiving the raw material.

(11) The financial department will prepare the financial documents such as invoice, tax invoice and receipt in order to collect money form customers.

(12) Staffs do delivery of foods according to the customer's need on time. The chef and the restaurant manager will prepare staffs to prepare and serve foods at the party also.

(13) The staff will take all financial documents to the customer in order to collect money on delivery.

3.2 Business Activities

Catering business requires more experience and skill. There are many processes involved in this business. The catering business is the same as the restaurant business but preparing for the outside and during a short period of time. The activities for catering business can be divided into primary activities and support or secondary activities.

Support Activities	**Human Resource**	Support in recruiting and training staffs according to each department. It has to responsible for evaluating and assessing staffs' performance.		
	Infrastructure & IT	Helps other activities complete quickly and easily. Information technology has an Influence on business in the future.		
	Procurement	Purchase the supported stationeries or equipments that are not the essential parts in operation.		
	Administration and Management	Helps on prepare and arrange any documents and administrative tasks. Financial and Accounting is included for taking in financial documents and processes.		
Primary Activities	**Inbound logistic** Acquire and purchase raw materials in order to use in operation. Raw material is forecasted in reasonable amounts and take the receive on time.	**Operation** Divided into two parts that are cooking and servicing that are responsible by chef and kitchen staffs. Cooking is a process for formulating raw materials into finished and semi-finished food. Servicing or staffing is a process for directing and staffing staffs.	**Outbound logistic** Outbound logistic or deliverable is the most important activity for catering service. This service requires staffs for preparing and serving foods at place where Customer's needed.	**Sales & Marketing** The first activity that contact with customers. Marketing is responsible for advertising and promotion in order to create awareness. Sales is responsible for selling products and services.

Figure 3.2. Primary and Support Activities in Catering Business.

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Primary Activities

(1) Inbound logistic (purchasing)

Purchasing is a very important activity after the customer places an order. Inbound logistic or purchasing is responsible for acquiring and purchasing raw materials that are forecasted in reasonable amounts. It has to take care of the amount and date of received raw materials.

(2) Operation

Operation can be divided into two parts that are cooking and servicing that is responsible by the chef and the kitchen staffs. Cooking is a process for formulating raw materials into finished and semi-finished foods. Servicing is

a process for directing and staffing staffs according to each suitable job and duty.

(3) Sales and Marketing

Sales and marketing is the first team to contact the customers. The sales department is responsible for selling products and services to customers after marketing creates awareness. Marketing is responsible for advertising and promotion in order to create awareness.

(4) Outbound logistic (deliverable)

Outbound logistic or deliverable is the most important activity for catering service. It requires staffs for preparing and serving foods at places where customers need them.

Support Activities

(1) Human Resource

Support in recruiting, training staffs according to each department. The human resource department has to be responsible for evaluating and assessing staffs' performance.

(2) Information technology

Information technology is supportive activity that helps other activities to be completed quickly and easily. Today, Information technology has an influence on business process.

(3) Procurement

Procurement is purchasing stationery or equipment that are not essential parts in operating.

(4) Administration and Management

It is a supportive activity that helps in preparing and arranging any document and administrative task.

Financial and accounting is included for taking in financial documents and processes.

3.3 Situational Analysis

Sakae Sushi has been one of newcomers for Japanese restaurants, where many people did not know more about Sakae Sushi. Sakae Sushi tried to promote products and services in many ways. Catering service is one opportunity that can create brand awareness and more revenue.

Unfortunately, catering service is a new service so Sakae Sushi is not familiar with this kind of service. Therefore, there are many processes to be improved in order to solve the problems that Sakae Sushi is facing.

Opportunity and Threat Analysis

The main opportunities and threats facing Sakae Sushi can be identified here.

The main opportunities are:

(1) Presently, Japanese food is very interesting for Thai people so catering will be interested easily.

(2) Catering service helps to create brand awareness for the company.

(3) Catering business will increase revenue for the company.

The main threats facing Sakae Sushi are:

(1) There are many competitors who come in this service.

(2) Sakae Sushi is a newcomer in this service so it is difficult to get the interest of customers.

(3) Japanese food is expensive in Thai people's opinion.

Strength and Weakness Analysis

Strength and weakness can be identified as below:

The main strengths are:

(1) Unique products

(a) Adding vitamin E in sushi rice.

(b) Using robots to produce sushi rice.

(2) Sakae Sushi is a well-known franchise Japanese restaurant from Singapore.

(3) Sakae Sushi gets the suggestion and help from Black Canyon, is a Shareholder Company, that has more experience about catering service.

The main weaknesses are:

(1) Lack of experience in catering service.

(2) Lack of process methodology for doing catering service.

(3) Limitation in the number of staffs in catering service because there are not staffs that take care of only the catering service.

Current Problems and Areas for Improvement

(1) Customer's accessibility (limited on an advertising)

The company does not pay more attention to advertising and promotion so, most customers do not know about products and services. The company may get lost sales and revenues. The customers may know about products and services but they do not know how to contact or how to order. The problem is how to create awareness and customer accessibility. Creating awareness and accessibility is required for improving in order to encourage sales volume.

(2) Delayed Response to Customers

According to the manual system in calculating pricing and communicating with customers, salespersons cannot quote the price and answer some questions to customers immediately. The serious problem is that the salespersons cannot respond to customers on time. It might make customers unhappy and the company might get lost sales. There are two points of this problem that should be solved.

(3) Limit on number of salespersons

This is a problem during the peak season. When many customers would like to ask salespersons to visit for presenting and providing products and services information at the same time, salespersons cannot visit many customers at the time they need so they may change their mind and go to other companies. Sometimes, customers call the company to ask about products and/or services while salespersons are unavailable, so nobody can provide the completed information to customers.

(4) Pricing information (Quotation)

When staffs or sales persons go to see the customer and present the products, the staffs have to come to the office to prepare the quotation and present to customers again. The pricing is based on manual system. Pricing is calculated from the total cost by the mark up method. Basically the manual system takes a longer time than the automatic system so the quotation that has to be sent to customers may be late.

(5) Communication problem

Another serious problem is communication problem that creates bad relationship within the organization and with the customers. At the start until

the last point of process, the communication is very important. This problem can be divided into two parts for consideration.

(a) Between departments

The first part is the communication problem between departments within the organization. This problem comes when the company does not have a good communication system or staffs do not communicate between each department. It can create failure and damage of the sales and services processes. The company and staffs may incur loss.

(b) Misunderstanding with customers

The second part is the communication problem with the customers that is the serious problem. Sales and service processes are presented to the customers in a manual way, so there are no record for checking what the customers want. The persons who go to see the customers are the only persons who understand the customers' requirements. When they translate to other persons, they may be wrong. The restaurant may prepare the wrong products and services for customers. The restaurant may incur loss and bad feedback from customers.

(6) Purchasing problem

The purchasing department takes care of the ordering and purchasing of raw materials and ingredients according to the chef's requirements. Materials and ingredients are planned based on the chef's experience and the recipe. There may be trouble in forecasting and purchasing.

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(a) Incorrect in forecasting

The chef makes the forecasting or planning of materials and ingredients from his experience and the recipe so, he may be wrong in forecasting. There may be shortages or surplus materials and ingredients problems. The shortage problem is more serious than the surplus problem because the restaurant might not deliver foods to customers according to the required amount and time.

(b) Delivery problem

The restaurant purchases raw materials and ingredients from contacted suppliers. The supplier may delay the delivery materials and ingredients so the restaurant might not deliver foods to customers on time. The supplier may deliver incorrect item or amount so, the restaurant has to waste time in changing to the correct one or waiting for the rest of materials and ingredients.

3.4 Solutions

Regarding the analyzes of current problems and areas of improvement, the solutions for solving these problems are shown in Table 3.2.

Table 3.2. Current Problems and Improvement Areas.

Current problems/Improvement areas	Solutions
Customer accessibility	Create new cost-effective sales channel that can provide products and services information widely 24 hours a day.
Delayed response to customers	• Create web site for customer self-service.

Current problems/Improvement areas	Solutions
	• Get all information • Order • Quotation • Automate processes within the organization. • Standardize menus in order to reduce the complexity in calculating cost and price.
Communication problem	• Sharing information between departments. • Online job delegation • Collaborative • Create web site for customer self-service. • Get all information • Order • Quotation
Purchasing problem	Calculate raw materials and generate the purchasing order automatically.

E-commerce is the process of buying and selling products, services and information via computer networks including the Internet. The Internet (Web site) is a cost-effective sales channel to provide information 24 hours a day.

The web site is customer self-service that is customers can get the products and services information, place an order and get the pricing by them via online immediately. The restaurant has to automate processes within the organization in order to reduce the sales cycle time. "Catering online application" can help to automate the processes within the organization. These solutions can solve the delayed response to customer problems.

Within the restaurant or organization there should be sharing of information in order to reduce the communication problem. Online job delegation will help to reduce the complexity processes and communication problems that used to happen with verbal or paper-based job delegation. Customer self-service through the web site is one way to reduce communication problems between the restaurant and the customers.

Purchasing problem can be solved by calculate raw materials and generate the purchasing order automatically.

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IV. THE PROPOSED SYSTEM

In this chapter the proposed system's formulation methodology, system definition, functional design, screens design and database design are described and the proposed system and expected results after implementing are evaluated.

System Philosophy

"Catering online application" is based on the company's objective of completely satisfying the customer needs **profitably**.

Goal(s) of Catering Online Application

The system aims at achieving technology enabled process improvement to:

(1) Enable sales channel.

(2) Enable customer self-service.

(3) Enable relevant and timely communication with customers and prospects.

(4) Have automatic workflow within the organization and promote work collaborative.

(5) Reduce misunderstanding in communication within the organization and with customers.

4.1 System Formulation Methodology

"Catering online application" is defined as the solution for Sakae Sushi's catering service. The system formulation methodology describes the processes of formulating this system. These processes are system definition, functional design, and screen design and database design.

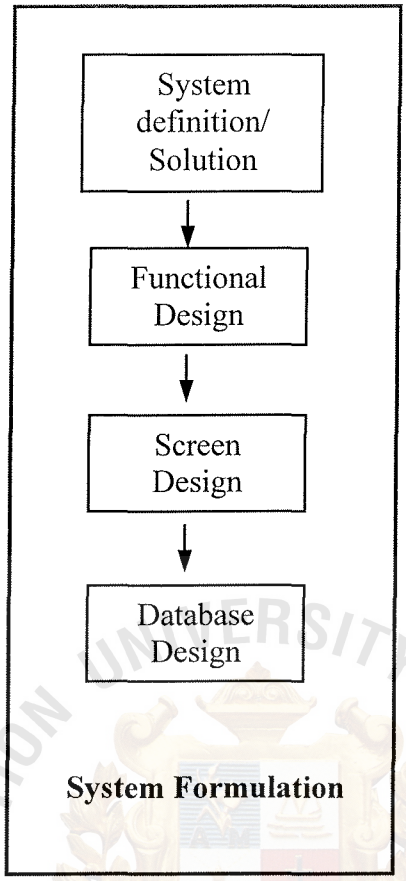

Figure 4.1. System Formulation Methodology.

"System definition" describes a big picture of the proposed system. The user's requirements and Sakae Sushi's problems are considered in order to create a solution or new system. The functionality of the solution will be defined after this step.

"Functional design" is a step to define what functions should be included in the system. The functional design is designed from grouping the related activities into the same function.

"Screen design" is a step to design user interface which are web pages in Sakae Sushi web site and intranet application screen in order to visualize the functionality of the new system to be understandable for the user.

"Database design" is a step to design the data that should be stored in the system. The database design is designed for relational database by using normalization technique.

System Definition

"Catering online application" is a web-based application for Sakae Sushi's catering service. The application will assist the company to manage sales processes more efficiently by integrating the front office's processes and the back office's processes together.

The system consists of two components; the first component is the Sakae web site, customers can access to the company information including products and services information and also make an online order. This component can be called "the front office". The second component is the Intranet application, which provides information and automation functionality that are necessary for employees to work together. This component can be called "the back office". Figure 4.2 shows the relationship between the two components that are the front office and back office

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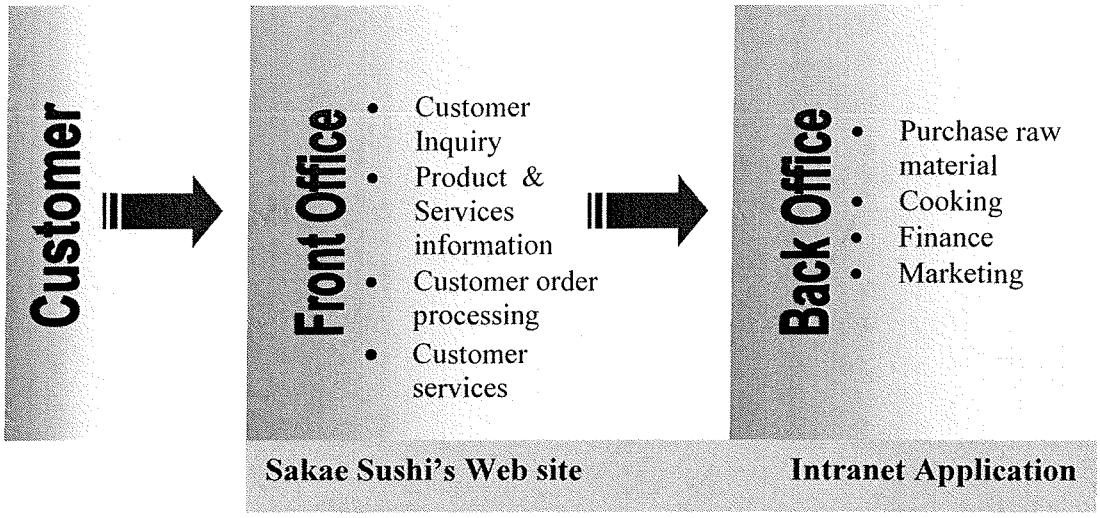

Figure 4.2. System Overview

In the sales cycle, it requires a lot of communication between the front office and the back office or within the back office itself. The catering online application can help the company to improve the communication and streamline business processes as described below:

(1) Provides products and service information, pricing information and promotion information via the Sakae Sushi's web site.

(2) The customer can place an order through the web site by himself or herself. (Customer self-service)

(3) The application will distribute the order information to Intranet application so that the information is shared by every department.

(4) Using Material Planning Requirement module from the application plans for raw material.

(5) The purchase order is produced from the application.

(6) Create cooking and delivery plan from the application.

(7) Payment collections through the web site.

Functional Design

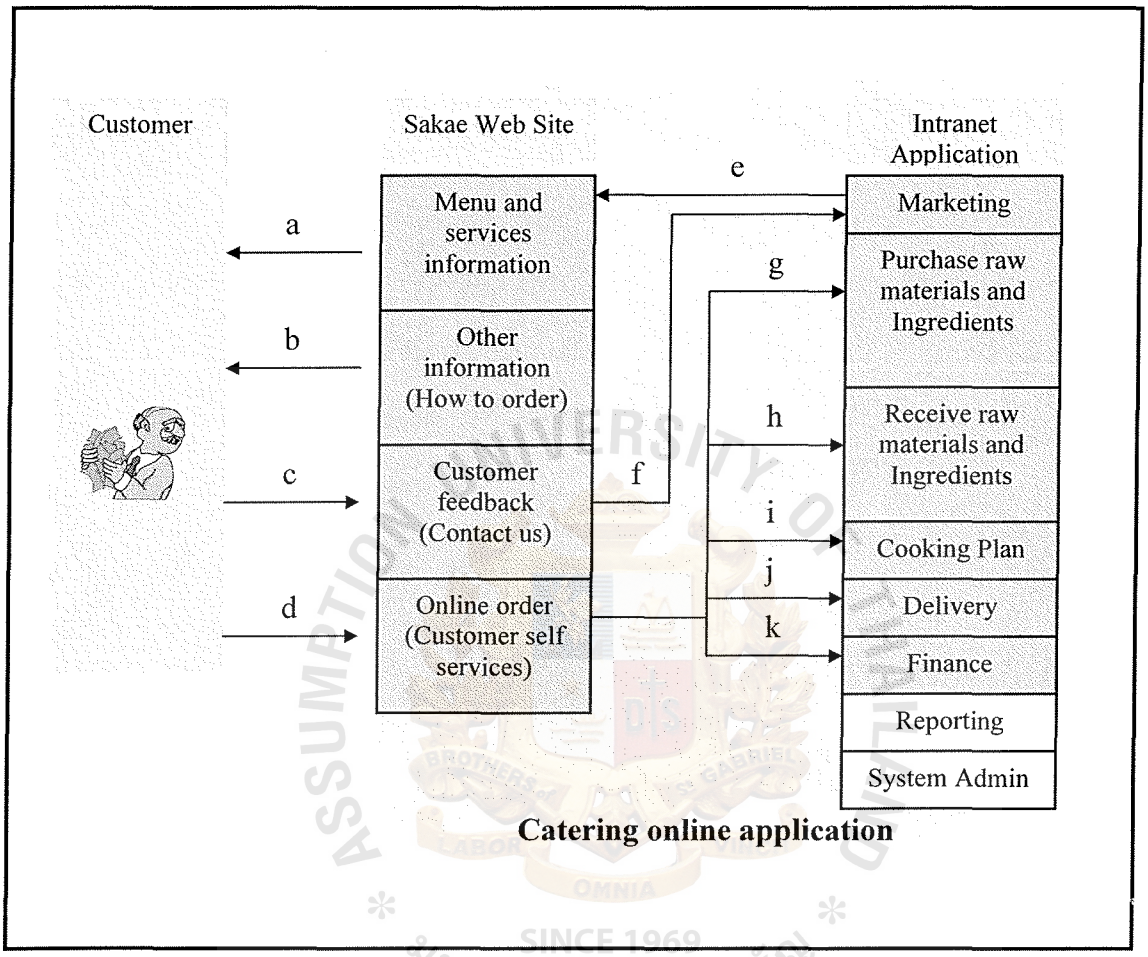

Figure 4.3. Functional Design

The application consists of the customer, the front office (web site) and the back office (Intranet application). The work-processes are integrated between the customer and the front office (web site) that can be described in detail as below:

(a) The web site provides products and services information to customers.

(b) The web site provides other information to customers such as how to order, term & conditions etc.

(c) Customers contact and give feedback to the restaurant through the web site.

(d) Customers place an order through the web site by themselves (Customer self-service).

The work-processes are integrated between the front office (web site) and the back office (Intranet application) and within the back office are described below:

(e) The marketing department can update menus and services information including the promotion plan shown on the web site via online.

(f) The marketing department gets the customers' feedback and contacts from the web site via online.

(g) The information for customer's order is delegated via the Intranet to the purchasing department for purchasing raw materials and ingredients.

(h) The purchasing department can record and check the received raw materials and ingredients via online.

(i) The information for customer's order is delegated via online to the cooking department for planning cooking plans.

(j) Preparing delivery process and report via online after the cooking plan is finished.

(k) The information for customer's order is delegated via online to issuing the online financial documents for collecting.

Reporting: The management will be able to get the important information from this part of the application. The major report is sales report and financial report.

System Admin: This module allows the system administrator to setup the master file such as the ingredient master, the menu master, recipe and user account.

Screen Design

Screen design is divided into 2 modules. The first module is the screens that customers can take a look at and get the information from the screens are shown on **Sakae's web site**. The second module is the screens are shown on the **Intranet application** from where the staffs can get information and automate all tasks.

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Site Map for Screen Design

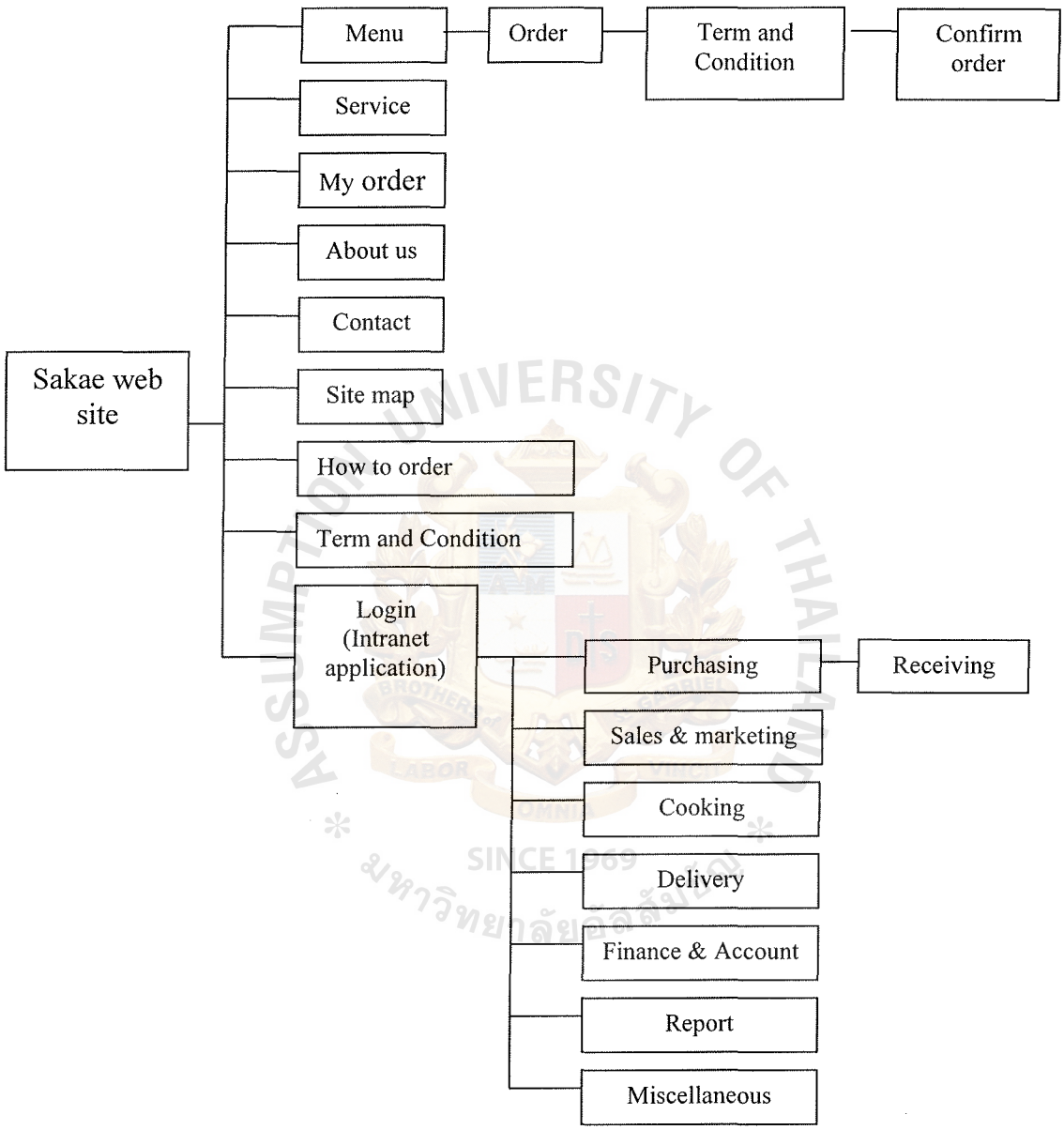
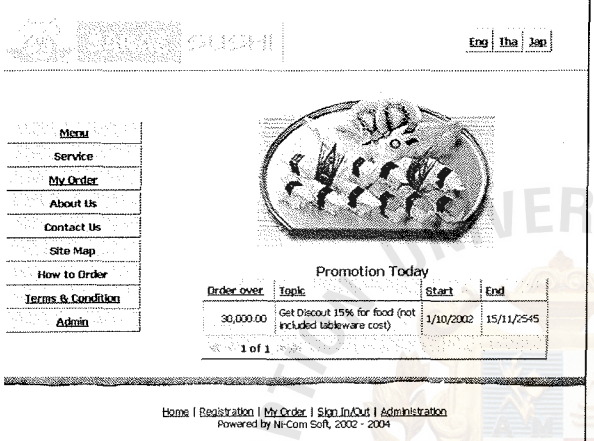
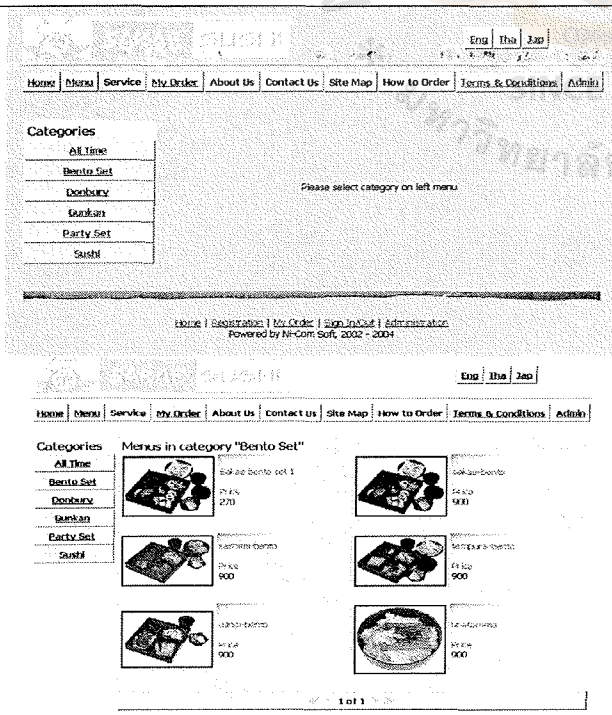
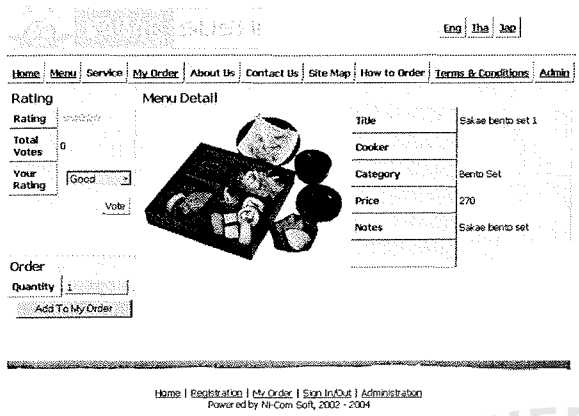
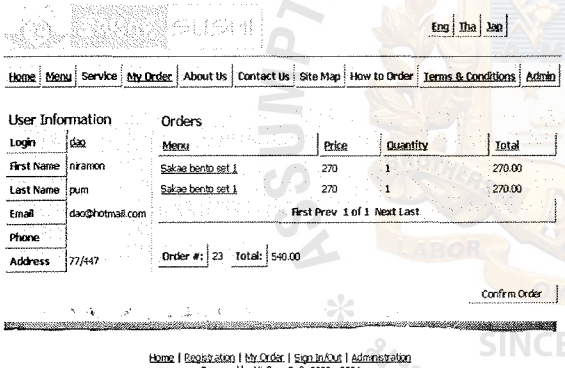
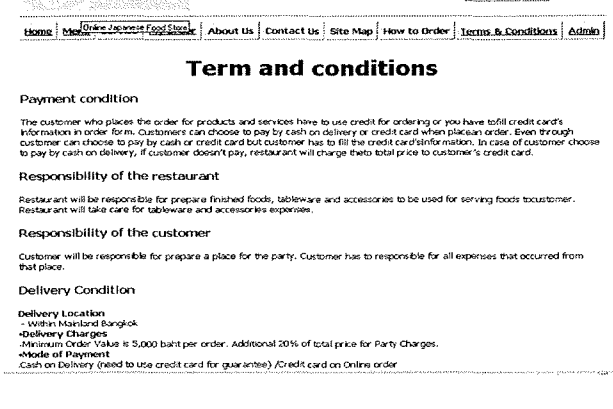


Figure 4.4. Site Map for Screen Design.

Sakae Sushi Web Site

Table 4.1. Web Site Design.

Screen Design	Description
	From the first page or Home page, customers will be able to choose three languages from the top right button that are English, Thai and Japanese (future plan). Eight menus are provided for customers access to get the information and place the order. "Admin" is used for restaurant (back office) only.
	Customers come in "Menu" in order to get product information. The customers have to select the category of products that they would like to see the information. Web site will show the picture and the details of each product and customers can order the product by click on that product.

Screen Design	Description
	After customers click on the selected product, the web site will show more details of that product. Customers have to enter the quantity of product and then click for ordering.
	The web site shows the details of the order that is placed by customers. Customers can know the total price of products before confirming.
	Before customers confirm the order they have to accept term and conditions first. Term and conditions present the information about payment condition, responsibilities of the restaurant and the customer.

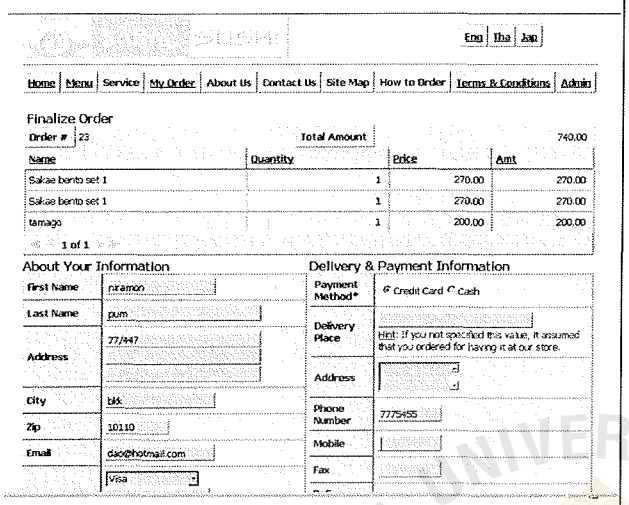
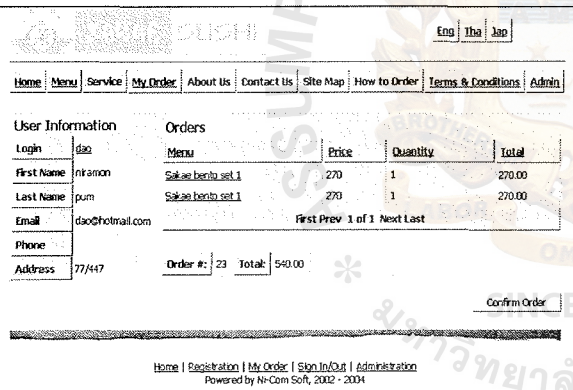
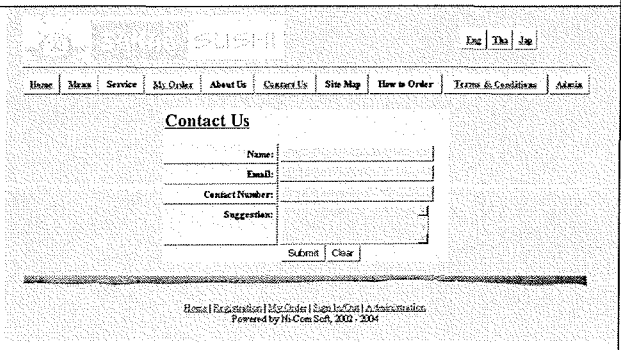
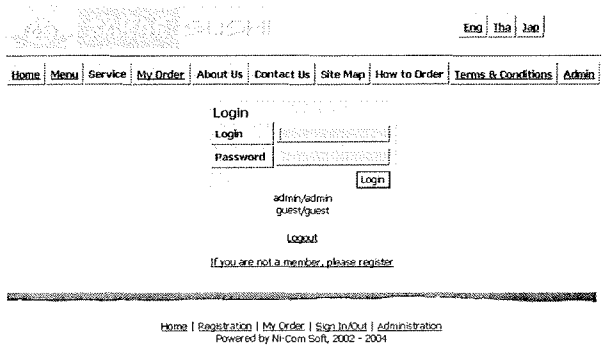
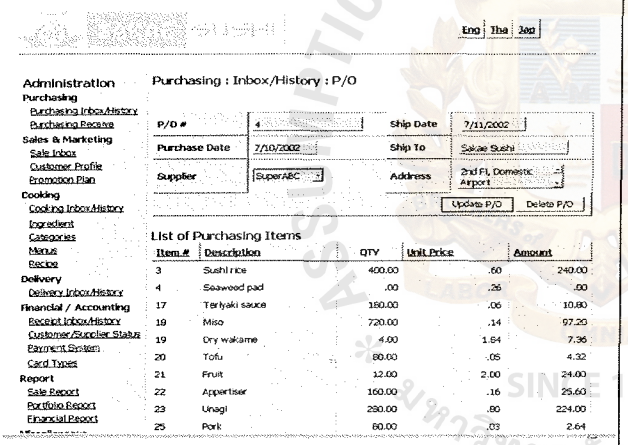
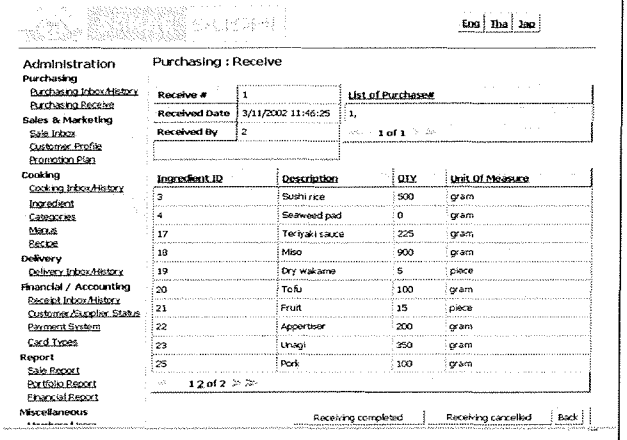
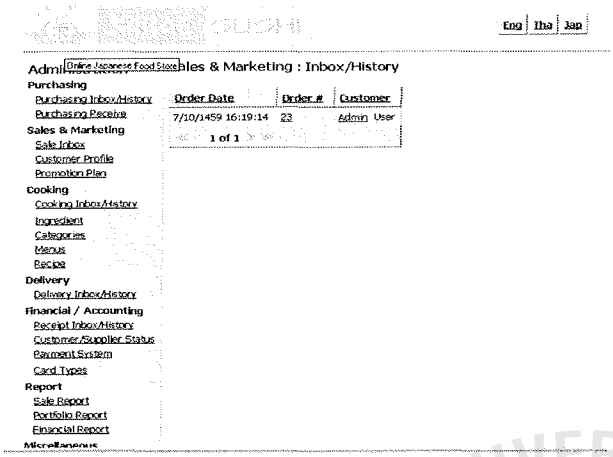
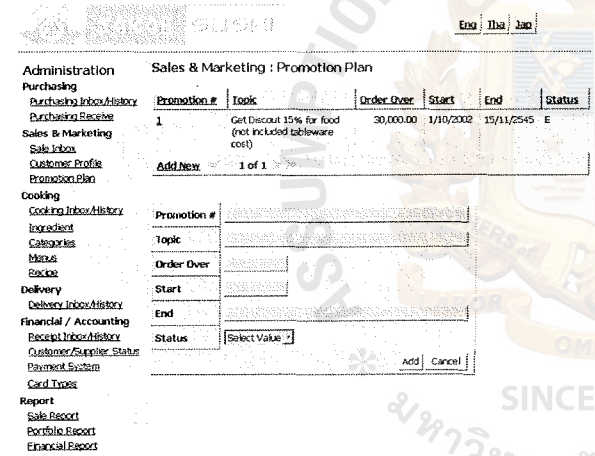
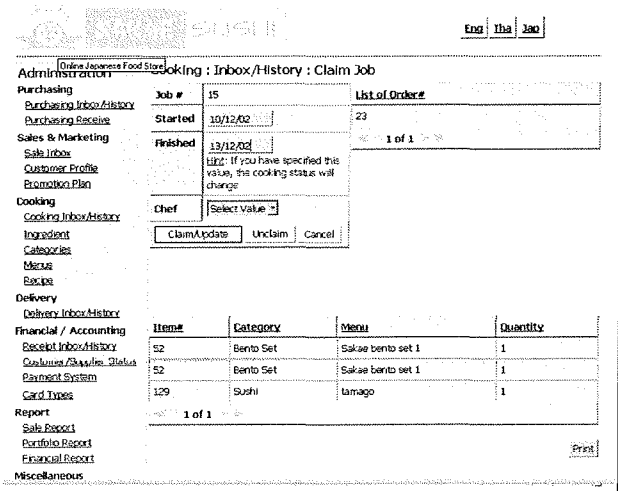
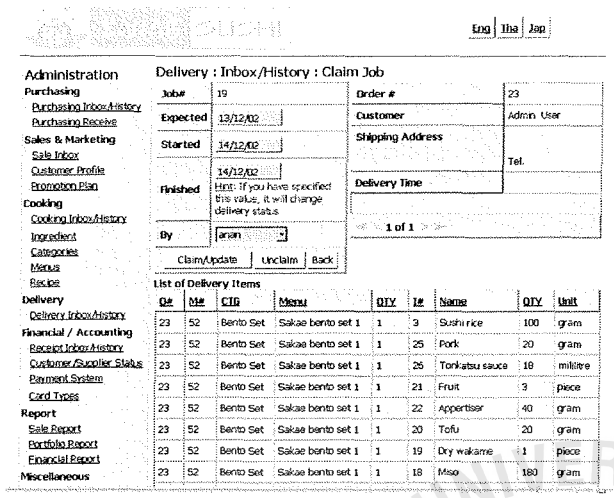
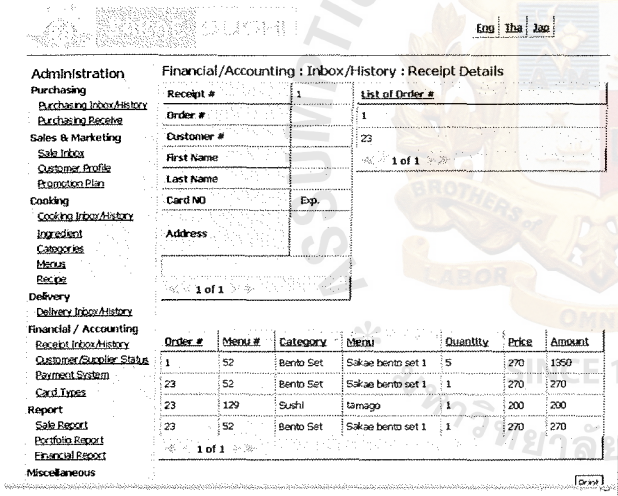
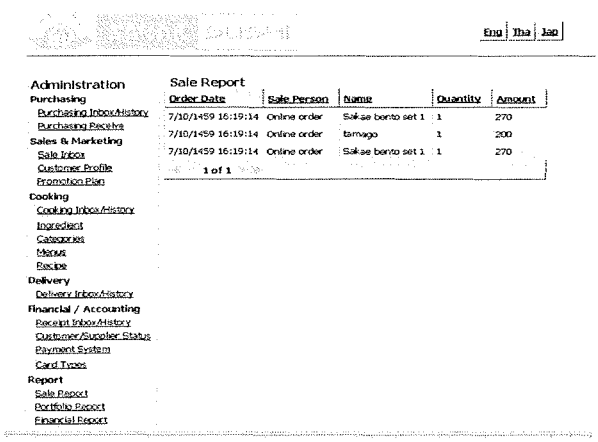
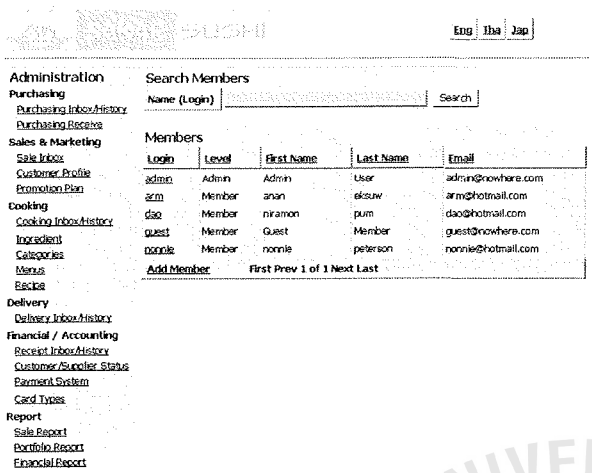
Screen Design	Description
	After customers accept term and conditions, they have to fill the personal, delivery and payment information especially credit card information is used for ordering products. For the payment, the customer can select the payment method between credit acrd and cash on delivery. After that submit all information to the system.
	"My order" allows the customers come to see the details of their order. The web site will show the details of the products and the price.
	"Contact us" allows the customers contact to the restaurant through the web site. Customers can e-mail any suggestions and comments to the restaurant.

Table 4.2. Intranet Application Design.

Screen Design	Description
	The Intranet application allows only the authorized staffs access to get the order information and prepare all tasks so they have to login before access to the application.
	The purchasing staffs can access to the application in order to see the order information from customers and create the purchasing order from the application automatically.
	The purchasing staffs can record the receiving the raw materials from the selected purchasing order through the application also.

Screen Design	Description
	The sales and marketing staffs can access to the application in order to see the order information and the customer profile.
	Sales and marketing staffs can create the promotion plan through the application also. The promotion plan is created through the application will be shown on the home page of the web site.
	The cooking staffs can access to the application in order to see the order information from customers and create the cooking schedule from the application. The application allows staffs add and change the menus, the recipes and the ingredients.

Screen Design	Description
	The delivery staffs can access to the application in order to see the order information and create delivery report from the application automatically.
	The financial and accounting staffs can access to the application in order to see the order information and create the receipt from the application automatically.
	"Report" is a menu for the management team for accessing to see the sales status report, portfolio report and financial report. All reports are generated from the application automatically.

Screen Design	Description
	The system administrator comes to "Miscellaneous" menu in order to add and remove the users or the members.

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Database Design

Database is designed by using the ERwin software and normalization technique. Database will store all information that is necessary for the application in both modules, which are the Sakae web site and the Intranet. The entity relationship is shown in Figure 4.5.

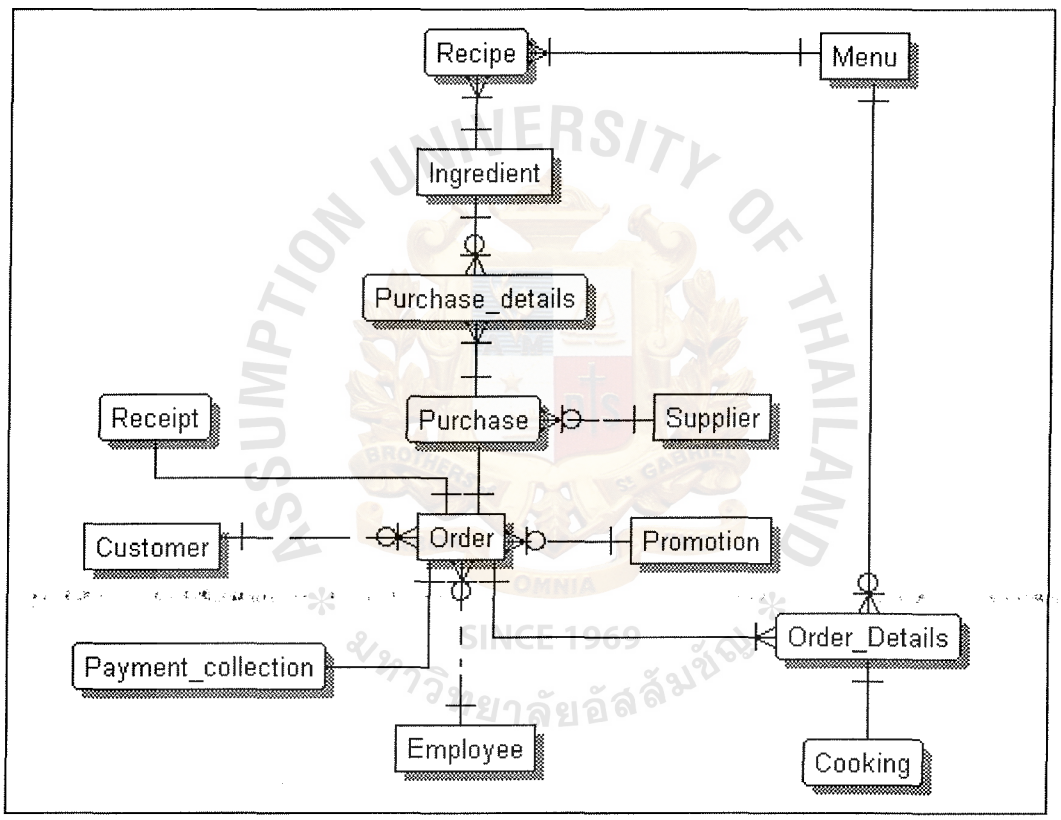

Figure 4.5. Database Design.

4.2 Prototype Development Processes.

(1) Scope of the prototype

The major functions are included in the prototype in order to evaluate efficiency of the system and to be able to see how the front office processes integrate with the back office processes. The major functions are:

(a) Receive customer order via the Sakae web site.

(b) Calculate the raw material requirement needed and purchase order.

(c) Receive raw material

(d) Cooking plan

(e) Delivery

(f) Collect a payment

(2) Hardware and Software requirement

(a) Hardware requirement: Personal computer.

(b) Software requirement: Microsoft personal web-server (ASP), Erwin and MS Access

(3) Create database

Create all database tables according to database design (Appendix C) including primary key, foreign key, and index.

(4) Development

(a) Prepare PC and windows 98.

(b) Install and setup all required software.

(c) Create database by using Erwin.

(d) Create web pages by using ASP

4.3 Testing Plan

The objective: To ensure that every function in the application is working correctly.

The objectives for testing to each function are below:

(1) Receive online order

Ensure that customers can order every menu and the order information is sent to each department correctly.

(2) Purchase raw materials

Ensure that the application can generate purchase order by using the information from sales order correctly.

(3) Cooking

Ensure that users can change status of cooking plan status

(4) Delivery

Ensure that users can change status of delivery status

(5) Payment

Ensure that users can see customer order information and can change the status of payment collection and supplier payment.

(6) Management Report

Ensure that the reports are displayed correctly.

The application is tested by scenario and sample data. Below is the testing scenario.

ABC Co., Ltd. will have a New Year party in Japanese style at the company in the next 3 days. Mr. A has responsibility to organize this party. He has to prepare Japanese foods that the price will not to be over the budget for serving at the party and he has only 3 days for preparing. He calls many Japanese restaurants asking for products,

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services and pricing information. Those restaurants have to send the menu or brochure to present the information to him or come to present by themselves that it waste the time for Mr. A because he has less time. So, he tries to find the Japanese restaurant that provides catering service through the Internet. He visits to the Sakae web site that provides information about products, services and pricing on the web site. The important thing to make Mr. A decide to order is that the Sakae Sushi allows the customer to place an order via the web site and takes only one day for preparing the catering. He views the products, services and pricing information and orders the required products by entering an order form and filling delivery information through the web site. Mr. A uses the credit card in ordering and paying for all products and services through the web site. The system will check Mr. A's credit card and liability of that card. After Mr. A orders the products, the order information will come to the system and be distributed to each involved department. The purchasing staff will receive the order and prepare the purchase order from the system and print out for sending to suppliers. When she received the raw materials she will enter in the receiving form to check the received raw materials. The receiving information will be distributed to the cooking department. The chef will check the received raw materials and prepare the cooking plan and print out to circulate to kitchen staffs in order to prepare. The cooking plan information is distributed to the delivery department. The delivery staff will check the delivery place and time from the system and prepare a delivery report from the system also. The delivery staff will print out the delivery report and take the financial documents that are prepared from the system by the financial department with the products to be delivered and prepared at the party.

4.4 Evaluation

(1) SWOT analysis

<u>Internal Analysis (Strengths and Weaknesses)</u>

<u>Strengths</u>

(a) Streamline processes

(1) Integrate operation planning such as acquiring raw material, pricing, cooking, delivery and collection.

(2) The system will delegate the specific tasks to each department.

(3) Easy to capture data to analyze because all information are stored in electronic form.

(4) The system can be linked to the accounting system in order to automate the accounting processes.

(b) Reduced sales cycle time.

(1) Reduce time to visit the customer and take the receive order.

(2) Reduce time to calculate material requirement, cost and price.

(c) Reduced Cost

(1) Reduce transportation cost

(2) Reduce the number of staff and paperwork.

(3) Reduce energy and physical cost

(4) Reduce marketing collateral material such as brochure.

(d) Reduced defection

(1) Misunderstanding with customers because of recorded information.

Weaknesses

(a) High cost

(1) More investment is required for online application. Hardware/Software and IT materials are required for online application.

(2) Training is required for staff.

(b) Time consuming

(1) Longer period of time is required for implementing the system.

External Analysis (Opportunities and Threats)

Opportunities

(a) Channel expansion

(1) An online application is a new channel for advertising in order to promote products and services.

(2) An online channel can cover the target groups and can reach broader prospects.

(b) It does not have this kind of web base application on line yet so it can create the differentiation from the competitors.

Threats

(c) Competition

(1) Our system may be unattractive for the customers because of many competitors in this business.

(2) The best application is required because of many competitors. It means that we have to invest in more money and skill.

(3) Competitors might follow the same concept as we do quickly.

(d) Technology revolution

(1) The technology changes rapidly, so the system may be out of date or more adaptations are required.

(2) Existing and new processes comparison

Table 4.3. Existing and New Processes Comparison.

Existing processes	**New processes**
Selling products and services: • Distributing leaflets, coupons and posters for advertising. • Salespersons call and visit customers for presenting products and services by using paper-based menus to present to customers. • Customer places an order by ordering to the salesperson or calls to order.	Selling products and services: • Online advertising. • Salespersons call and visit customer for presenting products and services by web site. • Online ordering (customer self-service).
Purchasing: • Chef forecasts raw materials and sends to purchasing staff in order to purchase. • Purchasing staff creates purchase order and sends to suppliers. • Purchasing staff receives raw materials then checks and send them to chef.	Purchasing: • The application produces purchase order automatically. • Record the receiving raw materials through the system.

Existing processes	New processes
Cooking: • Checking the received raw materials by asking the purchasing staff. • Chef prepares the cooking plan by meeting with staffs in order to inform the plan.	Cooking: • Checking the received raw materials automatically from the purchase order is produced by the system. • Chef can prepare cooking plan from the system and print out to staffs.
Delivery: • Chef will inform staffs about preparing and delivering.	Delivery: • Staff can prepare the delivery report from the system and print it out for preparation in order to deliver. • The report will tell the staff how everything has to be prepared.
Finance & accounting: • Receive the payment on delivery by cash or cheque. • Issue the financial documents from Microsoft office manually.	Finance & accounting: • Receive the payment online by credit card. • Issue the financial documents automatically from the system.
Reporting: • Prepare from the collected data from each department on manual basis.	Reporting: • Prepare some reports from the system automatically.

4.5 The Return-On-Investment (ROI) and Breakeven analysis

The Cost of Catering Online Application

Cost is the major part of the planning for a catering online application and this is a critical concern within most companies. In fact, depending on the company's exact needs, plans and requirements, the application cost could easily be the smaller percentage of the total cost.

Cost Breakdown

The application cost is only one piece of the pie. Additional costs include hardware, training and support – not to mention other inherent costs associated with lost productivity of the individuals while they are learning to use the system, downtime associated with implementing the system, and other soft-dollars. Let us take a closer look at each of these cost items

(1) Hardware

This system requires laptops and even the desktops, to be upgraded with more memory, larger hard drives, faster modems, and more of the latest technologies to ensure their systems are fully featured. Add to that the costs of servers, networks, modem pools, and other hardware necessary to ensure the proper infrastructure that exists to support the users, then the cost of hardware can escalate dramatically.

(2) Application / Customization

As mentioned earlier, the cost of online application is the major part of the costs. Every department within an organization is different; it is imperative for an application to be tailored to meet the unique requirements of its users. These designing and customization vary wildly depending on

the requirements of all the departments and users as well as the priority of these requirements, which will dictate when they need to become available.

(3) Training

Training is required for a new application in order to use it well. The purpose of training is the way an application should be used for our business. This includes what business processes should be followed, workflow management, task delegations, and basically how the application should be used to reflect the way the company wants things done using this new technology.

(4) Support and Maintenance

Finally, support and maintenance should be included in cost estimates. This cost includes hot spares for hardware, replacement units, and other maintenance costs.

Costs

The cost of catering online application and the detailed line items can accumulate dramatically, depending on the rollout plans, customization requirements and more.

(1)	Hardware (Server)	=	Using existing server	
(2)	Web hosting	=	1,200	baht/month
(3)	Application / Customization	=	500,000	baht
	(Training is included)			
	(Average 2500-baht/man day X 200 day)			
(4)	Support and Maintenance	=	60,000	baht/year
	(12% of application and customization)			

Monthly costs cumulative

Year 1	Jan	561,200	(500,000+60,000+1,200)
	Feb	562,400	(561,200+1,200)
	March	563,600	(562,400+1,200)
	April	564,800	(563,600+1,200)
	May	566,000	(564,800+1,200)
	June	567,200	(566,000+1,200)
	July	568,400	(567,200+1,200)
	Aug	569,600	(568,400+1,200)
	Sep	570,800	(569,600+1,200)
	Oct	572,000	(570,800+1,200)
	Nov	573,200	(572,000+1,200)
	Dec	574,400	(573,200+1,200)
Year 2	Jan	635,600	(574,400+60,000+1,200)
	Feb	636,800	(635,600+1,200)
	March	638,000	(636,800+1,200)
	April	639,200	(638,000+1,200)
	May	640,400	(639,200+1,200)
	June	641,600	(640,400+1,200)
	July	642,800	(641,600+1,200)
	Aug	644,000	(642,800+1,200)
	Sep	645,200	(644,000+1,200)
	Oct	646,400	(645,200+1,200)
	Nov	647,600	(646,400+1,200)
	Dec	648,800	(647,600+1,200)

Measurements

Before we start down the path of figuring out the ROI of online application, we need to first understand what our goals are. What problems are we trying to solve? What costs are we trying to save? What times are we trying to improve? What pains are we trying to cure? As we are thinking about these important issues, we can also think about what it is costing us not to address these issues. For instance, how much is it costing you in lost revenue when our products and services are not productive?

We addressed the online application as an investment, not a cost. This is an important viewpoint because if we only look at application as costing our company money, then there is no return on that investment to even consider. But even if we do consider it an investment, then we also need to know what it is we will be improving in order to measure our return. As such, it is important to understand our goals and objectives, then measure our progress as we proceed. Only then will we be able to calculate our return on the investment.

The goals and objectives for Sakae Sushi are to approach new technology to encourage sales volume and reduce sales cycle time and costs. Sakae Sushi addressed the new application as an investment, not a cost.

Scenario

Let us analyze an ROI by creating a scenario to work from.

Sakae Sushi has	3 sales executives.
Annual revenues	15 million baht for catering service
Therefore, each sales executive has	5 million baht per year quota
Average sales	50,000 baht/sales
Therefore, each sales executive needs	100 sales per year (to meet quota)

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Sakae's corporate goal is to increase annual sales by 10%, thereby generating 16.5 million baht per year. In order to achieve this goal, they will need to increase the productivity and close ratio of each sales executive by 10%, requiring them to make 110 sales per year, an increase of less than 1 sale per month. Here's the math:

(1) 10 Additional Sales x 50,000 baht Avg. Sale = 500,000 baht more revenue per year, per sale executive.

(2) 5,000,000 baht Annual Sales per sale exe. + 500,000 baht Increased Sales = 5,500,000 baht Annual Sales per sale exe.

(3) 5,500,000 baht x 3 sales execs. = 16.5 million baht Annual Corporate Sales, or 1.5 million baht more sales per year.

We now have some measurable goals. We have a corporate goal of increasing annual sales by 1,500,000 baht. We also have a goal of increasing individual executive's sales to 10 more per year. We not only have to improve the productivity and efficiency of the products and services, but we also have to improve our performance and workflow management as well. All this is just to increase annual sales by 10%.

Now that we know the results we want to reach and measure against, and we know the costs associated with catering online application, we now need to calculate our return on investment, or basically what our breakeven is, so that we can calculate the monthly impact of the application,

Total annual sales goal of	1,500,000 baht
By twelve months, yielding	125,000 baht monthly sales goal

Let's consider that sales executives will not be any more productive for the first three months after the installation and training. Let's also consider that by month four, all sales executives will realize only 10% increased productivity, therefore increasing sales by only 10% of our goal. This will result in only 12,500 baht total sales increase

for that month (10% of 125,000 baht) for all sales executives. Finally, let's consider that each month, sales executives will be 5% more productive than the prior month until they hit 100% increased productivity, which is when they will collectively reach the corporate goal of 125,000 baht increased sales per month. This monthly increase in sales will yield a 12-month increase of 1,500,000 baht, which is our ultimate goal.

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Year 1

Month with % Productivity Increase:	Jan (No increase)	Feb (No increase)	Mar (No increase)	April (10% of Goal)
Increased revenue / month:	0	0	0	12,500
Cumulative revenue:	0	0	0	12,500
Cumulative costs:	561,200	562,400	563,600	564,800

May (10% Increase)	June (15% increase)	July (20% increase)	Aug (25% increase)
13,750	15,812	18,974	23,717
26,250	42,062	61,036	84,753
566,000	567,200	568,400	569,600

Sept (30% Increase)	Oct (35% increase)	Nov (40% increase)	Dec (45% increase)	**Year 1 Total**
30,832	41,623	58,272	84,494	**Baht 299,974**
115,585	157,208	215,480	299,974	
570,800	572,000	573,200	574,400	

Year 2

Month with % Productivity Increase:	Jan (50% increase)	Feb (Goal Reached)	Mar (Goal Reached)	April (Goal Reached)
Increased revenue / month:	**126,741**	126,741	126,741	126,741
Cumulative revenue:	426,715	553,456	**680,197**	806,938
Cumulative costs:	635,600	636,800	**638,000**	639,200

May (Goal Reached)	June (Goal Reached)	July (Goal Reached)	Aug (Goal Reached)
126,741	126,741	126,741	126,741
933,679	1,060,420	1,187,161	1,313,902
640,400	641,600	642,800	644,000

Sept (Goal Reached)	Oct (Goal Reached)	Nov (Goal Reached)	Dec (Goal Reached)	**Year 1+2 Total**
126,741	126,741	126,741	126,741	**Baht 1,820,866**
1,440,643	1,567,384	1,694,125	1,820,866	
645,200	646,600	647,600	648,800	

By looking at the table above and the cumulative increased sales each month, we can see that the breakeven point will occur in 14 months (March of the second year).

We can also see that we will reach our target monthly goal of 125,000 baht in 12 months (January of year two). By the end of the first year, we increased sales by

300,000 baht. By the end of year two, we generated over 1.5 million baht in increased sales.

Therefore, if Sakae Sushi does not invest wisely in technology solutions to improve the performance and productivity of sales and marketing department, then it can cost Sakae Sushi 1,500,000 baht in increased sales over the next year – Opportunity Lost.

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V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

After having designed the prototype of "catering online application" for catering service for Sakae Sushi Co., Ltd., there are the opportunities to open up web sites for expanding sales channel and streamline work processes by helping to enable relevant and timely communication with customers and prospects.

The exact problems facing Sakae Sushi's catering service have led to the generating of catering online application to eliminate those problems in running the catering business. The application offered is to directly develop workflow management plus innovative methods of customer self-service. From the analysis, the best way to improve the catering service is providing customer's accessibility and reducing the company's response time to customers. It came out that the best method is to let the customers learn and get information about products and services and place the order by themselves through the web site (customer self-service) at the same time, which would help customers get the convenience and save their time. The application also improves the company's workflow by reducing paper-based work, streamline work processes and encourage collaborative work, which help to respond to customers faster and conveniently.

The application is well designed to suit the needs of customers and company. If there is really a good chance for Sakae Sushi to implement this application, of course, it will help to improve the catering business, for sure. Even though, further implementation of application will be done and some parts of planning need a little adjustment and improvement.

Therefore, catering online application can help improve the company's performance and customer relationship.

5.2 Recommendations

When Sakae Sushi would like to implement this application, Sakae Sushi has to consider the following issues below:

The Readiness

Before implementation, Sakae Sushi has to prepare the readiness for:

(1) Staff and skill

Make sure that most of the staff have agreed, understood, and accepted the new application and all of the staff have the skill to operate to the new application.

(2) Information technology infrastructure

Another issues before implementation is the readiness of the Information technology infrastructure including network equipment, wiring, personal computer, and Internet connection to support the new application.

Promote Web Site

Only the catering online application itself cannot acquire more prospects or customers in order to increase sales revenue. The Sakae web site needs to be promoted to prospects and target groups, which are associates, clubs, corporate and families in order to create awareness after implementation.

Create Community

To make the web site successful it should have the customer's community or web-board for sharing opinion between customers in order to use as reference for new customers.

Content Updating

The content in the web site should be updated when some information is not valid or not up to date. The company should prepare staff that can handle this task.

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APPENDIX A

QUESTIONS AND ANSWERS FOR INTERVIEWING

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Questions and Answers for Interviewing

Questions for interviewing the first person

QUESTION: Can you brief me on the details of your company background?

ANSWER: Sakae Sushi Co.,Ltd. is a franchisee Japanese restaurant. It is a new entrance conveyor belt restaurant that comes from Singapore. Sakae Sushi is managed and operated by Black Canyon (Thailand) Co.,Ltd. and Apex-pal International Pte Singapore who is a franchiser. Sakae Sushi has two branches; the Bangkok domestic airport and the Kadsuankaew shopping center, Cheingmai.

QUESTION: Can you tell me about the business overview of catering?

ANSWER: Catering service is new for Sakae Sushi but it is a good source of revenue for the company. Today, Sakae Sushi uses a temporary leaflet, call and walk-in visits to create awareness for catering service and quote the price by manual. It takes a longer time to respond to the customers, so it may create loss of sales or customer's dissatisfactions. In the price quoting, Sakae Sushi uses the makeup method from cost of products and services. The forecasting and controlling of inventory is based on the manual system, so inventory shortage or surplus may occur. The catering service is the full services provided by Sakae Sushi including preparing foods, kitchenware, accessories and staff.

QUESTION: Do you have any problems about the catering service?

ANSWER: Today, Sakae Sushi uses a temporary leaflet, call and walk-in visits to create awareness for catering service and quote the price by manual. It takes a longer time to respond the customers, so there may be get loss of sales or customer's dissatisfactions. The forecasting and controlling of

inventory is based on manual system, so inventory shortage or surplus may occur.

QUESTION: What is your product and services?

ANSWER: The products are every kind of Japanese food such as sushi and sashimi. The vast variety of Japanese food is served on the conveyor belt and served by order. Sakae Sushi provides eat-in and take-home with plastic bento set (for some items) for restaurant service. One more service is the catering service that is made by customer's order.

QUESTION: What is your core competency of product and services?

ANSWER: There are a vast variety of products waiting to be served to customers in restaurants. If the customers have less time to eat, the restaurant serves the sushi on the conveyor belt that they can pick up from the belt immediately. The products are unique selling points because of the added vitamin E ball within the sushi rice and using a robot to prepare the sushi rice.

QUESTION: Who are your target groups?

ANSWER: Our main target groups are associates, clubs, corporate and families.

QUESTION: How do you find the prospects?

ANSWER: Our prospects come from our advertising and promotion. For catering service, we have sales persons who visit customers directly.

QUESTION: How do you apply the marketing mix strategy (product, price, place and promotion) to your business?

ANSWER: We serve more than a hundred kinds of Japanese foods to customers on the conveyor belt. Our sushi is produced by the robot that can produce 3 pieces of sushi per second so the customers will get food very fast. We

add vitamin E in the sushi rice in order to give good health to customers. The price for sushi will be charged from the color plate of the sushi and it is very easy to calculate the price and control the budget for customers. Sakae Sushi provides restaurant service and catering service in order to create brand awareness and increase revenues. The marketing department takes care of advertising and promotion. Sakae Sushi concentrates on advertising in magazines, newspapers and television. Promotion will be produced in forms of leaflets, tent-cards, posters and bunting in order to attract the customers to come to the restaurant and create brand awareness.

QUESTION: How many staffs are responsible for catering business?

ANSWER: We did not separate staffs into catering business. We use the same group of staff as the restaurant service so that now we have 40 staffs at the restaurant and 10 staffs at the office.

QUESTION: How do you manage your staffs?

ANSWER: Our staffs at the office are from the sales, marketing, purchasing and administrative departments and are responsible for selling products and services. They will arrange the tasks according to each department. Staffs at the restaurant do cooking, preparing foods and servicing. The chef and the restaurant manager will help to arrange and assign task and responsibility to each staff.

Questions for interviewing the second person

QUESTION: When and how do you purchase your materials and ingredients?

ANSWER: We have the list of suppliers for each material and ingredient. We will fax the purchase order to the supplier and then the supplier will deliver the right amount of material and ingredient on the required date.

QUESTION: How do you know the amount of your materials and ingredients to be purchased?

ANSWER: After we get the order from customers, we will give the information to the chef in order to forecast and calculate the amount of materials and ingredients based on the ingredient formula.

QUESTION: Do you have any problem about purchasing?

ANSWER: Yes, I have. The chef may forecast the incorrect amount of materials and ingredients and sometimes the suppliers deliver incorrect amount and quantity or deliver late.

QUESTION: How do you solve these problems?

ANSWER: For incorrect amount of materials and ingredients; If the amount is under the requirement, we will borrow materials and ingredients from the restaurant or purchase the rest if we have time. If the amount is over the requirement we will give to the restaurant the fresh ingredients and keep for next order the non-fresh ingredients.

Questions for interviewing the Third person

QUESTION: How do you plan cooking after you get the order?

ANSWER: We will plan foods, staff and time schedule. For food, we will plan about the ingredients based on the recipe. We assign responsibility to each staff

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who is involved in each department. The chef and the restaurant manager will determine the time schedule for each task.

QUESTION: How do you acquire raw materials and ingredients?

ANSWER: I will prepare the list of required materials and ingredients including the required amount and time for the purchasing department. The purchasing department will order them for us according to the list.

QUESTION: How do you deliver products and services to customers?

ANSWER: The cooking department prepares the products to be delivered and served to customers. The chef and the restaurant manager will assign each staff for a specific task and responsibility and brief about the service before going to the party. About the products, the chef will separate which food has to be prepared at the party or has to be made before.

QUESTION: How do you plan for staffs, products and services?

ANSWER: We will assign each staff for a specific task and responsibility and brief about the service before going to the party. About the products, we separate which food has to be planned at the party or has to be made before.

APPENDIX B

SYSTEM ARCHITECTURE

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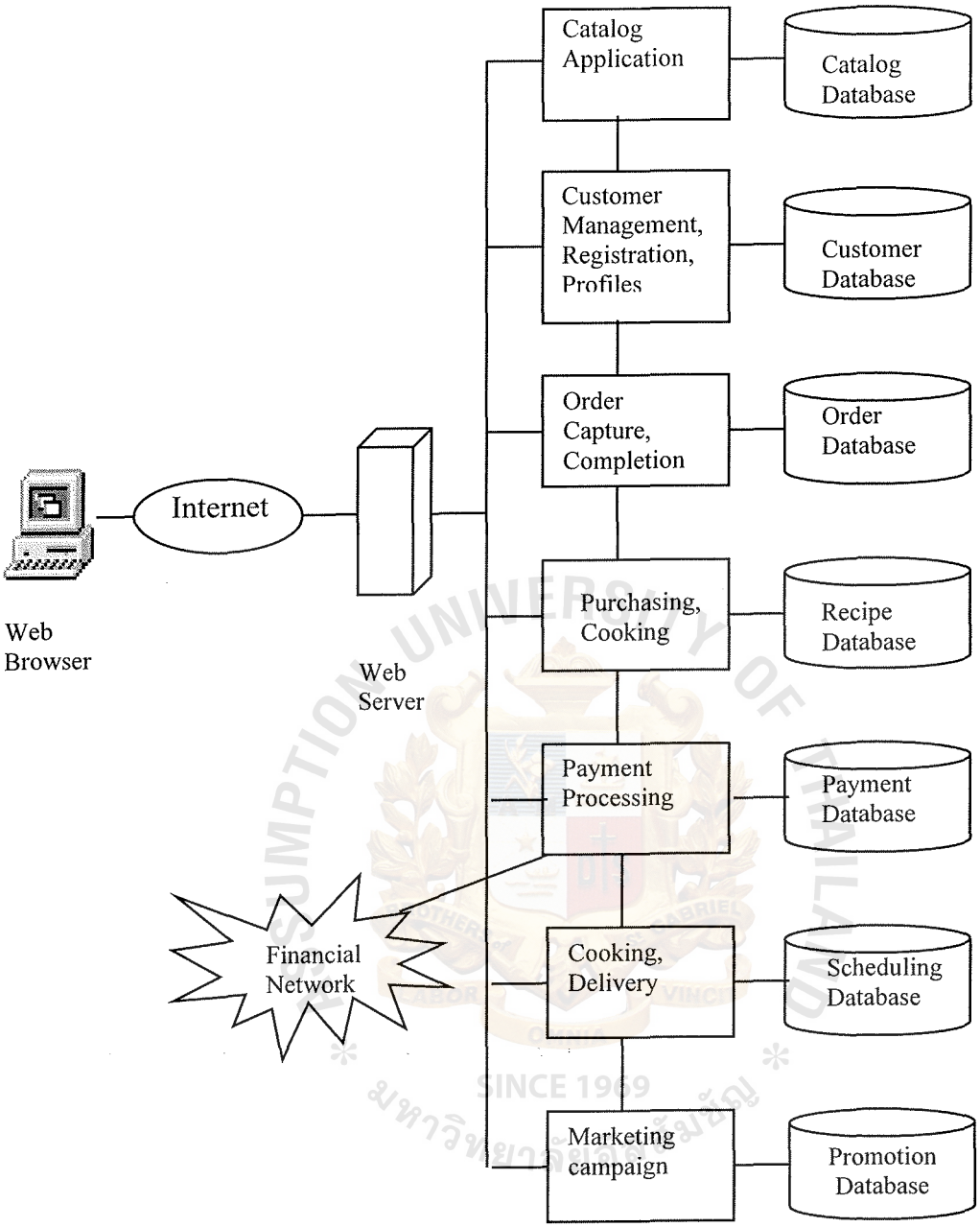

Figure B.1. System Architecture.

APPENDIX C

DATABASE DESIGN AND DATA DICTIONARY

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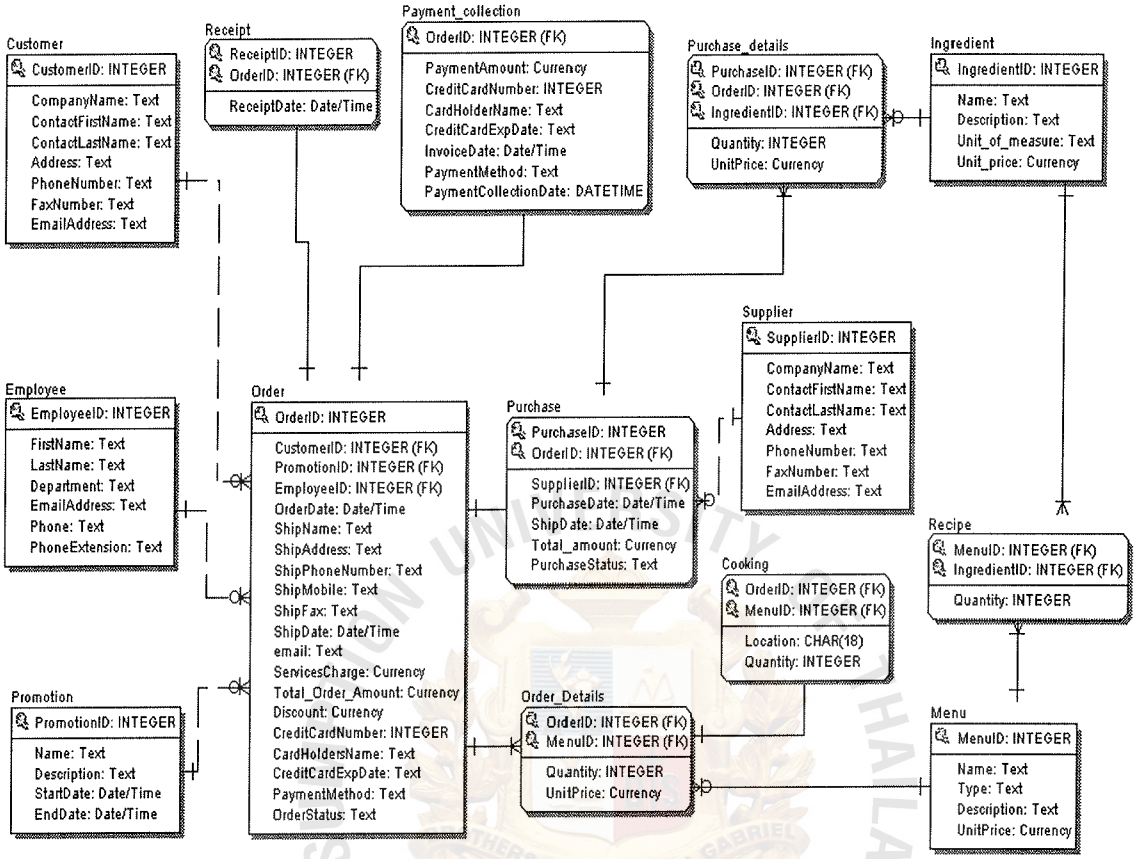

Figure C.1. ER Diagram.

Data Dictionary

Table C.1. Cooking Table.

Field Name	Data type	Description	Remark
OrderID	INTEGER	System generated	Primary key
MenuID	INTEGER	Company name	Primary key
Location	TEXT	Cooking location	
Quantity	INTEGER	Last name of contact person	

Table C.2. Customers Table.

Field Name	Data type	Description	Remark
CustomerID	INTEGER	System generated	Primary Key
CompanyName	TEXT	Company name	
ContactFirstName	TEXT	First name of contact person	
ContactLastName	TEXT	Last name of contact person	
Address	TEXT	Address	
PhoneNumber	TEXT	Phone number	
FaxNumber	TEXT	Fax number	
EmailAddress	TEXT	eMail address	

Table C.3. Employee Table.

Field Name	Data type	Description	Remark
EmployeeID	INTEGER	System generated	Primary Key
FirstName	TEXT	First name of employee	
LastName	TEXT	Last name of employee	
Position	TEXT	Position	
Department	TEXT	Department	
Title	TEXT	Title	
EmailAddress	TEXT	eMail address	
Extension	TEXT	Telephone extension	

Table C.4. Ingredient Table.

Field Name	Data type	Description	Remark
IngredientID	INTEGER	System generated	Primary Key
IngredientName	TEXT	Ingredient name	
IngredientDesc	TEXT	Ingredient description	
Unit_of_Measure	TEXT	Unit of measurement	
Unit_price	Currency	Unit price	

Table C.5. Menu Table.

Field Name	Data type	Description	Remark
MenuID	INTEGER	System generated	Primary Key
MenuName	TEXT	Menu name	
MenuType	TEXT	Menu Type	('Bento set','Sushi set','Party set','Sashimi set')
MenuDesc	TEXT	Unit of measurement	
UnitPrice	CURRENCY	Unit price	

Table C.6. Order_Details Table.

Field Name	Data type	Description	Remark
OrderID	INTEGER	System generated	Primary Key
MenuID	INTEGER	Menu ID	Foreign Key
Quantity	INTEGER	Quantity	
UnitPrice	DECIMAL(15,5)	Unit price	

Table C.7. Orders Table.

Field Name	Data type	Description	Remark
CustomerID	INTEGER	System generated	Primary Key
OrderID	INTEGER	Order ID	Foreign Key
EmployeeID	INTEGER	Employee ID	Foreign Key

Field Name	Data type	Description	Remark
DeliveryID	INTEGER	Delivery ID	Foreign Key
Order_Status_ID	INTEGER	Order status ID	Foreign Key
OrderDate	DATE	Order date	
ShipName	TEXT	Received person	
ShipAddress	TEXT	Delivery address	
ShipPhoneNumber	TEXT	Receiver's phone number	
ShipMobile	TEXT	Receiver's mobile phone number	
ShipFax	TEXT	Receiver's fax number	
ShipDate	DATE	Delivery date	
EMAIL	TEXT	Receiver's email address	
PaymentMethod	TEXT	Payment method	
ServicesCharge	CURRENCY	Services charge	
Total_Amount	CURRENCY	Order amount	
PromotionID	INTEGER	Promotion ID	Foreign Key
Discount	CURRENCY	Discount	
CreditCardNumber	TEXT	Credit card number	
CardHoldersName	TEXT	Name of credit card holder	

Field Name	Data type	Description	Remark
CreditCardExpDate	TEXT	Expiry date of credit card	
OrderStatus	TEXT	Order Status	

Table C.8. Payment_collection Table.

Field Name	Data type	Description	Remark
OrderID	INTEGER	Order ID	
PaymentAmount	CURRENCY	Payment amount	
CreditCardNumber	TEXT	Credit card number	
CardholdersName	TEXT	Credit card holder name	
CreditCardExpDate	TEXT	Credit card expiry date	
InvoiceDate	DATE	Invoice Date	
PaymentDate	DATE	Payment Date	
PaymentMethod	TEXT	Payment Method	'Cash', 'Credit Card'

Table C.9. Promotion Table.

Field Name	Data type	Description	Remark
PromotionID	INTEGER	System generated	Primary Key
Name	TEXT	Promotion name	

Field Name	Data type	Description	Remark
Description	TEXT	Promotion description	
StartDate	Date	Promotion starting date	
EndDate	Date	Promotion ending date	

Table C.10. Purchase Table.

Field Name	Data type	Description	Remark
Purchase_ID	INTEGER	System generated	Primary Key
OrderID	INTEGER	Order ID	
SupplierID	INTEGER	Supplier ID	
PurchaseDate	DATE	Purchasing Date	
ShipDate	DATE	Delivery Date	
TotalAmount	CURRECNY	Purchasing Amount	
PurchaseStatus	TEXT	Purchase Status	'Paid',' Unpaid'

Table C.11. Purchase_Details Table.

Field Name	Data type	Description	Remark
PurchaseID	INTEGER	System generated	Primary Key
OrderID	INTEGER	Order ID	
IngredientID	INTEGER	Ingredient ID	
Quantity	INTEGER	Ingredient Quantity	

Field Name	Data type	Description	Remark
UnitPrice	CURRENCY	Unit Price	

Table C.12. Receipt Table.

Field Name	Data type	Description	Remark
Receipt_ID	INTEGER	System generated	Primary Key
Order_ID	TEXT	Order ID	Foreign Key
ReceiptDate	DATE	Receipt Date	

Table C.13. Recipe Table.

Field Name	Data type	Description	Remark
IngredientID	INTEGER	Ingredient ID	
MenuID	INTEGER	Menu ID	
Quantity	INTEGER	Quantity	

Table C.14. Supplier Table.

Field Name	Data type	Description	Remark
SupplierID	INTEGER	System generated	Primary Key
CompanyName	TEXT	Company name	
ContactFirstName	TEXT	First name	
ContactLastName	TEXT	Last name	
Address	VARCHAR(255)	Supplier address	
Phonenumber	VARCHAR(50)	Supplier telephone number	

Field Name	Data type	Description	Remark
FaxNumber	VARCHAR(50)	Supplier fax number	
EmailAddress	VARCHAR(50)	Supplier email address	

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