Kudler fine foods service request

Service Request Kudler Fine Foods (KFF), a virtual organization from the University of Phoenix (2008), is interested in developing and deploying a customer tracking system through a Kudler Frequent Shopper Program (KFSP) that would provide KFF data on shopping habits of cliental and in return provides customers with high-end incentives for shopping. The project will require the determination of requirements from KFF and their client base and a system analysis. This paper follows a systems analysis process by exploring business objectives and models, current and proposed system analysis, project constraints, functional requirements, cost benefit analysis, and design requirements with the assumed delivery being to an executive management committee at KFF.

Scope and Goals Kathy Kudler in La Jolla started KFF in 1998 after getting tired of working in the defense-contracting arena (University of Phoenix, 2008). In the first nine months of operation, KFF had already broken even and in their first year, they had shown a profit. Since then Kudler has opened a stores in Del Mar in 2000 and Encinitas in 2003. The stores praise themselves as being the best for imported and domestic foods.

A 16000 square feet facility warehouses these products. KFF’s mission is to provide their customers with the very best foods and the best service possible. In pursuit of that mission, KFF has decided to implement KFSP in order to track their customer’s purchases. KFF can use this system to keep track of the products purchased by their loyal customers. The tracking of the customers purchases would be used to determining patterns in customers shopping and track frequent purchases. At most lower end food stores the

frequent shoppers programs provide immediate benefits by giving their shoppers a few cents off each product.

KFF has a different plan in mind for their frequent shopper incentives. They have collaborated with a loyalty points program to provide their customers with high-end gifts, frequent flyer miles, and other specialty foods. With the SR-kf-013 service request, this improvement refines KFF’s process and provides an even better service to their clientele. Requirements The purpose of developing a detailed requirements document allows for the implementation of a proper solution for both parties. In an article published by TechRepublic, user requirements are extremely important because they “ effectively lay the foundation for developers, testers, and implementers to begin determining the functionality, responsiveness, and interoperability required of that system” (¶ 2). Measures for Success KFF’s decision to the offer their frequent shoppers that ability to obtain a KFSP is an excellent idea for many specific reasons.

The ability to track the trending data from their most dedicated shoppers, the company will be in a position to design systems that will enable them to meet better the needs of their customers. Specific measures surrounding this program are the fact that their frequent shoppers will be whether their customers partake in any of the activities, incentives, and or discounts made available to them. For instance, with the information gained from the checkout counter the company can redesign their inventory strategy to ensure that the particular foods that their frequent shoppers buy often are always in stock. Based from this action of inventory security, the company could then measure the increase or overall status of the inventory

movement to determine program effectiveness. While inventory awareness is important in a retail environment, the measuring satisfied customers is possible by recording their level of engagement while in the store and by word of mouth to new customers.

The company already holds special events in their store where they have special guest and celebrity chiefs that come and teach, entertain or simply have a presence in the store. The beauty of the frequent shopper program is that with it, KFF can target specific data that can help them determine what topic to present, what foods to focus on, and even what day of the week they should consider holding an event. The measurement for success could exist by cross checking the number of attendees at promoted events with events from pre KFSP data. Lastly, to gauge program success, KFF could also implement a suggestion program where the company takes information from customer transactions and based from that data make suggestions of like or similar foods that may appeal to that same customer. The store could use the “ suggestion series” foods as a way to gauge program success by tracking the sales of the suggested foods with pre and post level timetables and nventory levels.

Project Feasibility The feasibility analysis looks at the specific operational, technical, and economic feasibility of KFSP program. KFF expects this program, designed to track frequent shopper purchase trends and reward frequent shoppers, to increase KFF projected revenue by 4. 75% according to the KFF 2007 sales plan. With net sales of $10796200, this would equal out to $512819.

5 (University of Phoenix, 2008). This projected increase in revenue almost equals the net income for KFF. No information exists on startup costs for the program. There should be minimal cost associated with hardware as most rewards programs in place use barcode or magnetic strip cards and readers. All the registers already have the necessary hardware. Software will be a small cost as well as training for the information technology (IT) staff to run the software on KFF's networks and training for store associates to know how to register shoppers for the program and make sure that the rewards cards scan properly.

No cost estimate exists for this software or the training, nor is there any other startup cost info such as advertising listed at this time. The initial investment should be feasible considering without hardware. In addition, since KFF is joining a currently existing rewards program it will not have to worry about how a customer redeems their points. The IT staff for KFF is large and they probably have the necessary staff for this project. This will help keep costs down and assist in implementing.

This analysis shows that the project is an economically, operationally, and technically feasible rewards program for KFF and their customers. Business Process Summary Figure 1 shows their current process flowchart. Figure 2 should their current data flow without this new program. After evaluating these models and information from the database section (University of Phoenix, 2008), opportunities exist for process improvements. The models provide visual guides early in the problem to help assist the system analyst in making proposed system decisions that satisfy KFF's needs (Satzinger, Jackson, & Burd, 2004).

Proposed System Requirements Many of the system requirements needed to institute and make good use of the proposed KFSP at KFF are already in place (University of Phoenix, 2008). They consist of networked cash registers, scanners located at the cash registers, a business web site, and bar codes on purchase items. Other necessary items would consist of application cards. Application cards ensure that customers receive benefits and that the system receives the appropriate customer identification information in the databases. The cash registers, scanners, and key tag swipes would be work hand in hand and would be implementing this new system.

The scanner would send information to the main database created by entering information received from customer applications. New information sent to the database via the scanners used at the cash registers would consist of the shopping habits of the customer and frequency of items purchased. Having a company web site, KFF is able to set up accounts on their site, by use of the customer’s identification number, to send them special offers, whether discounted prices or free items, according to the data that is collected during each card use. Not only could KFF provide these types of rewards, but also if the customer were to fill out a more detailed information sheet via the web site related to their likes, dislikes, hobbies and interests, KFF would be able to, as mentioned before, offer their customers higher end gifts, such as specialty foods and items related to their specific tastes.

KFF could easily measure the success of this program. Each time a customer used or cashed in on one of the benefits of being a frequent shopper, the

system records the transaction. A future analysis could reveal trends and suggested changes. The way to continue business growth is through letting customers know the company cares by having customers' best interest in mind. With this business case, KFF can accomplish this and attract new loyal customers. Information Gathering In order to gather the information that is required from the program by KFF should meet with employees.

The initial discovery of meeting with KFF employees' helps for an understanding and determination of system and end-user requirements. KFF should include the sales and marketing team because they may understand the customer base and could possibly provide valuable information about the client's needs. The systems analyst might reveal answers to specific information tracking needs; methods of information access; project scope among specific business units; and information communication with suppliers regarding inventory replenishment data to improve the supply chain. The analyst uses all this valuable information to produce documentation as roadmap for the design phase. The program will be only successful if KFF employees align to the KFSP system objectives.

This system should be easy to use and provide the shopper with clearly defined and understood benefits. The best method to understand the customer's value would be to conduct a survey to assist in meeting customer needs during design. With help from marketing and research departments, the survey should focus questions on customer usage activities, customer benefits, and incentives. The final solution should include data recording that provides continuing market research for future service requests. Both the

meeting with the employees and survey will provide a clear understanding of the user requirements and needs.

Once completed, grading the information with a statistical analysis pinpoints activity correlation and relevance to the business case. Analyzing the data provides an improved representation for solution requirements. Optional and Mandatory System RequirementsDetermining needs and wants is important for clarifying and organizing the process before design changes or advancements (Satzinger, Jackson, & Burd, 2004). KFF currently is making good use of many system solutions fitting for the requirements of their upcoming initiative. Mentioned in the last paper are existing hardware and applications: cash registers; bar code scanners; labeled product; key tag swipes; and a database that is diverse enough to obtain and organize all the events mentioned here.

The website establishes an online presence to allow customers access to an online KFSP account. From the point of view of an external stakeholder, KFF needs to maintain all the current systems already implemented without removing anything. With the system requirements in mind, the current system may need additional features for this service request. Something to consider will be the further advancement of the systems not only to ensure optimal use in capturing customer data and realizing patterns, but also to keep pace with technological advancements of competitors. For instance, the company website should have the ability for the customer to see a summary of the foods they have purchased and perhaps a list of suggested items and recipes based on their orders.

Furthermore, networking the store cash registers into the same database as the store website allows for synchronized information directly to the website and inventory to keep the customer and suppliers with up to date promotions, discounts, giveaways, and marketing data. Functional Allocation ModelingIn order for KFSP to achieve success, there has to be a functional allocation modeling system in place that would require hardware, software and human-computer interface (HCI). As mentioned previously, the hardware needed for the program is already in place, these being the cash registers that are already located in each of the KFF's shops and a server, which currently networks the registers to a mainframe. the registers are already connected to a mainframe, the software used for the program would be one of the key factors in making the process easy, yet effective for customers. Therefore, the human-computer interface would be another key factor in the success of the project. With the human element, customers could register three ways for KFSP.

This first method is by having either KFF personnel or customers key customer information into the computer system. The second is by filling out a paper application for later entry. The third method if by allowing customers' opportunities, on the company website, for entering information directly into the system and saving costs of paper applications. Customers can view their accounts online for accumulated points.

They would also be able to see how many points needed to acquire a specific item. By offering various levels of rewards and allowing customers to have a self-managed account that has an automatically responsive interface, the process will make online experiences enjoyable. Figure 3 is an example of

the proposed system process. This system outlines the process for completing transactions with the rewards program.

Figure 4 is an example of the logical data flow between the corporate mainframe and the customer, business, and supply chain entity. The mainframe controls the interaction between servers to access the databases. The Ethernet provides a pathway for data between customers and the business systems for business analysis. The business entity can use telnet emulation software for accessing the UNIX data server.

Detailed Design Process and Design Specifications KFF has the counter scanners presently in use at their facilities, but would benefit from linear symbol technologies barcode scanners for items not scan able by a horizontal scanner. Each of these scanners comes with cables and stands that are highly recommended for high performance scanning. This setup costs approximately $160 per unit (Linear Symbol Technologies, 2008). The key tags recommended for use come with one full card and two key tags. Not only will these allow easy tracking with the barcode and magnetic strip, they allow fast and easy access to contact information that keeps KFF in front of customers, similar to billboard marketing.

Built in security measures maintain, designed by the company, control of all the software functions. User functions are individually set to allow tracking of all card related customer activity. The report generator, which is included in the software, will allow KFF the ability to design custom reports or print one of the standard reports. That way, KFF will be able to change the direction of advertising when necessary and be able to measure accurately the success

of their newly applied KFSP. KFF will be able to increase sales and improve their image with the key tags.

Plastic cards perceive to have high value, especially with professional full color printing and professionally designed images. Design Process and Design Specifications With closer evaluation of the Frequent Shopper Program and all the needed systems and business requirements to make it happen, KFF is poised to be in position in a timely fashion. Considering the already in place components such as automated point of sale (POS) machines, scanners, product bar codes and the website, the financial output at this point is going to be minimal. Organizing the relationship between scanned item at checkout with the store’s inventory database and tying in the website to offer special romotions and programs is going to be the largest aspect of the project. What the company needs is to institute the proper database management System (DBMS) to query customer data, shopping frequency, and item history. KFF should implement a DBMS customized to their particular needs.

A midrange DBMS will be a good choice for KFF and the cost associated will be reasonable, depending on the needed turnaround. Considering the company is looking to implement KFSP soon, KFF should look elsewhere in the project for cutting cost and corners because the DBMS is the backbone of the entire operation. Over the course of a one to two weeks time, KFF can have a custom database in place that will allow them to carry out all their needs. However, in order to have a perfect environment for their system, the company needs to consider all the stages of the SDLC. This development cycle will ensure that the company is launching a database that is not only a

quality and secure system, but will allow the company to start out on the correct foot and instantly start gaining trust from their frequent shoppers.

With all this said, KFF will be looking at a three to six month period, and potentially more money as well to ensure the best possible product. Establishing a solid foundation for the DBMS the company can execute all the objectives of the program, but the cost associated will still far outweigh any other aspect of the job. To prevent the temptation of cutting back on the database, the company should look to less important parts of the program to save money, such as the initial discounts and coupons they decide to distribute, the amount of printed materials that promote the program, and the types of events planned to entice the customers to the store. High quality is important, especially in the launch of a project like this. Holding back on the throttle could help the program in the end. Customers will be impressed with the focus on customer value from the KFSP and this alone will keep them intrigued, the website can foreshadow future events and promotions, all the while the company is not only building anticipation, but also biding time for the DBMS to pay for itself.

Figure 5 is an example of a Preliminary Design Model. In this model, a rewards program server exists like a mainframe with the DBMS where facility servers connect to retrieve customer, POS, and item information. The facility servers also control the report printers. Figure 6 is the Physical Model of the system.

This diagram should physical data flow and connectivity between the bar codes to the database. This diagram also shows the use of handheld

technology and connectivity through access points located throughout each facility. Testing Process Summary The testing phase for the shopper rewards program will not have to be very extensive. The hardware needed is already in place because the rewards cards will use the same POS barcode scanners already in place at the stores. The rewards program software will be installed at one site and tested after store hours.

The rewards program is already established so the software will need minimal testing. The customer database and the product tracking software will need to be tested. A rewards test card will need to be scanned in and then products scanned through like a normal point of sale transaction. Multiple test cards will be needed and will be used to establish multiple frequent shoppers.

Multiple purchases will be made over the course of the test period which should be at least 2 weeks. The first week of testing will be done at the initial site. The rewards program database will need to be checked to be sure that the correct point value shows up for each test card and that the appropriate gifts are able to be redeemed. Product tracking reports will need to be printed to make sure that these products end up in the report and the ordering system updates. The software will then be loaded at the remaining two sites and tested, any bugs or errors found will need to be corrected by the time the program goes live. Installation Process and Training Plan Summary Proceeding with implementing KFSP is exciting and intimidating at the same time.

The company is placing all their eggs in the same basket at this point and only time will tell if the investment is worthwhile. Over the course of the next few months, the new program will include the implementation phase with rigorous testing. KFSP is to begin its virtual life on November 1, 2008. By that date, measuring for objectives and performance help ensures success. KFF is setting out to collect and measure the data of their frequent shoppers in order to better supply inventory, analyze spending patterns, and show appreciation for their customers' backing.

In order to accomplish this successfully the back end database needs implemented flawlessly to avoid data lost and corruption. The in-store cash registers will be communicating to this same database as well as the online store, a seamless marriage of these three components is critical early in the implementation. As this is the most critical aspect of the installation of the system, a large amount of the project time needs to be dedicated to this part of the process. The challenge in this stage of the program implementation is that the software used to bring the three aspects together, CMS, POS, and store website, will need time for bringing into play in order to determine overall effectiveness. Continuous testing during implementation is important to pinpoint bugs early.

The company can then focus their efforts on the relatively smaller aspects of the program. These details include the introduction of the KFSP, ensuring all products is coded correctly on the bar codes, all scanners are correctly transmitting data and so on. By November 15, 2008, the project should have a green light and meet are implementation goals. The timeline for this project's implementation is 2-3 months.

The company should take precautions in marketing this program that keep this innovation confidential for remaining competitive. A release with instant marketing will build excitement and anticipation in employee eyes. Customers need time to adjust to the new program. With the procedures that are necessary for the program to gain traction, KFF will need to spend the time to train staff on a variety of functions.

For instance, the customer service counter should have a clear understanding of the protocol for issuing the KFSP cards, and support teams on how to trouble shoot a system error. To gain a quick system rollout, the company needs to be diligent in the training aspect of the project. The cashiers need the training on methods of asking for marketing the program, and procedures for using, issuing, and reissuing cards to customers. The key to the initial success of the program is by having the cashiers understanding how to market the program. KFF’s mission provides a starting point for delivering customer value. This mission should hold weight in card marketing procedures and training.

Failure on this front could lower customer value, which is counterproductive to their objective. The databases, POS, and website working seamlessly together will allow the company opportunity to execute the program on many levels. For instance, coupon offers via the website, recipes ideas, food recommendations, invitations to celebrity chief events, and future objectives. Kudler Fine Foods will need to maintain several pieces of documentation in order to train and support the new system. The first document that needs to be created or finalized is the systems overview or design document. This

document will be used in the future to understand the architecture at each location and how the systems integrate together.

It is important to maintain the systems design documentation because it will aid in troubleshooting later on in the future. Another document that is important to maintain is the systems operation document. The systems operations document goes in-depth on how the system operates, how store employees use the system, and how the system is utilized by the consumer. The systems operation document will be used as part of the employee training at KFF. In addition to the systems operations document, the employees will have to have a full training document on the new frequent shoppers program.

The training documentation will go over how to use the Point of Sale (PoS) terminal with the new shoppers program, how to run reports, how to assist customers on the shopping floor, and how the redemption process works when customers want to use their points. A maintenance document will need to be created on how the system will be maintained, upgraded, and serviced. There will be patches to install, software upgrades, and hardware maintenance on the scanners so the maintenance will go over this information. The last document that will need to be maintained and updated regularly is the customer information and incentives document.

This document will be generated from the reports server and will assist in understanding the shopping habits of the stores patrons and how KFF can improve to provide a better shopping experience. Support and Maintenance Plan Summary Once all network, hardware, and software components are in

place at KFF, a support and maintenance plan is essential to keep operations flowing smoothly. Frequent systems checks will need to run on the file transfer protocols (FTP) to ensure the system is running at an efficient and optimal capacity. Since this network will be the linked to all plants, KFF should perform full systems checks and defragmentation on the system that minimize risks. Routine maintenance is essential every few months.

The cash registers should have installed on their systems, software that automatically scans the system every time the machine powers on. This will ensure the detection of possible defects or problems before the machines daily use. System administrations should set the software preferences to include automatic upgrading at boot. Setting the preferences in this manner will alleviate some of the responsibility from the user of having to remember or find time to scan for upgrades.

The key tags given to frequent shoppers will begin to exhibit wear after years of use. There will also be instances when customers will request new tags due to misplaced or damaged cards. In this event, the user’s personal information will update with the new number on the new card. The system removes duplicate customer information, and efficiently updates information without confusion or inconvenience for the customer. Conclusion The KFSP project is an in depth process that provides invaluable data to the KFF as well as great incentives to the customer. Through the use of bar code scanners placed at each Point of Sale (PoS) terminal the frequent shoppers cards are scanned and all purchases are tracked in a KFF database.

The bar code scanners provide the flexibility and adaptability that is sought by KFF, they have the option to not only use them at the PoS terminal but also allow employees to carry scanners on the store floor to assist customers. With this new system the KFF will benefit greatly and be able to grow their business in the direction that they desire. References Linear Symbol Technologies. (2008) LS2208 Barcode Scanner. (LS2208) [Computer Software].

Retrieved September 30, 2008, from: http://www. thebarcodewarehouse. co. uk/symbol-technologies.

Satzinger, J. Jackson, R. Burd, S. (2004) Systems Analysis & Design in a Changing World (4th ed.).

Boston: Thomson Learning, Inc. TechRepublic. (2003). Determine user requirements now to avoid problems later. Retrieved September 28, 2008 from: http://articles.

techrepublic. com. com/5100-10878_11-5054103. html University of Phoenix. (2008) Kudler Fine Foods [Virtual Organization].

Retrieved September 22, 2008, from University of Phoenix, Simulation, BSA/375 – Fundamentals of Business Systems Development eResource Web site.