Mid-Century Modern Décor Unlimited Consulting Project

Jacob Smith, Tong Wu, & Fan Zhao

University of North Alabama

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Table of Contents

[Table of Contents 2](#_Toc486873331)

[Background 3](#_Toc486873332)

[Purpose 4](#_Toc486873333)

[Project Scope 5](#_Toc486873334)

[General Project Information 5](#_Toc486873335)

[Problem/Opportunity Statement 5](#_Toc486873336)

[Project Objectives 5](#_Toc486873337)

[Project Description 5](#_Toc486873338)

[Business Benefits 5](#_Toc486873339)

[Project Deliverables 6](#_Toc486873340)

[Estimated Project Duration 6](#_Toc486873341)

[Mid-Century Modern Décor Unlimited (MCMDU) Information System 7](#_Toc486873342)

[Introduction 7](#_Toc486873343)

[Information system requirement determination 8](#_Toc486873344)

[Potential system requirement strategies 9](#_Toc486873345)

[Joint Application Design (JAD) 10](#_Toc486873346)

[Group support systems 11](#_Toc486873347)

[Project Report Strategy 13](#_Toc486873348)

[Introduction 13](#_Toc486873349)

[Systems Requirements Determination Strategy 14](#_Toc486873350)

[Functions of MCMDU Inventory System 14](#_Toc486873351)

[Interview Designs Summary 16](#_Toc486873352)

[Interview Designs 17](#_Toc486873353)

[Reference 23](#_Toc486873354)

# **Background**

Mid-Century Modern Décor Unlimited is seeking guidance for their business needs. An initial analysis was previously conducted to measure the needs of the company. Several processes were uncovered and reviewed to measure their effectiveness. The company currently needs to be able to add new items to their inventory system, generate recurring and ad-hoc reports, and receive company-specific templates that are used when transferring inventory-related data. These processes will need to be supported by the new planned inventory information system.

# **Purpose**

The purpose of this report is to consult Mid-Century Modern Décor Unlimited on their planned inventory information system. The task is to select an overall strategy for determining system requirements for the new structure. This strategy will be utilized to maximize system efficiency and performance. An interview process with several employees of the firm will help assist in defining the system requirements needed to support the growth of a system that meets the defined scope.

# **Project Scope**

Mid-Century Modern Décor Unlimited
Project Scope

July 1, 2017

## General Project Information

Project Name: Mid-Century Modern Décor Consulting Project

Sponsor: Jake Smith

Project Manager: Fan Zhao

## Problem/Opportunity Statement

Mid-Century Modern Décor has hired us to determine systems requirements for their new inventory information system. We will also interview several employees of the firm to assist in defining the information system requirements desired to support the development of the inventory system.

## Project Objectives

* Determine systems requirements for their new inventory information system.
* Interview several employees of the firm to assist in defining the information system requirements desired to support the development of the inventory system.
* Generate ad-hoc and recurring reports
* Add new items to the inventory system
* Receive company-specific templates when transmitting inventory-related data

## Project Description

A new inventory management system will be constructed that will generate reports, add new items to inventory, and receive company specific templates in the most efficient and economical way possible. a

## Business Benefits

Improved inventory management ability

Cleaner data

One single interface

## Project Deliverables

Inventory tracking

Enhanced reporting

Automated customer updates

Training measures

Store keeper data

## Estimated Project Duration

6 months

# **Mid-Century Modern Décor Unlimited (MCMDU) Information System**

## **Introduction**

 In the increasingly sophisticated world of industrialization, the need for fast processing power of information is vital to the success of any business. Among the things within the business or organization that are most affected by the transition from ancient to modern methods of handling information are the human resource and inventory management sections. In many cases, the efficiency of humans is only as good as the experience and the mood in which they are operating. However, in the wake of high technological advancements in the world, there has been the substantial development of systems that are able to complete tasks which humans would do in months and complete it within minutes or hours (Khosrow-Pour, Mehdi pp.12). Mostly, these information systems are tailor-made for a specific business depending on several factors such as the goals, objectives, and available finances so that the efficiency and reliability in the production area are maintained top notch.

 Mid-Century Modern Décor Unlimited (MCMDU) is an established company having a challenge with its current information management system. Initially, the company was dealing with sale persons, and this required a simple information management system that would process the sales, which was mostly met by the use of Microsoft Excel workbooks. However, upon shifting to e-commerce, the company now needs a new system that has the capability of managing their inventory in an efficient way with minimal maintenance required (Saad, Inès et al. pp.53). In this, the problem became managing the complex records due to the fact that the company’s presence is felt in more than 20 countries and the customers are many hence require good information system. Moreover, the employees of the company dealing with the retail e-commerce customers have reported to the business owner, Ms. Harrison that the system has several inefficiencies that make its management difficult. Furthermore, they have noted that these customers have different inventory needs which present complex problems when resolving them with the normal Microsoft Excel 2010 workbooks. Therefore, the objective is to come up with an efficient information system that will give the deserved efficiency, provide the customized inventory needs, and lower the maintenance cost by being very reliable. An evaluation of the system requirements for this system is to be conducted upon which the potential strategies suitable for the system will be highlighted. Most importantly, a recommendation based on the efficiency, maintenance cost, and reliability will be given and which will be used during the process of developing the system.

## **Information system requirement determination**

Information system requirement determination involves the process of establishing the problem and solutions to address the problem in an efficient and reliable manner. In most cases, this involves stages that filter out the probable solutions to leave the most efficient method or strategy which could be adopted given the prevailing circumstances and provide good results. During this process, the five stages of planning, analysis, design, implementation, and maintenance are followed to provide a refined solution. These are summarized in figure 1 shown below.



System requirement determination (source: http://slideplayer.com/slide/8940690/)

In the process of determining the best inventory management system for Mid-Century Modern Décor Unlimited, impertinence is of great importance and ensures all the possible shortcomings and alternatives are taken into consideration. Impartiality is also quite important since it makes the system developers remember their primary role is finding the best solution to address the problem. Another important aspect of putting in mind the relaxation of the constraints so that everything is assumed possible and the infeasible factors are eliminated. Upon keeping more attention to detail so that every possible problem is captured, reframing is done which gives the organization a new look and help identify the other problems that cannot be foreseen. These constitute the characteristics of a good analyst, and they will provide enough insight into solving the problem.

## **Potential system requirement strategies**

When collecting information on system requirements, several methods have been in use, but their reliability and cost are the most determining factors. Prior to advanced computing applications, ancient methods such as interviewing and listening, analyzing procedures and other documentaries present on the company, observing users, and administering questionnaires to participants who then give the data. However, most of these methods are only suited for simple systems which have one or two data entry and are also not complicated. For the case of Mid-Century Modern Décor Unlimited, the initial conditions before the inception of the retail e-commerce methods could have used these traditional methods.

In view of this, an updated strategy needs to be used to ensure an effective and reliable solution for the Mid-Century Modern Décor Unlimited Company. The potential strategies to be used for this include the Joint Application Design (JAD), Group support systems, and CASE tools. Due to their advanced nature and capability to take into account complex situations, they are highly suitable for handling the complex inventory situation at the Mid-Century Modern Décor Unlimited without fail. Furthermore, they can be used in a combination manner to give a hybrid system that is more reliable.

## **Joint Application Design (JAD)**

The Joint application design strategy is basically as a structured process in which the managers, users, and the analysts work together through a series of highly intensive meetings to either specify or review the system requirements tabled before them. In this strategy, physical presence must be there during the meetings to ensure that all the issues of concern or recommendations are addressed. This strategy is proven to work very effectively in large companies that have complex information system needs which cannot be noted down or better explained and so their presence is used to explain their concerns.

The meetings are usually very intensive as they try to come up with a solution within a short time and that which would integrate all the problems of the participants during the very meetings. This kind of strategy is well suited for Mid-Century Modern Décor Unlimited because of the nature of the problem they are facing in their inventory. It has been reported by separate departments of different kinds of challenges, and in order to address them, all these people who have experienced the problem need to come on board. Therefore, this makes the joint application design participants be six (6) in the number who attend the meetings. The session leader facilitates the group process and acts as the moderator to ensure all parameters and parties present their concerns in an acceptable way. The managers and users are the most active participants who are given more time to speak since the information system is being built for them. Further, the system analyst and computer information system (CIS) staff are mostly listeners taking down every concern of the users and managers. The other important participant is the project sponsor, and in most cases, he/she is a high-level champion having very limited participation. The scribe records the activities of the session to make sure all points of concern are addressed.

The decision on the use of this strategy will depend upon the strengths and the weaknesses it has over the other potential strategies. Among the strengths of this strategy is the fact that it saves a lot of time compared to other strategies. Here, all the members involved meet and deliberate on the issues after which a solution is established. This eliminates the need to meet each individual at their own time since it may consume a lot of time. Further, it creates a high level of ownership since all the stakeholders are invited to the intensive meetings to give their contributions. The meetings are also highly focused, and this leads to desirable results within a short time. However, the shortcomings of joint application design are also worth considering. It requires a high level of commitment in order for it to work through the meeting. Further, a high degree of planning and organization is required. It is also resourced intensive since every stakeholder needs to be in the meeting.

## **Group support systems**

This involves the use of techniques comprised software and technology developed for the primary reason for focusing and enhancing communication, deliberations as well as the decision-making of groups. Here, instead of talking, typing is used for communication and limits the barriers caused by protocol during delivering a point though talking (Jobe, Jared B pp.47). This is highly applicable when the team is huge in terms of numbers, and it is impossible to accommodate them in a confined place where they can reason out together. Also, it makes it possible for distant communication without the need for physical presence hence reducing the commitment needed for it to be successful.

However, this system is very inefficient due to the lack of commitment. Unlike joint application design, group support systems do not have that commitment, and this makes even the people benefiting from the information system become reluctant due to limited involvement in the whole process. Moreover, there is a high degree of planning required in order to make it successful (Khosrow-Pour, Mehdi, pp.254). It is quite difficult to make sure that everyone is contributing though typing instead of talking and when the group is very large, there is little concern from a majority of the participants. Also, it consumes a lot of time in the whole process of initialization and implementation. Generally, typing takes a lot of time compared to talking, and this makes the strategy time consuming since a lot of time shall be dedicated to typing instead of resolving the problems. Most importantly, it becomes quite difficult to come up with a conclusion since many participants are involved, and this increases the time required to draw conclusions.

**CASE tools**

Computer aided software engineering, CASE, tools are domain based systems that support activities through the software development life cycle involving the planning, analysis, design, implementation, and maintenance (Jobe, Jared B pp.33). These are primarily used in places where high quality is intended within a short time as well as high productivity of the inventory performance. Most importantly, this strategy is used to facilitate a single design philosophy within any business organization.

Mid-Century Modern Décor Unlimited would also adopt this strategy because of the desire to improve the speed and quality of the inventory systems. It saves a lot of time since it eliminates the need to go back and correct any wrong step by ensuring the process only moves forward after meeting the minimum standards. However, it is very costly, and this is what has reduced its penetration ability to the rest of the world (Ulrich, William M, and Philip Newcomb pp.307). As a sequential system, CASE tool has some challenges in sharing information with other systems hence sometimes incompatibility can hinder its application. Nevertheless, it is very effective and reliable.

**Recommendation**

Going by the findings of the potential strategies that can be used to develop the inventory information system, the combination of the joint application design and CASE tools might provide the best solution. Both systems are fast in terms of providing a solution, but each has its own weakness that is complemented by the other. For instance, joint application design highly resources intensive meaning the stakeholders must be there. However, this can be merged with CASE tools so that the procedure is done step by step and the stakeholders only come in when their step is involved. By doing so, the efficiency will be improved, and even the cost of implementing the strategy will be reduced considerably. Among the issues raised by Mid-Century Modern Décor Unlimited was the low efficiency of handling of the e-commerce inventory data. Therefore, these two strategies will combine to come up with a hybrid system that will address the problems experienced by the stakeholders and solve them in a procedural manner so that each aspect is handled. Therefore, it would be recommended that Mid-Century Modern Décor Unlimited adopts joint application design (JAD) and computer-aided software engineering (CASE) tools to collect information for the inventory system development.

# **Project Report Strategy**

## Introduction

Mid-Century Modern Décor Unlimited (MCMDU) is a mid-sized manufacturing company targeting the modern décor market and currently has 80 full-time employees and approximately 200 décor items. However, the efficacy of the current inventory system is so poor that it takes up to 24 hours to provide a requested inventory update whether it is internally or externally. As such, there is need to come up with a design that works as a single information system, cost-effective and time-sensitive when it comes to extraction of information for e-commerce retailers’ requests, easy-to-use platform though highly secured for all company employees, fully functional with high-end search query features to allow for informed decision making, and available off-site in case of any disasters.

Project Scope Statement

The project is mandated to build a system that accounts for any item added or removed from the inventory, show all placed orders and their paid or pending bills, and different automated ad-hoc inventory reports and efficient use of automated e-commerce retailer templates.

# Systems Requirements Determination Strategy

## Functions of MCMDU Inventory System

The inventory system is mandated to realize any item that is added or removed from the system which in practical sense means when an item is manufactured and ready for sale or when it has been sold and the system needs to recognize this fact and remove it from the system. As such, the inventory system should detect the payment of each item that is sold. In addition, there is need to ease the provision of ad-hoc reports. As such, it is important for the system to be easily understandable so that it does not delay this process. Having highlighted these issues, let us look at the strategies applicable.

Strategies

One of the strategies is by placing demand on the new inventory but focusing on the storekeeper such that if the storekeeper provides real-time information regarding the product demanded, it is clearly observed that the storekeeper has real-time management of the items and therefore helps to cut downtime on releasing this item or data to other sources, whether it’s the e-commerce retailers or the management board. The other alternative is focusing the system on the customer such that once the customer requests for an item, the request goes directly to storekeeper who accepts this request thereby automatically initiating the system to quantify the sell of the item. Once the customer needs are managed, the storekeeper can access all the information and send it as ad-hoc reporting to the relevant people. The third alternative is focusing on the e-commerce retailer in that once he orders for items, the storekeeper is mandated to process this request once the payment is done. This means that the system should be automatically detecting the current stock and what is not available thereby making it easier for the e-commerce retailers not to be disappointed as a result of delays. The last alternative the three already mentioned above.

My recommendation goes for the last alternative as it combines three significant strategies. In this case, the once the customer requests for an item, the e-commerce retailer facilitates this order by requesting it from the company. Considering the inventory is automated, the storekeeper only gets a notification on processing bought items once the e-commerce has confirmed and paid for the items he needs. Once the storekeeper receives this notification by confirming shipping or ready for pick up, the e-commerce retailer gets a notification highlighting this status as well. Once the retailer receives his item(s), this information is stored in the database.

As such, in the need of an ad-hoc reporting and since the system is automated, once the owner, vice presidents, managers, marketing/sales departments or inventory management staff request for this information, it is automatically processed and printed. This allows all these individuals to have access to this information in real-time. In addition, in the event an e-commerce retailer requests for this information, he should provide a default template which is only entered into the system once under his profile such that when he requests for such information, the default template is used in processing this data and sending it via email or printing where necessary.

# Interview Designs Summary

When it comes to the interview plan, this section will highlight specific question that should be directed to the firm owner and to the company employees as well.

Alexis Harrison, Company Owner Interview Questions

1. What is the benefit of using your services?
2. What are some of the major challenges you have faced and how did you solve them?
3. Your company’s inventory system is not time efficient. What are you doing in that line to ensure there is change in that line?
4. If you were asked to outsource your inventory system then allowing your current database to be accessed by the third-party company, would you accept such an offer? (Yes/No)
5. If not, why wouldn’t you?
6. Where do you see MCMDU in the next 5-10 years?
7. Do you expect to retire early and trust the company to someone else, say a member of your immediate family?

Company Employee, Purchasing and Suppliers Department

1. What is the best part about working for MCMDU?
2. If there is a department you would like improved, which one would that be and why?
3. Do you think your inventory system is efficient? (Yes/No)
4. Why do you think so?
5. What are some of the major challenges you have faced as an employee in The Purchasing and Supplies Department?
6. In what way do you think these challenges have been or can be adequately addressed?

In conclusion, MCMDU stands a chance of increasing its market share. However, this calls for an improved inventory system that considers all relevant stakeholder. Settling for a strategy that balances the needs of all these departments and individuals will go a long way in ensuring the system is not only time sensitive but also cost effective.

# **Interview Designs**

When it comes to the interview plan, this section will highlight the specific question that should be directed to the firm owner and to the company employees as well.

**Alexis Harrison, Company Owner Interview Questions**

1. What is the benefit of using your services?

Our services do not limit our customers’ tastes, colors, design or preferences. This remains the main benefit where customers have the option to choose from a wide range of customized and unique services. We endeavor to come up with services and products that are differentiated, unique and the same time ensure that they meet our clients’ requirements. Additionally, we custom our services to fit the clients physical and financial needs. Whereas everybody requires well designed and developed products and services, all of us have different tastes and our secret is to custom the product to have maximum benefits for our clients. We achieve this by clearly identifying specific needs of each of our customers and offering personalized service.

1. What are some of the major challenges you have faced and how did you solve them?

Like any other business, the firm has faced several challenges that range from financial to management issues. Breaking into the international market was also a challenge due to stiff competition in the industry. The company has been able to come up with solutions to financial problems by investing carefully and ensuring customer satisfaction which makes the business sustainable. The firm has also been able to break into the international market by registering its trademark in several countries.

However, management of inventory, clients’ requirements, employees, and inventory still remain a challenge and although over the last few years the company has tried to use Excel, this is no longer working with globalization where the company is required to manage all its resources and clients on a digital platform. Manage

1. Your company's inventory system is not time efficient. What are you doing in that line to ensure there is a change in that line?

To improve on the current inventory system, the firm is looking into several options. One such option is coming up with a system captures all the company requirements. The firm is considering a system that will interconnect all the company department and resources to ensure an efficient inventory management. Specifically, the firm is looking for a system that will be can be accessed from anywhere by the company’s employees. The systems should also have a client’s portal where customers can login into view and place orders. One major functionality that is very vital to the company is a system that is able to update all inventory levels and customers preferences. The current system requires that both inventory levels and customers’ requirements change are done manually. This has created a lot of redundancies in the inventory. The firm seeks to reduce redundancy in the inventory as well as have the available inventory levels available in an online platform where customers can see what is in stock or out of stock.

1. If you were asked to outsource your inventory system then allowing your current database to be accessed by the third-party company, would you accept such an offer? (Yes/No)

No.

1. If not, why wouldn’t you?

I believe that the firm does not need to outsource an inventory service that may be accessed by a third party due to the level of confidentiality required. Further, the company offers the most unique and differentiated services that require a custom system that will address all the requirements and problems faced by the company. Another reason why the company may not be willing to outsource a system that will allow the current database to be accessed by the third party is the magnitude of the business and trade secret. The third party may compromise the confidential information of the firm that would diminish its competitive advantage. This is a security risk and before making such a decision I would consider other available options

1. Where do you see MCMDU in the next 5-10 years?

The goal is to make MCMDU the preferred décor company of choice in the world in 5 years. This will be achieved through offering differentiated products and services in both existing and emerging markets. This will be achieved by incorporating new technology by the implementation of a system that will offer enterprise resource planning and management that will allow connectivity of all company processes in order to remain competitive in the industry players. The firm seeks to offer the best customer relations experience where the firm target to reach and do business with its customers over an online platform. In view of the above, I do not think that a third party vendor would offer such solution seamlessly.

1. Do you expect to retire early and trust the company to someone else, say a member of your immediate family?

This is not a decision that can be made today, but when that time comes, I would be more than willing to trust someone else to take the mantle and take the company to another level. I believe that with the structures and systems that I expect to be put in place, the firm will be in a very good position move to the next level. I will do that when that time comes and I am confident that whoever takes up this role will be able to able to ride on the structures and system the firm is laying today to people the organization to a much high level.

**Company Employee, Purchasing and Suppliers Department**

1. What is the best part about working for MCMDU?

The best part of working at the firm is the culture that fosters and encourage creativity and innovation. This has given me an opportunity to improve my skill. This has also been very helpful to the whole team at the company and has led to increased productivity and employee performance. As the person in charge of Purchasing and Supplies, I have also been able to learn a lot since the management gives me the room and space to engage the suppliers.

1. If there is a department you would like improved, which one would that be and why?

Both the sales and purchases departments require a facelift. These two departments are key to the organization operations. More or less it becomes difficult to separate the two as the sales department relies on what is already in stock which is dependent on the purchases made. The reason a facelift is required is to ensure stock movement is well tracked, documented to avoid inconsistencies or lack of clear inventory levels.

1. Do you think your inventory system is efficient? (Yes/No)

No.

1. Why do you think so?

We rely on more or less manual stock updates on Excel worksheets or other records that do not update our stock timely. Sometimes the company has to rely on our sales person to come from the field to ascertain how much has been sold and what has been ordered in order to reconcile the stock levels. Something needs to be done to ensure there is a system that provides a timely update on the inventory levels.

1. What are some of the major challenges you have faced as an employee in The Purchasing and Supplies Department?

Management of inventory has been one of the major challenges I face on a daily basis. I have to now and then make sure that the relevant staff updates the inventory level based on the information or stocks that we receive or sell out there when orders are made. Additionally, I have to check with several sales person how much they need manually in order to make the necessary requisition.

Dealing with vendors has also become a challenge of late. Many suppliers currently require that I make my orders online and do this in a timely manner. However, due to lack of a system that is able to give me my re-order level in good time, I find myself making the orders in a rush. Sometimes these orders are not delivered in good time and I have to lose customers. I have to keep checking with stores manager what is remaining in order to advise the sales manager and customer representatives on what is in stock.

1. In what way do you think these challenges have been or can be adequately addressed?

I believe that this problem can only be solved by coming up with a comprehensive system that captures all the information relating to inventory management. This should include entry at the purchase point, auto update of inventory level where purchases or sales should update the inventory database inventory timely. This will make it easier to track inventory stock movement.

The system should be interoperable to allow access by all the sales representative in all the major outlets operated by the company through the web and mobile platforms. This will be necessary as the business environment has changed and if the company has to meet the demands of its customers drawn from various geographical regions, then the system has to be accessible by customers who can find out whether their preferred product or service is available. I also believe the system should be able accessed and mobile friend for customers to be able to make reservations and allow online payment methods.

Summary

In conclusion, MCMDU stands a chance of increasing its market share. However, this calls for an improved inventory system that considers all relevant stakeholder. Settling for a strategy that balances the needs of all these departments and individuals will go a long way in ensuring the system is not only time sensitive but also cost effective.

# **Reference**

"© 2005 By Prentice Hall Chapter 6 Determining System Requirements Modern Systems Analysis And Design Fourth Edition Jeffrey A. Hoffer Joey F. George Joseph. - Ppt Download". *Slideplayer.Com*, 2017, http://slideplayer.com/slide/8940690/.

Jobe, Jared B. *Information Requirements For Business Management System*. Alexandria, Va., Havard School Of Business, 2004,.

Khosrow-Pour, Mehdi. *Collaborative Information Technologies*. Hershey, PA, IRM Press, 2002,.

Saad, Inès et al. *Information Systems For Knowledge Management*. London, UK, ISTE, 2014,.

Ulrich, William M, and Philip Newcomb. *Information Systems Transformation*. Amsterdam, Morgan Kaufmann Object Management Group/Elsevier, 2010,.