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# Abbreviations

BPR – Business Process Re-engineering

ERP – Enterprise Resource Planning

IS – Information Systems

IT – Information Technology

OTC – Over The Counter drugs

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Secondly we would like to thank the head of HR and staff of Markss HLC for providing us with the information for the research. Last but not the least we would like to thank the National School of Business Management for the support rendered to make the research a success.

# Abstract

In dealing with today’s competitive environment, it is necessary that an organization focus on gaining strategic advantage improving operational efficiencies to enhance Business Performance. In order to retain competitive in the industry using Information Technology to automate business functions is considered as essential with the rapid advancements taking place globally.

The study carries out a critical investigation based on Markss HLC (Pvt) Ltd – a dominant player of Sri Lankan pharmaceutical industry. The study examines the impact of IT related change management to enhance business performance considering the problems raised at the selected company in implementing change.

The analysis will be conducted gathering data by use of interviews, observations, and questionnaires to summarize the findings to provide recommendations on effective change management strategies in business process automation whilst examining the impact of organizational culture on behavior of employees in change situations to provide solutions to minimize deficiencies.

# CHAPTER 01

# Introduction

## Company Background

**Markss HLC (Pvt) Ltd.**

Markss HLC (Pvt) Ltd is a diversified and dynamic healthcare company which mainly focusing on providing high quality products to the Sri Lankan market. They endeavor to give quality healthcare products to people with affordable prices to improve the quality of life of people.Markss HLC is a Private Limited Liability company established in September 2006, it has the membership in Lanka Chamber of Pharmaceutical Industry and it also has the membership and the association with the National Stroke Association of Sri Lanka and National Chamber of Commerce of Sri Lanka.Markss HLC mainly focuses on marketing and importation of pharmaceuticals, surgical and bio medical equipment and OTC products. They have their innovative products containing with antibiotics, dermatological products analgesics, anti-inflammatory, ophthalmological, hyperglycemic, dietary supplements, cardiovascular and OTC etc. For getting maximum growth Markss HLC (Pvt) Ltd has based their structure on the Strategic Business Unit mode (SBU).

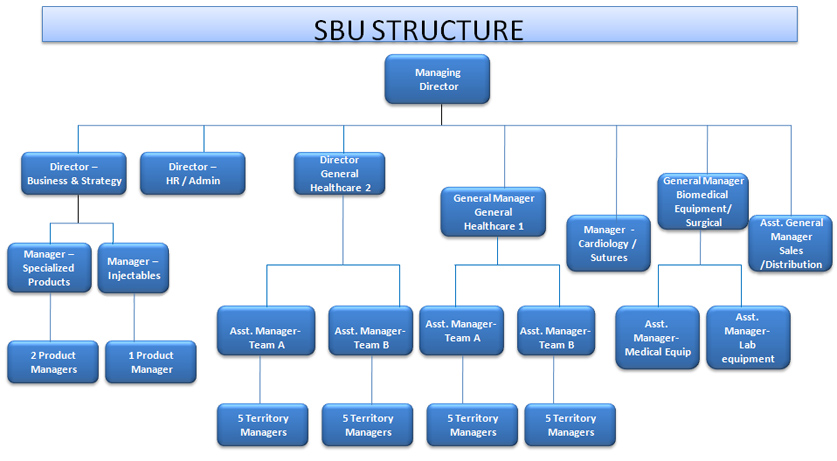


Figure .1: SBU Structure of Markss HLC (Pvt) Ltd (Markss HLC 2010)

## Vision

“To become the Most Admired Healthcare Company.”

## Mission

* Achieve the highest degree of Employee Satisfaction.
* Achieve the highest quality in services to Doctors, Pharmacists and Distributors.
* Achieve the highest admiration by officials of the Health Ministry and earn the highest degree of regards and acceptance from all other government officials and stake holders.
* Achieve the best financial stability whilst meeting all established KPIs ensuring best corporate governance.
* Achieve highest satisfaction with all our current and future principals.
* Carry out all our business activities in an admired and ethical frame work whilst enhancing our corporate image.
* Be a partner of sustainable development of the society engaging in most admired corporate social responsibility activities.

## Corporate Values

* **Total Commitment to their customers**

Commitment is an essential ingredient for successful long-term relationships. Developing a customer‟s commitment in a business relationship does pay off in increased profits, customer retention, willingness to refer and recommend.

Therefore Markss intends to ensure that they are offering a total quality service for their valued customer base. For an example, 24/7 door step drug delivery service at the Melbourne and Wellington Specialized Care Centre (a retail customer service outlet operated under Markss HLC umbrella) and offering highest quality drugs and medical equipments at an affordable price.

* **Dynamic and Human Centered Leadership.**

The members of the management team are visionary and fully potential with their competencies. They empower their teams, focus on what matters, listen and set examples, mentor and always learn new things from their teams.

* **Commitment to Task and Team Work**

All the employees work more effectively and efficiently to achieve the given task. They always work together as a team in achieving the given targets by realizing what their task is exactly.

* **Uncompromising Integrity**

Trust and honesty are essential while you are working with a team to achieve a common goal. Markss employees do what they say. They admit their mistakes. Markss is a company which can be trusted.

* **Professionalism, Accountability, Good corporate governance.**

Work with methods, Systems and spirit. They are committed to the highest level of personal performance by each of them takes their roles and responsibilities seriously and handle affairs professionally and respecting ethical values. They also work by setting the way the company is directed, administered or controlled.

# Uniqueness of Markss HLC

In talking about the dynamism of the Organization, with a highly qualified, and experience prominent team of professionals they strive to improve the quality of life for follow citizens.

They have much to be proud of during their brief stay of existence. They enjoy one of the fastest growth rates in the industry currently ranging over 100% per annum. They are well associated with employing the finest people around. As much as the people who work with them, they represent some of the world renowned principals from all over the world which includes USA and EU.

As much as they proud of their principals, they are proud to have a customer base as prestigious as State Pharmaceutical Corporation, Medical Supplies Division of The Ministry Of Health, all the state & private hospitals, health care institutions and leading supermarket chains.

With a passion for excellence they manage their entity whilst contributing to social development and environmental sustainability. They believe in equity, responsibility, mutual respect and dignity when it comes to business. Furthermore maintaining transparency and highest standards of corporate governance is the way they work.

# Introduction to the study

The study is based on Markss HLC which is a dominant player in Sri Lankan pharmaceutical industry. The investigators identified several issues prevailing at Markss HLC as the change of automation in business processes which were implemented in the year of 2012 and the issues have impacted vastly to the decrease of business performance even though the expected outcome was an increase of effectiveness and efficiencies.

Markss HLC has implemented three main Information Systems for the departments purchasing, inventory holding and human resources respectively. The three system implementations have been done to replace manual work and increase accuracy and efficiency in work to enhance business performance.

It is identified that the three systems portray multiple issues and the employee willingness to use the systems have therefore decreased. The investigation is being carried out to find the impacts of the change implemented, to identify the change management strategies to be used in a situation of business automation and to identify the factors that influence the failure of business performance enhancement within an expected time by implementing IT related change.

## Research Problem and Justification

**Why IT related change management (Business Process automation) fail to enhance business performance within an expected period of time?**

Information Technology is considered as a prime component playing a critical role in enhancing business performance (Bergeron and Raymond, 1995;Henderson and Venkatraman, 1999; Porter and Miller, 1985). As per Beheshti (2004) and Penhune (1998), studies have depicted that information systems have positive impacts on businesses in enhancing operational efficiencies whilst driving towards business growth aligning marketing operations and corporate strategies. However it is also identified that IT does not always deliver business value due to lack of synergy between corporate strategy and IT strategy (Chao and Chandra, 2012).

Although IT plays a critical role in enhancing business performance, it is found that 40% of information systems implementation projects have failed (Ciric and Rakovic, 2010).

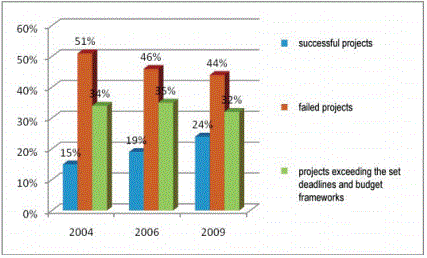


Figure 1.2. Successful rates of information systems implementation projects (Martineau & Shumway 2009)

Figure 1.2 illustrates that majority of the projects belong to the category of failures. Thus it is evident that the projects failed are taking a higher percentage than the projects successfully implemented even though the success rate depicts a growth.

Moreover, Taylor (2004) stated that functional change management is a decisive factor in achieving success as change is complex, formative, and evolving in information systems implementation projects. Change management is defined as a systematic approach to deal with change from the organizational perspective as well as the employee’s perspectives (Song, 2009).Song (2009) also suggests that IT related change management includes defining and instilling new values, norms and behaviors within the organization to overcome the resistance to change, building consensus among stakeholders and customers to use IT for better results, planning, implementing and testing of all aspects in transition from the existing state to the expected state.

In addition,Stanleigh (2008)stated that IT related change management fails to enhance business performance within an expected time period due to many reasons such as;

* Lack of employee engagement and motivation
* Managing change only at the management level
* Lack of analysis on the risk factors
* Lack of integration of corporate strategy and IT strategy
* Lack of user friendly system implementation
* Lack of user feedback
* Lack of resource allocation

Moreover it is reported that in USA only 10% of IT implementation have become successful (Schaffer and Thompson, 1992) while in UK only 8% is reported as successful (Wilkinson et al., 1993). Thus it is evident that ineffective change management leads to failure of meeting the expected outcomes which will increase the costs damaging enhancement of business performance.

* 1. **Research Aim and Questions**

To find the reasons why IT related change management fail to enhance business performance with an expected period of time and to formulate solutions and recommendations.

## Research questions

* What are the strategies used in managing change in automating business processes?
* How does organizational culture influence employee behavior in adopting to change?
* How does BPR involve in change management?

## Research Objectives

* To identify effective change management strategies in automation
* To identify influences by organization culture on employee behavior in change implementation
* To identify effective means in implementing IS in an organization to align with corporate strategy

## Structure Scope of the study

This investigation carries a critical analysisonIT related change management to enhance business performance examining the causes of failure in meeting the expected results in information system implementation. The authors mainly focus on the strategies used in managing change in automating business processes implementing ERP systems, cultural influences predicting employee behavior in change process, and the role of BPR in change management.

The study is based on Markss HLC (Pvt) Ltd which is a company operated in the pharmaceutical industry. Primary data required in examining the business problem will be gathered by use of data collection methods such as interviews, questionnaires and by observation while secondary data will be obtained from the company reports and other data sources.

The above information is provided in different chapters of the document. They are included in the chapters of literature review, research methodology and findings.

## Conclusion

This chapter introduced the research topic by briefly describing the background of the study. The other main focus was on describing the research problem and the objectives of the research were pointed out. This chapter will give a brief view on the whole research. The next chapter among the four chapters will briefly explain the theories behind the research and other relevant literature materials.

# CHAPTER 02

# Literature Review

## Introduction

A literature review is a discussion of several important research papers in the field, relating the findings to one another. They are also known as surveys and discussions of existing literature, which covers the same subject matters.

## Organization culture

Brown (1998) defined culture as the patterns of beliefs, values and experiences that have been developing within the organization since its establishment. Kilmann et al., (1986) stated that culture is the personality of the organization. It has been argued that culture plays a key role in terms of organizational structure, leadership, performance and teamwork (Walumbwa et al., 2007). Thus organizational culture is a set of shared psychological aspects that guide interpretation and action in organizations by defining appropriate behavior for different situations (Ravasi and Schultz, 2006).

Thus it is identified that implementing change involves three factors as technological, organizational and personal where people are the most critical factor in making change (Linstone and Mitroff, 1994). Managing human resource involves values, preferences, norms, attitudes and possibly the need of maintaining traditions which involves culture (Dunham, 1984; Carnall, 1990). Moreover, as identified by researchers there are three types of attitudes towards change as affective, cognitive and behavioral which involves emotions, beliefs, and behavioral tendency respectively (Dunham et al., 1989). In addition, as Culture involves with attitudes that are identified as difficult to change once it has been learned, a resistance to change may occur as it may involve substantive changes in the job (Dunham, 1984).

However, as culture has influences on attitudes towards organizational change, it is found that positive cultural characteristics provide ingredients to innovate which is healthy in implementing change adopting the external and internal changes required to sustain in the industry (Pool, 2000). Thus in tallying with organizational culture some researchers have argued that the process should start at top, while others have argued that it should start with the bottom- up approach (Lupton, 1971). Thus organizational culture is identified as playing an important role in assuring efforts in organizational change to achieve higher business performance (Ahmed, 1998).

## Business Process Reengineering

Hammer and Champy (1993) defined business process re-engineering is “the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed”. BPR is concerned with the internal and external elements of a business, the performance and information technology (Choi and Chan, 1997).

Figure 3 illustrates on implementing change where BPR is considered when the time taken to implement change is longer than 1 year and the change type is radical.

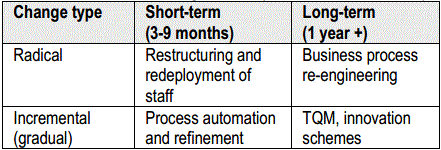


Figure 2.1: Time and change matrix (Ciric and Rakovic 2010)

As per Choi and Chan (1997) BPR mainly aims at performing changes to existing business in order to improve performance measured by accelerating speed, minimizing cost, or upgrading service/ product quality. They also mentioned that BPR may be deployment of information technology in to business processes that help improve business performance.

## Change Management

Change is identified as a movement from present state to a future state (George and Jones, 1996). As per Dawson (1994) change is referred as any alteration in activities performed by an organization. In addition, it is a process of analyzing the past to extract present actions needed for future (Kanter et al., 1992).

With the rapid changes in the business world, moving towards globalization and liberalization of markets, it is necessary that organizations adopt latest technological advancements such as by automating business functions in responding to business and economic alerts (Rashid et al., 2004).

As per Yousef(2000) elements of organizational commitment influence attitudes towards organizational change, job satisfaction, while directly and indirectly influencing the attitude towards organizational change. Furthermore employee’s perception of change climate within the organization relies on the relationships with the teams and supervisors (Tierney, 1999).

Cadle and Yeates (2008) stated that there are four main reasons for organizations to implement change using information systems. They are; for business survival, to improve efficiency, to gain competitive advantage or to avoid the threat of external factors. Hence success of managing change determines the enhancement of business performance and is associated with those strategies that facilitate change process (Saka, 2003).

Change management is the process of implementing changes systematically taking the risk of it being resisted (Armstrong, 2009).Lennox (1994) stated that one of the major failures is the inability to overcome the resistance to change. Therefore it is important to make use of change management strategies in order to gain efficiency in change management process.

## Employee Behavior

Employee behavior in an organization includes behaviors directed towards co- employees as well as interpersonal forms of conscientiousness and workplace involvement which contribute to organizational effectiveness (Mayfield and Taber, 2010). As per Cadle and Yeates (2008) staff in an organization is categorized in to two types as;

* Danger people (D- type) –resist change as they see it as a threat
* Opportunity people (O- type) – grasp change as an opportunity

Furthermore they discuss the stages of adopting change by employees as illustrated by the figure below.

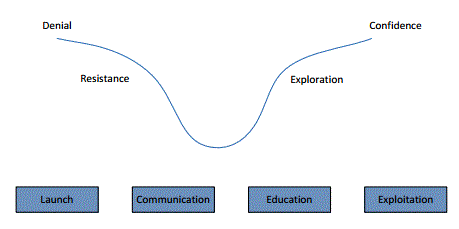


Figure 2.2: Stages in implementing change (Cadle and Yeates 2008)

As per Brooks and Bate (1994) employees strongly prefer stability and continuity ensuring comfort and familiarity which lead to resistance in implementing change. As discussed by Victorian Quality Council (2006) it is identified that as employees are the critical resource in managing change, feeling of insecurity in change may provoke strong resistance where high level of support, assistance, awareness and guidance are needed in aligning human capital towards change to achieve a higher performance.

## Conceptual Framework

## 

**Organizational Culture**

**Business Process Reengineering**

**Change Management**

**Employee Behavior**

**Business Performance**

**Independent Variables**

**Dependent Variable**

Figure 2.3: Conceptual Framework (Authors’ work)

## Conclusion

Chapter two annotated the findings of relevant literature related to marginality factors which influence to enhance business performance. It includes relevant reading material found out in articles and websites. This would describe the main topics which would affect the research problem. The next chapter would focus on the methodology of the study and the basic findings of the research.

# CHAPTER 03

# Methodology

## Introduction

The third chapter represents the central point of the research report. Previous chapters of the report have laid the groundwork for the project. A description of the respondents who took part in the study will be provided

## Design and Study sample

### Population

The population of the study is the total number employees working at Markss HLC (250). The sample is drawn by the population.

### Sample

“Non-probability” sample method will be used under “Convenience” technique. Research will be continued further with 6 selected individuals from each ofthe three departments that Information Systems have been implemented.

6

6

6

Figure 3.1: Sample of the Study (Author’s work based on Markss HLC information)

## Data Collection Methods

The investigation will be carried out at Markss HLC by use of data collection methods listed below;

### Interviews

There are different types of interviews. They are structured, semi structured and unstructured interviews. Structured interviews were conducted for the research by the authors. The directive interview questions were pre-designed for each and every department heads. Structured interviews were done in a face-to-face format using a standard set of questions to obtain data that can be aggregated because identical questions have been asked of each participant.

The authors used structured interviews as structured questions can improve the quality, honesty and validity of answers given by the management staff. The structured questions were divided into 2 parts which are direct answers and MCQ section. The main focus for the interview was based on 3 departments namely;

* Human Resource Department (Interview was carried out with the manager of the department)
* Inventory control department (Interview was carried out with the manager of the department)
* Purchases Department (Interview was carried out with the manager of the department)

The Interview of the Purchases and Inventory control department was conducted together as the automation was implemented at the same time by the same vendor. Therefore both managers were interviewed together thus, two separate set of questions for the two departments were not prepared. It consists of 10 direct answers question set and 7 MCQ questions which would total up to 17 questions all together.

Another set of questions were made for the Human Resource Departments including the same format. It consists of 10 direct answer questions and 8 MCQ questions totaling up to 18 questions. That format was followed by us to deal with time limitations. The interview questions are attached in the appendix.

The questions prepared were directly linked to the content.

Example: Did your staff members have experience in implementing an automation system before?

Innovative questions were asked from the managers in order to get straight forward answers about their experience about the change management. In that case the authors expected to have honest answers from the managers.

Example:What are the difficulties that employees have to face at present with the new conditions?

Overall the questions were focused on the necessary details we wanted to acquire about the existing automation system. The answers of such questions really matters in a research as the answers were given directly and can rely on them.

* + 1. **Questionnaires**

After interviews the next step was to preserve questionnaires to relevant parties of the company. A single common questionnaire was designed to gather information. . As it is mentioned in the 3.1.2 study sample mainly questionnaires were gone with the 6 selected individuals from each, Purchasing department, Inventory control department and HR Department in Markss HLCwhich have been implemented the information systems in each departments.

The target audiences of the questionnaires were;

● 6 Employees in Purchasing Department

● 6 Employees in Inventory Department

● 6 Employees in HR Department

Developing questionnaires are most effective to the system. Because the responses are gathered in standardized way, so questionnaires are more objective, certainly more than interviews. Generally this scenario is relatively quick to collect information using questionnaires. And information can be collected from a large position of group.

By questionnaires it is trying to measure and yield the information from relevant people towards the relevant topic of implemented information systems in each three departments in the company. Cause of the closed ended questions series it is easy to interpret and tabulate information gain from questionnaires and it is easier and quicker for respondents to answer and also the answers of different respondents are easier to compare.

Interviews to be carried out with the executive and managerial staff will be unstructured for each level and observation of work environment to gather data on organizational culture and employee behavior would be based on operational staff.

## Data Analysis

The data gathered using the above stated methods will be analyzed using descriptive analysis method and statistical/ mathematical/ graphical representation on findings which would provide.

## Limitations

* Confidentiality of information by the company

Information gathering could be limited as the company maintains rules and regulations in providing information on the company’s internal processes and financial stability.

* Technological limitations

The company is making use of manual and legacy systems which the investigators are not given exposure to information which is affecting complementing of the change management strategy evaluations.

* Logistical limitations

The research will be carried out by using the employees in three departments

* Purchasing department
* Inventory holding department
* HR department

## Research Plan

Table : Research Plan

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activity** | **1st Month** | | | | **2nd Month** | | | | **3rd Month** | | | |
| **Week** | | | | **Week** | | | | **Week** | | | |
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Defining Project |  |  |  |  |  |  |  |  |  |  |  |  |
| Identifying Project Scope & Boundaries |  |  |  |  |  |  |  |  |  |  |  |  |
| Assigning Project Roles |  |  |  |  |  |  |  |  |  |  |  |  |
| Analyzing Data Collection Techniques |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify Basic & Critical Information Requirements |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify Suitable Information Sources |  |  |  |  |  |  |  |  |  |  |  |  |
| Design customized Questions & Questionnaires |  |  |  |  |  |  |  |  |  |  |  |  |
| Prepare Interim Report |  |  |  |  |  |  |  |  |  |  |  |  |
| Carry out Survey & Gather Information |  |  |  |  |  |  |  |  |  |  |  |  |
| Analyze & Process Gathered Information |  |  |  |  |  |  |  |  |  |  |  |  |
| Finalize Project |  |  |  |  |  |  |  |  |  |  |  |  |
| Design Solutions/Make Recommendations |  |  |  |  |  |  |  |  |  |  |  |  |
| Prepare Documentation |  |  |  |  |  |  |  |  |  |  |  |  |
| Delivery |  |  |  |  |  |  |  |  |  |  |  |  |

## Conclusion

Chapter three described the study settings and methods of research. How the research was done is interpreted in the subtopics of this chapter. The methods of data collection and how the research was done are the main points highlighted in this chapter along with the time plan of the research. The next chapter would focus on the methodology of the study and the basic findings of the research.

# CHAPTER 04

# Research Findings

## Introduction

This section outlines the research findings gathered from interviews and questionnaires carried out at Markss HLC. The structured interview format, and the questionnaires used for results generation are attached on appendices. The gathered information is being analyzed by use of Microsoft excel, and findings are given in this chapter.

.

## Research and Analysis

As per the analysis by use of other sources provided by the company, the group came to a conclusion that Markss has a tall and a Decentralized structure it has Low span of control and easy to reach for any department

The employees enjoy a free culture where they are free to decide a way to address the management. Employees are privileged to reach the highest ranked management if there is an issue. There are career advancement opportunities internally where the employees can go up in the ladder on their career.

The members of the Markss management team are visionary and fully potential with their competencies. They empower their teams, mentor and always learn new things from their teams. All the employees are working more effectively and efficiently to achieve the given task. They always work together as a team in achieving the given targets by realizing what their task is exactly.

Markss employees walk the talk. They admit their mistakes. They are very trustful and honest.

Work with methods, Systems and spirit. They are committed to the highest level of personal performance by each of them takes their roles and responsibilities seriously and handle affairs professionally and respecting ethical values. They also work by setting the way the company is directed, administered or controlled.

The Culture and the Values of the Organization are not pre designed or either not pre documented, these are starting from the Top Management experiences and mainly from the all the employees at Markss HLC. Since the Markss has a tall and a Decentralized structure it has Low span of control and easy to reach for any department.

Thus culture and structure creates an invisible attraction, on beliefs and values that are so deep in the organization determining the change adaptation level.

## Research Findings

## Results of the Interviews conducted with the top management

### Level of participation of employees in decision making process

Figure 4.1: Decision making authority

As per the analysis of the structured interviews carried up with the management personnel of the three departments, the decision making on automating the manual systems has been done mostly (90%) by the top management with only 10% contribution of ideas or view points from the general management staff or executives. Top management decision making has had a critical impact on the performance of the employees as their work related tasks has been subjected to change. Even though a basic research on gaining ideas with regards to system implementation has been gathered, it has not been sufficient to satisfy the requirements of the system implementation phase.

### User perception on IT systems implemented

Figure 4.2: User perception before and after system implementationUser perception before and after system implementation

As per the diagram above, it is visible that the negativity of the system has been increased considerable after the implementation of the system, which is unhealthy in achieving required level of performance. As per the research findings, since Markss HLC employees are always open to new experiences, and allow change to do positive things related to work, it is identified that 75% of the employees has had a positive view point in changing the manual system in to an automated IT system while a 25% of employees has had a negative view point, may be due to the insecurities they felt with regards to their job. However, the results have depicted that after implementation of the IT system, the negativity on the system has had a major increase of 35% making it to a 60% negativity to the system by the employees, leaving only 40% of positive viewers remaining.

As per the management comments and the questionnaires carried out states that no proper mechanism was implemented to stimulate employee awareness regarding the upcoming changes. The major changes done by use of Information Systems have had vast impacts on the sense of security of the employees, and lack of prior exposure and training has resulted in poor positive attitude towards the system. Moreover, it is identified, that the integration failures, and IT related issues have had adverse effects on employee satisfaction on system usage thus demeaning the value of the system.

### Business performance

Figure 4.3: Level of business performance

As per the findings, the manual systems that have been used by the organization has had a significant impact on performance while maintaining it at 55% approximately. However, as the company is driving towards its vision to be the most admired health care company, the level of performance expected is 80% with the use of new IS implementation. The need to increase efficiency of work related tasks, decrease errors while eliminating waste and to walk towards “go – green – paperless concept” has had a diverse effect on automating the manual systems. Although the attempt was to increase business performance, it has been decreasing as a result of the radical change implemented dropping it to 40%.

# User characteristics

### Experience

Figure 4.4: User experience

As per the diagram it is found that the sample taken for the research basing the three department consists of 55% of employees with more than 5 years of experience at Markss, while 28% has been identified as having less than 2 years of experience and 17% of employees have exactly 5 years of experience at Markss HLC.

Although having experience of 5 years or more at one company is considered invaluable, it also acts as a disadvantage when it comes to change management philosophy, as ability adopt change may be less compared to the employees who are new to the work environment, and who are not in the category of aging employees. As found by many researchers, mature employees depict a higher rate of resistance to change, and less satisfied with the jobs making a negative impact on business performance.

### User Education level

Figure 4.5: Employee Education Background

The analysis found that the sample consists of 39% of employees with a basic degree, while having 56% of employees having a diploma or a higher diploma in the related field having prior work exposure. There have been no employees with masters qualification in the chosen sample from specific departments, however, 5% has been noted having only Advanced level qualification handing work tasks.

### IT Qualifications

Figure 4.6: IT qualifications

According to the results drawn from the sample, it is figured that 56% of the employees chosen for the sample do not have any IT related qualification which is a crucial factor. The percentage of employees with a certificate qualification marks at 22% while only a 17% has portrayed a diploma related to IT and only 3% signifying a degree in the stream of IT. The figures portray the level of IT knowledge of the employees, which is a crucial factor in determining the effectiveness of employees in handling IT in work related tasks.

### Prior IT exposure

Figure 4.7: IT Exposure

At Markss HLC, from the chosen sample, it is visible that prior IT exposure is seen from only 33% of employees, where 67% of employees have no experience in using an Information System to do work related tasks. This is a critical factor that management should have taken in to account in considering a rapid office automation.

### Level of English proficiency

Figure 4.8: Level of English proficiency

The level of English proficiency of the employees at Markss HLC lies at a healthy position, where 56% of the employees depict manageable while only 22% represent poor knowledge in English. This may be used as a positive factor as most of the employees do have a satisfied level of knowledge in English which is healthy. The prominent factor that should be taken with regards to the user characteristics is that little knowledge in IT, no prior experience and poor English is a threat to future training process; however, it is found that at Markss HLC even though the level of IT education and prior experience in IT depicts a low level of as the level of English depicts a higher level, if training on IT usage was given to the employees, it would generate higher results.

## System Characteristics

### Availability of support on system usage

Figure 4.9: Availability of system support

As per the analysis, it is found that a user manual is only been given with the HRIS system, but the support does not seem of much use. The other two systems do not have any user manual or any other guidance given on usage of systems. And Markss HLC does not have an IT department, thus a system coordinator is not in place for support when an error occurs. Thus mostly the employees have to either go back to the manual system to complete the work tasks, or seek help from the IT system vendor which is time consuming and ineffective.

### Training given by the company on the system

Figure 4.10: Training provided by the company

The figure elaborates on the training rendered by the company on the Information Systems. And 89% of employees stated that even though training was provided, it was a one day program that did not cater to the exact needs. Only 11% of the employees found it useful to carry out their work related tasks using the system.

### System Issues affecting performance

Figure 4.11: System issues affecting performance

As per the analysis, it is figured that 67% of employees stated that there are integration issues of the systems. As the purchase order system must have a good level of integration with the inventory control system to make orders when the stocks reach margins, it is necessary that the two systems integrate well to gain effective performance. Moreover, 33% of employees have stated that there are human errors made while doing the transactions, and they affect the overall performance. However to minimize them, training and development would be an effective tool.

### User feedback on the system

Figure 4.12: User feedback

As per the research carried out using the sample at Markss HLC, the findings depicted that a 56% of employees required a system with high integration and match with the corporate goals and objectives thus providing higher level of training with the system. A 33% of employees have requested more training on system to perform work tasks better.

## Research Findings

* Figure 4.1 shows how the organization has carry out their decision making process. 90% of the decision making is done by the top management while 10% of the employees are involved in decision making.
* Figure 4.2 depicts the user perception of the system before and after system implementation. 75% of the employees had a positive attitude towards the new system before implementation but it has decreased by 35% after system implementation.
* Figure 4.3 shows the level of business performance. Before the automation was introduced performance was 55% and the expected performance level before implementation was 80%. However the actual performance after implementation was just 40%.
* Figure 4.4 depicts the experience of the employees at Markss. The employees who have experience less than 2 years was 28%, five years was 17% and experience more than 5 years was 55%. It shows that most of the employees have experience in working for the company for long time.
* Figure 4.5 shows the education background of the employees. 55 of the employees consist of just O/L and A/L qualifications, 39% bachelors, 56% Diploma and Higher Diploma holders while no employees with Masters.
* Figure 4.6 demonstrates the IT qualifications of the employees. There are 22% employees with a certificate qualification while only a 17% has portrayed an IT diploma and only 5% signifying an IT degree.
* Figure 4.7 shows the IT exposure of the employees. 67% of the employees do not have an IT exposure which is the majority while 33% of the employees have a significant exposure in IT.
* Figure 4.8 depicts the level of English knowledge of the employees. 22% of the employees are poor in their English while 56% of them can manage with their work. 11% equally are fluent and very well in English proficiency.
* Figure 4.9 shows the availability of support systems. Availability of user manual is just 33% and it is with the HRIS. Other systems do not have manuals which have been shown by 67%. No support was given from the system coordinator as well.
* Figure 4.10 demonstrates the training provided by the company. The training has been provided but only 11% of the employees have stated that it is sufficient while 89% have stated that it was not sufficient.
* Figure 4.11 shows the system issues affecting performance. 67% of the issues were integration issues while 33% were human errors. It clearly shows that the main problem is in integration part.
* Figure 4.12 depicts the user feedbacks. 11% has suggested that moving on to a manual system would help to solve the problems while 33% has suggested that they should provide more training so that they will be aware of the new system. The majority of 56% has stated that they should implement a system with better integration and training.

## Conclusion

This chapter includes the research findings and they are presented through charts and graphs. It consists of an analysis of the results. Furthermore it includes the results that were obtained by the data finding methods and they are clearly elaborated.

# Chapter 5

# Conclusion

## Introduction

The chapter consists of the final results findings, and the recommendations generated by the analysis based on the findings. The results were analyzed deeply in order to derive the findings, to provide optimal solutions to the research. Furthermore, methods are suggested for further study for more accurate results.

## Purpose of Study

This research is conducted to study the issues that are critical to the success of Information System implementation to enhance business performance and provide ideal solutions and alternatives to obtain high level of productivity and efficiency by using IT effectively at Markss HLC.

This study looks at the IT change management process carried out along with the implementation of the Information Systems, and highlights the weaknesses of its change management, and how to enhance IT skills and job satisfaction of the employees using proper change management strategies.

Studies were carried out using various techniques to analyze the inefficiencies and problems with regards to the change management process in office automation. Thus, consideration was given to find the most suitable change management strategies with regard to IT implementation for Markss HLC to overcome many issues that could possibly determine successful achievement of greater business performance.

## Methodology

This section describes the methodology adopted be the researchers to conduct the research study in detail.

The research was carried out by considering the problem aroused at Markss HLC, and the total population was considered as the total number of employees at Markss HLC which is 250. However, as for the limitations, the study sample was chosen using “Non-probability” sample method under “Convenience” technique. Research was continued further with 6 selected individuals from each of the three departments that Information Systems have been implemented.

Data collection methods used were Interviews and questionnaires, where structured interviews were carried out with the managers of the three departments which Information Systems were implemented. And the questionnaires were carried out with the sample drawn from the total population which contained 6 employees of each of the three division/ departments.

However, in data collection, certain limitations were incurred. Although the limitations were critical, the results were drawn from the studies, and research findings were gathered by using the software tools and other techniques to generate accurate answers.

## Summarized review of results

Information gathered from the research study which were discussed in detail on chapter 4 are summarized here.

Top management decision making has had a critical impact on the performance of the employees as their work related tasks has been subjected to change. Even though a basic research on gaining ideas with regards to system implementation has been gathered, it has not been sufficient to satisfy the requirements of the system implementation phase.

As per the management comments and the questionnaires carried out states that no proper mechanism was implemented to stimulate employee awareness regarding the upcoming changes. The major changes done by use of Information Systems have had vast impacts on the sense of security of the employees, and lack of prior exposure and training has resulted in poor positive attitude towards the system. Moreover, it is identified, that the integration failures, and IT related issues have had adverse effects on employee satisfaction on system usage thus demeaning the value of the system.

The need to increase efficiency of work related tasks, decrease errors while eliminating waste and to walk towards “go – green – paperless concept” has had a diverse effect on automating the manual systems. Although the attempt was to increase business performance, it has been decreasing as a result of the radical change implemented dropping it to 40%.

Moreover, it is found that eventhough having experience of 5 years or more at one company is considered invaluable, it also acts as a disadvantage when it comes to change management philosophy, as ability adopt change may be less compared to the employees who are new to the work environment, and who are not in the category of aging employees. As found by many researchers, mature employees depict a higher rate of resistance to change, and less satisfied with the jobs making a negative impact on business performance.

However, it is also found that the level of IT knowledge of the employees, which is a crucial factor in determining the effectiveness of employees in handling IT in work related tasks.

Another prominent factor was, little knowledge in IT, no prior experience and poor English is a threat to future training process; however, it is found that at Markss HLC even though the level of IT education and prior experience in IT depicts a low level of as the level of English depicts a higher level, if training on IT usage was given to the employees, it would generate higher results.

## Research findings

* Figure 4.1 - 90% of the decision making is done by the top management while 10% of the employees are involved in decision making.
* Figure 4.2 - 75% of the employees had a positive attitude towards the new system before implementation but it has decreased by 35% after system implementation.
* Figure 4.3 - before the automation was introduced performance was 55% and the expected performance level before implementation was 80%. However the actual performance after implementation was just 40%.
* Figure 4.4 - employees who have experience less than 2 years was 28%, five years was 17% and experience more than 5 years was 55%. It shows that most of the employees have experience in working for the company for long time.
* Figure 4.5 – 55% of the employees consist of just O/L and A/L qualifications, 39% bachelors, 56% Diploma and Higher Diploma holders while no employees with Masters.
* Figure 4.6 - 22% employees with a certificate qualification while only a 17% has portrayed an IT diploma and only 5% signifying an IT degree.
* Figure 4.7 - 67% of the employees do not have an IT exposure which is the majority while 33% of the employees have a significant exposure in IT.
* Figure 4.8 - 22% of the employees are poor in their English while 56% of them can manage with their work. 11% equally are fluent and very well in English proficiency.
* Figure 4.9 – availability of user manual is just 33% and it is with the HRIS. Other systems do not have manuals which have been shown by 67%. No support was given from the system coordinator as well.
* Figure 4.10 - training has been provided but only 11% of the employees have stated that it is sufficient while 89% have stated that it was not sufficient.
* Figure 4.11 - 67% of the issues were integration issues while 33% were human errors. It clearly shows that the main problem is in integration part.
* Figure 4.12 - 11% has suggested that moving on to a manual system would help to solve the problems while 33% has suggested that they should provide more training so that they will be aware of the new system. The majority of 56% has stated that they should implement a system with better integration and training

## Recommendations

The research has identified the level of business performance before and after implementation of the automation system. Before implementing the system the organization has achieved 55% performance approximately and they have expected that it can be increased by 25% after implementation of the new system. But it is clearly depicted that the expected increase was not achieved. It has ended up with a decline in the performance which has amounted to 40%.

The expected performance was 80% whereas the actual performance was 40%. The gap between actual and expected is amounted to 40% which is a considerable amount. This gap has occurred due to the problems in implementation of the new system. There are many steps that the organization can take in order to minimize those implementation issues. The researchers suggest the following as recommendations.

* **Improve employee involvement in decision making**

It is appropriate to recommend that employee involvement in the organization should be improved as the research findings has proved that 90% of the decision making process is carried out by the top management where only 10% of the employees in the organization has contributed.

There are many issues in the system where the employees of the organization face during their work and those difficulties have been less if more employees contributed to the decision making process. Then they could have given their ideas in changing the existing system as they are the people who actually work with the system.

The organization has a tall structure where lower level employees do not get a chance to meet top management and also to contribute their ideas for the betterment of the organization which has happened in this scenario as well. Therefore we recommend that Markss should make their organization structure more flat where lower level employees can take part in important decision makings of the organization.

It is impossible to get all the employees of the organization in decision making. Therefore they can have a mechanism where key employees of each department would participate in decision making who will carry a set of ideas of the individual employees.

* **Stimulate employee awareness regarding the change**

As per the research findings it is clear that the automated system has many issues in implementation. Employees expected a real change after the automation where 75% of them have had a positive response on the change. But unfortunately the positivity has decreased and just 40% of the employees have a positive response after implementation.

This is due to lack of employee awareness on the new system before implementation. They should emphasize that the organization is improving the existing system so that they would focus on something better whereas emphasizing that it is a change because change can be positive as well as negative. Then the employees will have more confident about the system and they would react in a positive manner.

Marksshave to focus on changing the employees mind on the new system. They should also make the employees aware about the system through change agents. They can bring out change and stimulate employee awareness in this regard.

* **Provide training on using IT to perform work related tasks effectively and efficiently.**

As per the diagram portraying user experience level, majority of the employees have experience more than 5 years in the company which has negative impacts when it comes to IT related change management. Many of the employees are familiar with the manual systems, where they resist adopting new technology and perceiving it as a threat to their job. Thus it is necessary that the company ensures the sense of security whilst implanting the idea of bringing out improvements to the systems to achieve business excellence rather than attempting to make the employees adopt a change. The positivity behind the word “improvements” should be highlighted than using the word “change”.

Moreover, proper training should be given to improve knowledge on IT as the diagram portrays 56% of employees have no IT qualification which has a major impact resulting the lower performance rate in adopting to change. As analyzed, 67% of employees have no prior IT exposure. Therefore proper IT training is essential to be given before moving in to further improvements to reduce the level of resistance.

If proper training in forms of seminars, conferences, activities, on the job training on IT usage is provided, there is a high probability that the employees will perform better and will be more motivated towards working efficiently and effectively to improve business performance, as 56% of employees have a diploma or a higher diploma which is a positive drive towards building a learning culture which helps implementing change effectively.

* **Conduct onsite or off site programs to improve English proficiency**

Training and development department can provide English lessons for employees who require additional support to carry out work related tasks. It can be either in a form of on –site or off –site English courses.

On-site English lessons can be delivered by making use of internal resources- the employees who have good knowledge of English to volunteer to do after work classes to assist their other co- workers. If the option is not available, by hiring a trainer to conduct English classes during weekends or week day evening sessions would be an alternative. Off-site English classes can be delivered by sending the employees to language schools where they can learn faster.

By maintaining dictionaries of frequently used words and phrases in work related matters, and the meanings in mother language, English and Tamil would be another way to familiarize the work environment to the employees. Moreover, enhancement of using online platforms such as “Google translator, online dictionaries, Babylon” would be an advantage to keep the employees updated with latest knowledge and usage.

Encouraging employees to improve knowledge in English can be done through maintaining Libraries of both books and multimedia. Movies and various multimedia supplements are highly effective in drawing attention to tasks. Therefore encouraging employees to use DVD courses, and online courses, movies will help enhance knowledge in English.

* **Maintain user manuals to the systems**

As per the analysis, user manual on the system is only available for the current HRIS. A user manual is critical since it contains the functionality of the system. Thus it is important to request user manuals from the vendors, o create user manuals by the employees to maintain, so that even if a current employee leaves the organization, it is easy for a new recruit to use the system by using the manual. By making user manuals, knowledge can be shared widely on system usage.

* **Establish a separate IT department**

Markss HLC does not have a separate IT department to overlook the IT operations. A system coordinator/ support officers are not in place for support when an error occurs. Thus mostly the employees have to either go back to the manual system to complete the work tasks, or seek help from the IT system vendor which is time consuming and ineffective.

By establishing a new IT department recruiting employees with IT skills and knowledge would be an advantage in resolving many system issues and even to have in house development which will be more effective as the systems would be customized as required. Time consumption, and costs in resolving issues can be therefore minimized by having an internal IT department.

* **Provide training on the system**

As per the analysis 89% of employees stated that even though training was provided, it was a one day program that did not meet the expected level. Only 11% of the workers found it suitable to carry out their work related tasks using the system.

Training has specific goals of improving one's [capability](http://en.wiktionary.org/wiki/capability), [capacity](http://en.wikipedia.org/wiki/Capacity), [productivity](http://en.wikipedia.org/wiki/Productivity) and [performance](http://en.wiktionary.org/wiki/performance) of the organization. Therefore it is important that the company provide training sessions on usage of the system to minimize resistance. However, giving training prior to the implementation will help managers discover the mismatches between required components and the available options by using the knowledge of real employees who will be using the system to carry out tasks which will be an additional advantage.

Moreover, 33% of employees have stated that there are human errors made while doing the transactions, and they affect the overall performance of the organization. However to minimize them, training and development would be an effective tool.

### 

* **Increase user involvement in planning the systems**

In the phase of requirement gathering, it is important that the real requirements are captured in order to provide a user friendly and successful system that matches the needs of business. Real requirements can be captured only by gathering information from the real users of the systems who will be carrying out the tasks to be automated. Therefore user involvement in requirement gathering phase is a highly critical aspect. The more ideas, perceptions and involvement are encouraged by the operational employees, the higher motivation can be expected which will help minimize resistance to change. In addition, more advancement required, and new modules that can be implemented can be discovered by increasing the level of user participation in deciding the systems.

* **Implement an ERP solution (Enterprise Resource Planning) to enhance integration**

As per user feedback suggests to implement a system with better integration to enhance performance while the system being interactive with the users and supportive to carry out work related tasks. At present the company consists of three different Information systems that carry out the required tasks in the operations. However it is visible that certain integration issues and lack of system knowledge has prevented the company from achieving the expected level of growth.

Thus the researchers suggests the company to implement an Enterprise Resource Planning solution to overcome the current issues with better integration, high module coordination and high user interaction to enhance business performance.

The plan for ERP solution is as follows;

**Accounts Payable**

**Inventory Control System**

**Purchase Order System**

**Receiving**

**HRIS**

Inventory control status report

Purchase Order

Purchase Order

Material

Invoice

Payment

Receiving notice

Emp data

Purchase Order Request

Emp data

Received goods data

Figure 5.1: Suggested ERP Plan (Authors' work)

Given above is the plan for ERP implementation, hence the company may implement the module as given to achieve the highest level of performance. The employee data will be captured by the HRIS module and data such as employee number will be used for the other modules (purchase order module, inventory control module) to track the employee who handled the specific tasks to increase reliability.

As the current Inventory control system does not integrate well with the purchase order system, the reports on inventory are manually generated and sent to the purchase order department for acceptance which in turn results in waste of time and resources increasing costs. Thus the suggested ERP plan portrays an integrating between inventory control module and purchase order module to overcome the current issues.

Moreover, if the integrated ERP solution is in place, the inventory control module will provide inventory control status report to the purchase order module which will lead to an accurate order placement on time when the inventory is reaching its stock margin. Once the purchase order is given to the suppliers, they will provide the materials to the receiving unit, and thereby update the inventory. The suppliers will notify the finance division with an invoice on accounts payable and the finance division may cross check with the receiving notice in the payable amount and make the arrangements to pay the suppliers on time.

By using an ERP solution, the company will be able to utilize the resources in the best possible manner so as to improve performance thus creating an integrated work environment which will help in gaining an effective and efficient output whilst increasing the profitability which impacts on business performance.

## Limitations

During the research, certain limitations were encountered with regards to information gathering. In order to increase the credibility of the research an extensive work could have been included if not for the limitationswhich includes financial as well as logistical constraints. Should these constraints be eliminated the research could have been based on a larger scale. An accurate assessment of the case would have been generated otherwise. However, the sample size selected, the limited availability of information, and the confidentiality of certain information by the company has had major impacts on generating 100% accurate results as it may reflect only the view points of the selected group of people.

## Suggestions for further study

In order to improve on the initial study, certain actions could be adopted in future for more accurate results.

* Incorporate all officers Related to Systems at Markss HLC in carrying out the surveys.
* Repeat the research process in several other organizations to compare and contrast results to identify the best cultures, employee behaviors, change implementation methods that support change implementation.
* Repeat the research process in several government organizations

## Reflection on learning

The research describes the impact of automation of business functions and change implementation contributing to enhancement of business performance. It is identified that business process automation brings change into an organizational setting where the implementation time and type would be deciding the type of change required.

Moreover the study depicts a relationship among organizational culture contributing to employee behavior in deciding change adoption as well as a relationship with change management and business process re-engineering. The relationships among the independent variables discussed in the research are directly impacting the overall business performance.

Thus it is evident that the effective change management strategies help to align employee behavior with the successful implementation and thereby mold culture contributing to enhancement of business performance of the organization.

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# Appendices

## Appendix 1

**ISA Research Project**

**Interview No:** 01 **Section:** HR

**Interviewer:** Mr.H.M. Bandara **Date:** 05-12-2013

HR Manager

1. **Who brought out this concept?**

Actually the top management decided on IT related change management in order to enhance business performance.

1. **Who were involved in making the change?**

All important decisions were made by the top level management. The involvement of low level employees was less due to their lack of expertise.

1. **Did the company conduct a research before implementing the system?**

Yes we did a basic research and we got the ideas of the employees before doing the change. Some employees did not agree with the decision but we considered the majority.

1. **Was it a radical change?**

Yes it was a radical change

1. **Did your staff members have experience in implementing an automation system before?**

Most of the newly recruited employees have knowledge on IT but no employee had working experience in this kind of environment.

1. **How did the workers respond to the new system?**

Some employees were really excited to work on the new condition while some did not respond well.

1. **Does it satisfy the expected results?**

Yes, to a certain extent. Actually it improved the efficiency of work but still there are few drawbacks of the new system.

1. **What are the difficulties that employees have to face at present with the new conditions?**

A customized system was introduced to the HR department. Therefore some of the modules we require are missing. Also there are calculation and mathematical errors in the existing modules.

1. **Did the employees get training prior to the implementation?**

The employees had a one day workshop on business automation and change management but they did not have a training session.

1. **Do you like to develop the existing system or to introduce a new system (ERP)?**

It is more efficient to introduce an ERP system. It would help to overcome the existing problems.

1. **Opportunity for personality development of employees in the company?**

a) Very good b)Good c) Average

**12. What are the modules implemented by new system?**

* Employee master information
* Corporate communication
* HR dash board
* Performance appraisal
* Security console

a) Most of them b) Few of them c) None of them

**13. HR functions impacted by new system?**

* Recruitment
* Training and development
* Performance management
* Payroll & attendance
* Employee benefits

a) Most of them b) Few of them c) None of them

**14. Are preferred behaviors being displayed on the job?**

a) Yesb)No c) No comments

**15. Are employees receiving the information they want to make empowered decisions?**

a) Yes b) Noc) No comments

**16. Do you find quantifiable benefits?**

a) Yes b) No

**17. Does it help or hurt organizational performance?**

a) Helpb) Hurt

**18. Do you agree that the company more competitive than in past?**

a) Stronglyagreeb) Agree c) Disagree

**ISA Research Project**

**Interview No:** 02 **Date:** 05-12-2013

**Section:** Purchase and Inventory departments together (It was implemented at the same time by the same vendor therefore the interview was done together for them)

**Interviewers:** Mr.K.A.Weerasekara and Mr.W.R.Senanayaka

PurchasesManager and Inventory Control Manager

1. **Who brought out this concept?**

After a discussion between the top level managers, they decided on improving our business performance through introduction of business automation.

1. **Who were involved in making the change?**

The critical issues were addressed by the top level management. The low level employees supported the decision made by the top managers. The implementation was done at the same time, by the same vendor for the both departments.

1. **Did the company conduct a research before implementing the system?**

A research was conducted on how the new system is going to be implemented but the low level employees did not have an idea before implementation. So there was a mixed reaction on reception of the new system.

1. **Was it a radical change?**

It was a radical change because we needed a simple automation system where the employees would easily adapt while achieving the main purposes.

1. **Did your staff members have experience in implementing an automation system before?**

They have a considerable knowledge in IT but they have not got this kind of experience before.

1. **How did the workers respond to the new system?**

Most of the employees were looking forward to adapt to the change but some were backward to work in a new environment. The main reason was lack of confidence and training in IT and to stick to the old method which they were used to.

1. **Does it satisfy the expected results?**

We could achieve most of our goals. Our main purpose which was to improve efficiency among the departments was met but now it has created a new set of issues like problems in synchronization.

1. **What are the difficulties that employees have to face at present with the new conditions?**

Inventory Control Manager - When the reorder level of stock is reached, the purchasing department gets an alert as a reminder on purchases. They will get an alert but the report should be generated manually by our department and send it to the purchasing department.

Purchases Manager –This problem has occurred due to synchronization issues. The report should be signed by the Inventory department so it has to be done manually.

1. **Did the employees get training prior to the implementation?**

No. The employees did not have a long training period. They just participated in a workshop on business automation.

1. **Do you like to develop the existing system or to introduce a new system (ERP)?**

Introducing a new system would help to overcome the existing problems of synchronization. An ERP would share data across the departments without any issues which are the current problem our department is facing.

1. **Are quality, flexibility, productivity and customer service objectives being met?**

a) Most of them b)Least of them c) Not at all

1. **Does it help you to spot tendencies in the pharmaceutical industry and be ahead from your competitors by scheduling real-time business intelligence to customers?**

a) Yes b) No c) No comments

1. **Do you agree that the company is more competitive than in past?**

a)Strongly agree b) Agree c) Disagree

1. **Does it help to the change in the business strategy**

a)Stronglyagreeb) Agree c) Disagree

1. **Does it show the details about your total inventory on hand in your warehouse locations?**

a) Yesb) No

1. **Does it engage key customers and your suppliers, early?**

a) Yes b) No

1. **Do you find quantifiable benefits?**

a)Strongly agree b) Agree c) Disagree

## Appendix 2

**Questionnaire**

1. **Years of service**

* Less than 2 years
* 5 years
* More than 5 years

1. **Education Level**

* Ordinary Level
* Advanced Level
* Certificate/ Diploma
* Bachelors
* Masters

1. **Do you have any IT qualification or done any IT related course**

* Certificate Level in IT
* Diploma in IT
* BSc in IT/ IS
* No

qualification

1. **Do you have Prior exposure to IT in a work environment?**

* Yes
* No

1. **What is your level of English proficiency?**

* Poor
* Manageable
* Fluent
* Excellent

1. **What is the IT related system you use at work?**

* HRIS system
* Inventory Control System
* Purchase Order System

1. **What was your idea when you got to know about implementing an IT system?**

* Positive and was looking forward to it
* Negative and declined it
* Did not respond
* No prior notice was given regarding IT system implementation

1. **Did management give any updates on implementing a system to the department?**

* Yes
* No

1. **Were interviews/ discussions conducted with the members of your department to gather requirements?**

* Yes
* No

1. **After implementing the system, were you given any training on how to use the system?**

* Yes, one day training was given
* Yes, on the job training was given
* Yes, but it was not helpful as it only covered an introduction to the system
* No training was given

1. **What is your perception of System, after implementation and use?**

* Positive
* Negative

1. **Troubleshooting** 
   1. **If you face with a situation where you do not know how to work with the system for the particular work task**

* A user manual is available
* A system coordinator is there to help
* You have to figure out your self
* You stop working and do manually.
  1. **Consider the following scenario**

**“If a PC freezes while working, and does not respond. In this instance you would:**

* Try fixing it yourself
* Ask others
* There is no IT department in the organization to call for help therefore contact the vendor of the system

1. **Do you find any Integration errors that affect the required level performance from the system?**

* Yes, many integration issues are existing
* Yes, to a certain extent
* The errors are only human made, not the system errors
* No errors that affect performance

1. **Do you prefer manual system better than this?**

* Yes, it is more convenient
* Yes, but only to get the work done when the system prompts errors
* No, it would be better if more training was provided
* Not at all

1. **If you are to request the management on the IT systems, what would you request?**

* Remove the systems
* Provide more training on system usage
* Implement a system that has better integration while giving more training
* IT systems do not help increase performance; therefore change in to manual work