GOAL ACHIEVEMENT DERIVED BY THE RECOGNITION OF ESSENTIAL BUSINESS UNITS IN THE INDUSTRY: THE CASE OF INCOM

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Abstract

Goal achievement is an important issue for the success of any organisation. For an organisation to successfully set up its plans, business processes have to be clear enough to managers. It was seen that both business process modelling and improvement complement and reinforce one another and that improving business processes is vital for planning and goal achievement. This is particularly important in competitive markets, where building and maintaining a good customer relationship is essential to long-term business survival. Accordingly, organisational goals should include Customer Relationship Management. Thus, the main subject of the research is to examine how an organisation can determine its goals and plan to better satisfy their customers. In order to get a deeper insight, seven key decision makers at the case study organisation have been interviewed. Riva technique was used to analyse and improve the CRM process.

It was found out that modelling the systems process should be among the first steps to problem solution in order to better understand the current activities and accordingly detect, adjust and improve any inefficiency that may cause customers to switch to other service providers. Business process modelling seems to a suitable vehicle to start with; as it will help decision makers easily and clearly find out the improvements required in each business area in general and each process in particular. The model can help managers whether fully aware of the system or newly introduced to it in planning, measuring performance and evaluating employees upon a concrete basis. Business Process Improvement can help identify whether employees realize the existence of a problem or are just driven by paper work regardless of their performance or results achieved. The improved system together with the way to improve, provide a roadmap for other organisations in similar circumstances.

Keywords: Process Improvement, Goal Determination, Process Modelling.

1. INTRODUCTION

Goals are resolutions to achieve a desired result, where they provide a clear understanding of what the company is striving to accomplish based on the organisational mission and strategic objectives. Successful companies set goals in every business plan and become a regular part of ongoing business operations. Plans can help organisations identify what it
needs to achieve on a regular basis. Accordingly, most businesses require their employees to meet targets, upon which employees’ performance could be evaluated. Targets should adhere with the organisational strategic plans to provide better integration and consistency with the organisational mission. They also need to be clear enough for employees in order to make it easy for them to achieve the organisational goals.

Planning in particular often receives less attention from small business managers than they should. One way to more effectively fulfil this management function is through effective goal setting. The success of a business will depend on its long-range goals for sales, profits, competitive position, development of personnel and industrial relations. For an organisation to efficiently and effectively identify and set-up its plans and goals, an illustration of its business processes and the detailed activities within each process need to be clearly identified (Lucey, 2005). Thus, modelling business processes is necessary to understand the nature of a business and to evaluate the carried activities associated with each process to achieve its goals. This is particularly clear where an organisation might produce an efficient output but yet, not the one needed to achieve its goals. Therefore, organisational mission, strategic objectives, strategic planning, and goal achievement need to be closely tied to Business Process Modelling and Improvement.

Business process management (BPM) mainly focuses on the management of organisational business processes and the flow of work and information. It encompasses different business process modelling techniques that can simplify the understanding of the nature of business. Business Process Improvement (BPI) helps organisations identify malfunctioning business processes and measure their performance for better improvement. Business processes need to be revised and improved based on the organisational strategic objectives, in order to achieve the organisational goals. In this way, employees will have a better chance to realise their own roles, set plans and put targets to achieve on their day to day activities rather than being overloaded by paper work that normally keeps them unaware of the actual organisational vision.

Accordingly, the aim of the current study is to examine how the organisational strategic objectives and plans are related to the organisational business processes. The question is whether business process modelling and improvements are essential for setting, achieving, and evaluating organisational plans. The paper starts with a brief introduction followed by the review of literature about CRM, approaches to process modelling, six sigma technique, and the Riva technique used in the current study. Then, the research design is illustrated followed by a section on the analysis of INCOM Egypt. After that a clear understanding of the case study is overviewed, having a separate section on improved UOW diagram, and the role activity diagram. Finally a conclusion section shows the research findings and recommendations.

2. Literature Review

Organizations that do not take the time to develop missions are often ineffective. A mission statement explains why the organization exists and what business they are in. It also states what the organization does currently and sets parameters for what it does not do. It is the base upon which organisational goals and objectives are set for planning and scheduling (Sadler, 2003), and has been argued to lead to better (Sidhu, 2003). The vision statement articulates the future of the organization and the community that it serves, and
implies the work that still needs to be accomplished. Accordingly the vision statement gives credibility and motivation to the mission statement (Martins and Terblanche, 2003). It might be worthless to construct a well structured and detailed plan without considering the unexpected events while putting it into action. This is highlighted where an organization may fail to follow a plan due to unclear goals. A key success factor to planning and goal achievement is the availability of systems, people, technology and external market. Thus, planning and goal achievement are both tied to management; where under a good management organisational constituents can function independently (Longenecker, et al., 2009). But in order to for management to do a good job, organisational goals need to be clear enough to set up an objective and realistic plan. Entrepreneurs cannot realise the required targets that are compatible with the organisational goals and objectives without having a comprehensible and concise picture of the organisational processes and its detailed activities that will enhance their vision while planning and setting up targets, and thus achieve the organisational goals easily.

One of the most important goals of any organisation is increasing sales, which is directly related to customers. Therefore, customer service or customer relationship management is a matter that requires special consideration while setting up goals and plans. Organisations need to attract, acquire, and retain customers. This could be approached using a good CRM (Anderson, and Carol Kerr, 2002). Therefore, more explanation about CRM and how business process modelling and improvements can help in identifying precise plans to achieve the organisational goals will be shown in this study.

2.1 Customer Relationship Management

Technology has enabled organisations develop good customer relationship by linking front end processes (such as sales, marketing and pricing) with back end processes (such as finance, shopping and human resources). Since the introduction of CRM, it has been defined differently with a wide variety of focuses ranging from a shallow definition such as just establishing a call center, having a web-presence for communicating with customers to mining a customer data warehouse. This makes it difficult for managers to understand how functional areas interact with the CRM (Ramsey, 2003). In 2000, Handel has defined CRM as the process of acquiring, retaining and growing profitable customers. Massey has also defined CRM as attracting, developing and maintaining profitable customers over time (Massey, 2001).

Although a number of studies (Berry, 1983, 1995, 2002; Crosby et al., 2001; Dwyer et al., 1987; Hart and Johnson, 1999; Morgan and Hunt, 1994; Palmer, 2000; Sheth and Parvatiyar, 1995) have tried to understand the importance of cooperative and collaborative relationships between buyers and sellers, there is still no consensus on the CRM definition. CRM and relationship marketing have almost been used interchangeably in (Parvatiyar and Sheth, 2000). By broadening the scope of relationship marketing and viewing it in a comprehensive management and social context, Gummesson (2002) has defined it as “marketing based on relationships.”
To sum up, it seems that CRM is a critical success factor for business performance. Accordingly, firms wishing to improve their relationships with customers need constantly to monitor their behaviour and internal processes (Leo, et al, 2004).

2.2 Approaches to Process Modelling

Early approaches to process modelling tend to treat processes as fixed, routine, and repeatable detailed activities. A number of BPM approaches try to make the performance faster and cheaper, and seek to achieve this either as a radical overhaul or by instituting an organisational system of continuous improvement. Such techniques include Total Quality Management (TQM), Business Process Reengineering (BPR) and Six Sigma (Verma, 2009). The objective of TQM is to achieve process improvement using cross-functional teams, scientific methods and employee involvement, to produce a more process-centric organisation in which improvements are made on incremental basis. In BPR the objective is to derive an organisation's business processes from its business vision and objectives, and to implement a suite of measurable processes top down. BPR exercises often involve major changes to organisational structure and IT infrastructure.

Reports produced from data recorded about processes help in monitoring process performance. Automated processes in particular provide online real-time information in a systematic way. In 1993, Davenport complained that, in general, computer applications are not designed to support business processes, but are rather designed to process information. He believes that the systems analyst and business executives should analyse the business processes before commissioning a computer application. He introduced a distinction between process improvement and process innovation. While process improvement is a bottom-up technique that relies on incremental changes which need to be worked out in detail and to be understandable by lower level employees, process innovation is more top-down.

Once all the processes in any organisation have been mapped, process improvement can be used to improve small individual processes while process innovation is used to bring in new broader processes that change more radically the way the organisation works (Davenport, 1993). Therefore, business process modelling could be considered a tool needed for both process improvement and information technology applications.

There are a number of modelling methods such as Business Process Modelling Notation (BPMN) which could be used for business process modelling, but you will need to complement it with additional elements. It leverages the typical flow-chart diagramming that business people are familiar with and is rather confusing. For instance, each pool has its own start and end processes as well as process flow lines. If there is interaction across the pools then a message flow is used. Most business people get overwhelmed with the additional flow lines and have trouble following the overall process path.

Unified Modelling Language (UML) on the other hand is a comprehensive modelling standard for describing software designs. Although it helps bridge the gap between the business-friendly solution design and detailed design of software systems, it still takes a lot of time to keep the diagram reasonable and synchronized with the actual code. UML diagrams are only appropriate if the organization size can manage them. You cannot represent every condition in a sequence diagram. It's impossible if you want to deliver. Finally a good UML software costs money and it takes quite a while to properly master it.
2.2.1 Six Sigma Technique

Globalization and instant access to information, products and services have changed the way customers conduct business. The competitive environment pressures organisations to please their customers and perhaps find new ways to exceed their expectations. This is why Six Sigma technique could be used in problem solving that assist in process improvement. It helps organisations focus on developing and delivering near-perfect products and services.

Sigma is a statistical term that measures how far a given process deviates from perfection. The central idea behind Six Sigma is that if you can measure how many “defects” you have in a process, you can systematically figure out how to eliminate them and get as close to “zero defects” as possible. One of the Six sigma basics is DMAIC: Define, Measure, Analyse, Improve, and Control. They are all built on business processes that need to be defined at first. Knowing that each process has inputs and outputs, one could be able to direct inputs in order to control outputs. Thus, process mapping is one way to figure out how business processes could be lined out for improvement (Roderick et al., 2008).

Six Sigma is narrower in scope than TQM or BPR and uses statistical techniques to focus on those parts of processes where the problems are occurring, to identify areas for improvement. One of the Six sigma basics is DMAIC: Define, Measure, Analyse, Improve, and Control. They are all built on business processes that need to be defined at first. Thus, process mapping is one way to figure out how business processes could be lined out for improvement (Roderick et al., 2008).

2.3 Riva Technique

Riva method is another technique used for process modelling that focuses on the management of business entities through the actions and interactions of different roles. It combines two forms of diagramming, process architecture diagramming and role activity diagramming (Fady and Abd El Aziz, 2011). While a process architecture diagram shows several or all of the business processes in an organisation, and how they relate to one another, role activity diagram shows, for a single process, the activities within roles and their interactions.

It has been selected for process modelling as it seeks to explore the deeper reaches of the business. It focuses on understanding and designing business processes derived from essential business entities. It puts roles, actions and interactions at the centre of its detailed analysis rather than data items or process logic, and it offers a high-level, architectural level of analysis to supplement the lower level analysis of business processes. It does not start from a position of a commitment to existing work practices and technology base, but rather seeks to understand those in terms of what the business is about and trying to do (Ould, 2005).

The more recent development of BPM systems (Weske, 2007), combines a more dynamic understanding of processes as arising out of interactions between different roles, a desire for process agility, and an interest in automating business actions and interactions. The purpose of a BMP and BPI is to facilitate the work done by a group of people who carry out a certain process. It may do this by orchestrating and supporting the work flow between the members of the work team, or by executing some actions itself from code.
The aim of BPM systems is to enhance an organisation’s ability to define and evaluate its processes and modify them accordingly; in principle they offer greater flexibility than structured systems, where work have to be re-organised to fit the demands of the computer system.

Riva method also supports improvements that might be performed on a short-term trial basis and then consolidated if they appear to support long-term objectives. Process models produced using Riva provide a basis for process analysis and improvement. Process improvements might be incremental that are normally applied at the detailed process level Role Activity Diagram (RAD), while radical improvements are more likely to be applied on the higher architectural level (Ould, 2005).

There are three main kinds of process improvement in Ould’s view: restructuring roles and interactions, flow-wise improvements, and point-wise improvements. In restructuring roles and interactions, changes are made to the actions in a role or to interactions between roles. Roles and interactions might also be removed or combined. In flow-wise improvements, the flow of activities within a process, or between processes in the process architecture, is rerouted, simplified, or streamlined. In point-wise improvements, modifications are made at particular points in the diagram such as actions, or case processes, to enhance efficiency or effectiveness, in order to gain cost reduction or shorter cycle time.

3. RESEARCH DESIGN

In order to better understand the problem at hand, and in an attempt to investigate and analyse the case organisation from the inside, identify the malfunctioning, or even missing processes and propose an improved view of the business process, a number of research methods were used. As an initial step to understand the current situation in Incom Egypt, semi-structured interviews were designed and conducted with 7 key decision makers, namely the organisation’s President, Vice president, Sales head of department, and 4 senior staff members at different departments. Having the interview data interpretively analysed, a clear picture of the processes became a logical sequence to Then, as BPI rely on a clear picture of the business processes so that processes could be easily identified, analysed, measured and improved, Riva technique was used for modelling the business processes. Improvements afterwards could be applied and controlled wherever they are found to be essential.

4. INCOM EGYPT ANALYSIS

Egypt's industrial sector has undergone major reforms since 1991, showing clear steps towards privatizing and restructuring state owned enterprises. This has led the way for private organisations such as Incom Egypt to launch their own business. Incom Egypt Company is a subsidiary of Incom (America), Inc that was first established in 1994. It is a manufacturer of custom wire, harness assemblies, flexible building cables, power supply cords and plastic spools. The company serves both the local and international market.

Incom Egypt provides a wide range of products, some of which are Wires, Cables, Wire Harness Assemblies, Power Supply Cords, and Plastic Spools. INCOM Egypt products are certified by Underwriters Laboratories (UL) and SASO and are strictly tested in
compliance to their standards. Additional compliance testing is performed where other certifications are required such as BS/IEC/CSA/VDE and CE. INCOM has a set of traditional and core activities, some of which are Sales, Research and Development, Prototyping, Assembly, Molding, Quality Control, and Technical recognitions.

4.1 Incom Overviewed from those interviewed

From the interviews with different departments in Incom Egypt at different managerial levels it was observed that, commercial process combines both the internal and external activities performed to service the customer. Customers are always demanding service either tangible or intangible. Within the same process, different departments normally work together in order to achieve the process success both for customers and the organisation. Therefore, internal and external objectives in this process are unbreakable. Internally, from the company's side it is important to focus on sales maximization, cost reduction especially in production, maintenance and customer complaints, and collections. However, externally the focus is on external markets, customer service and the level of customer satisfaction.

Accordingly, in order for Incom Egypt to survive the fierce competition, it must cover its cost, expand their sales volume, customer base, generate more profit and improve their business processes. The commercial process combines different departments as will be shown later in the RAD of the commercial process in Section 4.3.

Upon receiving basic specifications and/or drawings, Incom develops recommendations and various options to suit customer requirements. Prototypes are representative samples of how a product would look like when built. With wire manufacturing and molding processing combined under the same roof, Incom supplies complete wire harnesses which consist of cordsets/power supply cords, wire assemblies, and molded components. All Incom products are tested to comply with the required standards. Products are shipped and labelled per individual customer requirement, and recognition of products from other countries can be worked out upon customer request. Thus, that Incom has three factories (cables and wires, wire harness assemblies and power supply cord) dealing together.

4.2 Improved UOW diagram in CRM

Recalling the UOW diagram for Income Egypt from a previous paper (Fady and Abd El Aziz, 2012), it was clear that some improvements need to be applied at the hierarchical level in the UOW model and the second cut process architecture. Regarding the UOW model the suggested changes are as follows:

1. Change the title of the 'CRM' business entity to be 'Commercial'. This will provide a wider scope that reflects the real functions and activities that are performed in the process as its functions are wider in scope than just managing the relationship with customers.
2. Change the title of the 'Cost' business entity to be 'Price'. Since pricing is not just to add a certain percentage on the cost in order to compute the profit and deliver the price that could then be adjusted with the customer and according to the market conditions, therefore, the price process will reflect the need to identify how
pricing is performed based on the cost and other variables before changes to price are applied.

![UOW diagram for Incom Egypt](image)

**Figure 1. UOW of Incom Egypt**

### 4.2.1 Improved second cut process architecture in CRM

Some changes were found to be essential in the second cut architecture. The changes are not limited to the commercial process; however, other changes in the flow of work between processes of the entire model had also taken place. The changes that took place are as follows:

1. Change the title of the 'Handle a CRM' process to be 'Handle a commercial' process.
2. Change the title of the 'Handle a cost' process to be 'Handle a price' process.
3. Add deliver from the 'Handle a customs' process to the 'Handle a commercial' process.
4. Add deliver from the 'Handle a shipping' process to the 'Handle a commercial' process.
5. Add deliver from the 'Handle a QC' process to the 'Handle a commercial' process.
4.3 The Commercial process RAD

The RAD technique is useful in showing how different activities are taking place simultaneously. Following each thread, one can understand the sequence of activities on the same thread. However, different threads in the same diagram means that they are performed simultaneously. Recall that each case process looks after the case from the time it arrives to the organisation until it leaves; this indicates that different threads show how the case is dealt with at different stages by different roles. Therefore, the location of different threads doesn't mean a sequence. Also each UOW deals with many cases and therefore many instances are handled in each case process.

In the commercial process (see figure 3), several departments are interacting together in order to arrive to a certain target or goal. The main outcomes of this process are bringing sales orders to the organisation and follow them until they are delivered out of the company to the customers. While doing so, other processes are also working in parallel from the time a sales order is put into operation until it is delivered out as a finished product. The interviewees stated that it is the responsibility of the marketing department to penetrate new markets by applying different marketing strategies, setting up a plan to attract customers and dispatching them to the customer service. Then, the CEO adjusts the plan with the marketing manager.

Interviewees believe that the customer service department is responsible for dealing with all customers and other internal departments in order to put the sales order in operation; especially as they are the customers’ representative in the company. Their tasks involve the follow up of new sales orders, in-process orders, customers’ inquiries, and the...
delivery of goods. The customer service department needs to check with the technical department the product specifications and with the pricing department to send and negotiate quotations. Once the product is in operation, the customs and the sales departments start making their needed actions for delivery. While the product is in process they always follow-up the sales order status with other departments until the product is delivered to the customer. They are also responsible to contact customers for money collection.

The sales department is another department that is responsible for implementing the sales plan received from the financial department. In this department, competitor prices are checked and compared to the company's prices. The sales orders are received from the customer service to be put into operation. Then the sales department follows the orders in operation until they are finished and requests delivery from the concerned departments. On daily basis, the sales department checks the daily production with the planning department and compares the actual production rate to the planned, then delivers a status report to the financial department in order to take the correct decisions with the CEO. The sales department has the balance of the delivered goods upon which collections are done.

After understanding the nature of business in the commercial process, it is now easy for a planner to figure out process plans and targets and relate them to the assigned person. Outcomes of plans can be easily measured and traced to each activity for corrective actions. Planning is not effective without having a definite structure of what needs to be planned. BPM and BPI can effectively aid in planning for goal achievement. Therefore, both BPM and BPI should take place as an introductory stage for planning. The presence of BPM and BPI in an organisation could be regarded as a fundamental asset for other subjects upon which implementation could be done easily.

Other areas where BPM and BPI might also play an important role in are; human resource management, decision making, process automation and others that can be left for the future work. The model can help newly hired managers as well as the existing ones in planning, measuring achievements and evaluating employees.
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5. **Conclusion**

Based on the undertaken interviews in Income Egypt, it was noticed that although they do have both a mission and a vision statement, they do not seem to be clear enough nor fully understandable. Employees do not work on solid strategic plans or given clear targets to meet. The problem does not only lie in the company's strategic view including its mission and vision statements, strategic goals, and target plans, but is also in identifying the organisational processes, their interactions and the roles played by its member staff. As long as there is no clear business model to identify the detailed activities within each process and the way they interact with one another, the employees would find it very hard to figure what their exact jobs are. Not to mention that managers can hardly measure employees' performance without having a clear idea of their business processes and they relate and affect one another.

Based on the above mentioned problems, Ould's technique, Riva, can identify a dynamic rather than a static view of the organisational business processes and their interactions with the roles involved in each process. Riva method provides a clear business process model for the entire organisation with suggested improvements for the flow of work, without which improvement in the organisations were almost impossible. Riva has enabled the researchers to give an explanation of the business processes in simply and easily.

After understanding the nature of business in the commercial process, it is now easy to make process plans and targets and relate them to the responsible person. Outcomes of plans are easily measured and traced. BPM and BPI can effectively help in planning for goal achievement, and thus should be introduced early in the planning process.

To sum up, we would say that one of the first steps to problem solution is to model the systems process in order to better understand the current activities and practices and accordingly detect, adjust and improve any inefficiency that may cause customers to switch to other providers of the service. Business process modelling seems to a suitable vehicle to start with; as it will help decision makers easily and clearly find out the improvements required in each business area in general and each process in particular. The model can help managers whether fully aware of the system or newly introduced to it in planning, measuring performance and evaluating employees upon a concrete basis.

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