CRITICAL SUCCESS FACTORS FRAMEWORK IN A PROCESS APPROACH: AN INFORMATION TECHNOLOGY STRATEGIC DIRECTION SETTING APPROACH

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ABSTRACT

This paper reports on the use of Critical Success Factors (CSFs) framework as part of a process approach for Information Technology (IT) strategic direction setting. The CSFs framework has been used by management of organisations to assist them in strategic management issues, and particularly those issues related to IT. It is the final outcome (CSFs) which is considered as important in the use of the framework. In a modified form, the framework is incorporated in an overall approach for IT strategic direction setting, which has proved to be more practical. Notably, one of the problems of using the framework in its original form is the problem of interpreting the final critical factors, which has been solved in the proposed process approach.

INTRODUCTION

Process approaches have been demonstrated to posses superior qualities when dealing with Information Technology (IT) strategy formulation [1]. The main characteristics of the process approach is that the final outcome of the approach is considered from the process rather than from the final product, a situation which can be compared with the informating characteristics of IT [2]. In other words, the results of a process approach are realised while "living through" the process.

Critical Success Factors (CSFs), as a tool or framework, has been used by management of organisations to assist them in strategic management issues, and particularly those issues related to IT. Although, on its own, CSFs did not prove to be particularly successful, its potential as part of an IT strategic direction setting approach has been realised [1]. It

is upon this realisation that this paper aims at presenting CSFs in a process approach.

The paper starts by defining key issues around the CSFs approach in section two. This is followed by some basic reasons for using CSFs framework· in section three. The CSFs in a process approach, with the details of how to use CSFs in a process approach is presented in section four of this paper. In the last section concluding remarks are given.

THE CRITICAL SUCCESS FACTORS (CSFs) FRAMEWORK

CSFs are events, conditions, circumstances, activities or those few things that must go well to ensure success for a manager or an organisation. These CSFs represent those managerial and enterprise areas that must be given special and continual attention to bring about high performance. The CSFs framework, is a procedure that attempts to make explicit those few key areas that dictate managerial or organisational success [3]. The primary focus of the framework is upon the executive's own experience and intuition in determining what factors are truly critical to the success of his/her firm.

The first ideas of CSFs were developed by Daniel [4]. These ideas have since then been developed as a methodology for supporting management information systems (MIS) planning and requirements analysis. John Rockart was the first one to introduce CSFs as an information systems methodology for defining a Chief Executive Office's (CEO) information needs [3]. In his approach, he outlined a procedure by which interviews between an analyst and CEO result first in a set of CSFs and, then, in performance measures that represent these CSFs. Rockart did not specifically advocate using the CSFs method to develop a detailed set of requirements specifications, but rather identify critical areas of concern and to provide initial descriptions of information measures that reflect these critical areas. He stressed two points: CSFs provide a focal point for directing a computer-based information system development effort, and the CSFs framework should result in an information system useful to a CEO as it pin-points key areas that require manager's attention.

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Bullen and Rockart [5] broadened the definition of CSFs and proposed that the methodology be used as an MIS planning tool, while Munro and Wheeler [6], suggest that CSFs can be used to direct an organisation's efforts in developing strategic plans.

The scope of this methodology as a strategic planning tool depends upon the CSFs that are identified. If the CSFs include such factors as delivery of services, then the scope is the external marketplace. If the CSFs identified include effective and efficient systems, then the scope is the internal operations [7].

The strength of this framework is its enthusiastic acceptance by senior management as its basic concepts and aims are easily understood. Furthermore, it supports structured, top-down analysis, which aids in identifying information services that can impact a firm's competitive position. In addition, the framework is flexible and does not require a rigorous format in interpretation of CSFs [8].

However, understanding the conceptual nature of CSFs may be difficult for lower-level managers who are more used to hands-on operation due to their lack of experience in conceptual thinking [8]. It can also be difficult to identify substantive organisational CSFs for those farther away from the top of the organisational hierarchy. These weaknesses call for a skilled CSFs analyst to direct the CSFs study, a situation which has been supported by Munro's [9] study of two independent CSFs analyses yielding comparable results.

At this stage, one cannot fail to notice the fact that even at its earliest stages, CSFs as a framework was associated with IT strategies. This paper presents a better, more practical way of using CSFs, for IT strategic direction setting - a process approach. In so doing, the weaknesses mentioned in the previous paragraph are taken care off.

be successful. The key jobs differ from company to company and they depend on [3]:

* Structure of the particular industry.
* Competitive strategy, industry position and geographical location.
* Environmental factors:
  * national GNP and economic fluctuations,
  * political changes,
  * population changes.
* Temporal factors:
  * especially in unusual situations, for example, the Zambian soccer team tragedy of 1993 makes "rebuilding of a new list of players for the national soccer team a CSF for the Zambian sports governing body.

CSFs support the attainment of organisational goals which represent end points that an organisation hopes to reach. However, CSFs are the areas in which good performance is necessary to ensure attainment of these goals. The following are examples of general CSFs:

* In automobile industries:
  * efficient dealer organisation,
  * tight control of manufacturing costs,
  * styling.
* In food processing:
  * new product development,
  * good distribution,
  * effective advertising.
* In life insurance:
  * development of agency management personnel,
  * effective control of clerical personnel,
  * innovation in creating new types of policies.
* In supermarkets:
  * having the right product mix,
  * having the product mix available on shelves,
  * having the products priced correctly,
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It is precisely on this basis that CSFs become a very good candidate for a process approach. The critical factors of success are top management, individually based issues, which need to be shared and discussed in a process that will lead to enhanced understanding and hence a consensus on what to do. When that level is reached, it is believed that an organisation will be able to move to a known direction, with all efforts (IT-based in this particular case) directed to assist in the best possible ways.

The following section shows how this approach can be incorporated as part of a process approach aiming at identifying the critical areas of the business, both internally and externally, for the ultimate purpose of prioritising the business areas whereby IT could give maximum rewards.
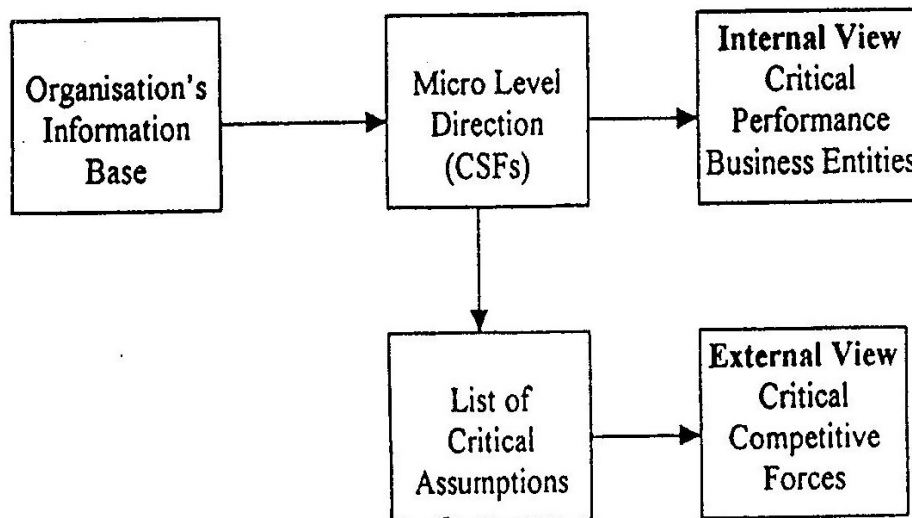
CSFs IN A PROCESS APPROACH

It is a top management task to decide towards which direction the business should be developed, while being guided by the business mission and objectives. The outcome of this decision process is usually in the form of written down management goals. In the process of making this abstract decision, a number of implicit assumptions are made about the environment surrounding the business. Unexpected changes affecting the validity of these assumptions may imply failure of the business in achieving the management goals.

The criticality of each of the management goals will differ from time to time depending on the importance of the goal towards overall success of the business. It is possible therefore, at various points in time, to identify these more critical goals and they will be known as strategic goals because of their strategic importance. The process of identifying

Because of possible non-existence of business strategies in most organisations a comprehensive IT strategic process should always start with formulating the business strategy. It is from this explanation that the approach shown in Fig. 1 is proposed. This proposed approach will produce two major outputs namely: an internal view and an external view. The external view will consist of a list of critical competitive forces (CCFs) established from the list of critical assumptions (LCA). The internal view consists of the critical performance business entities.

Fig. 1: CSFs in a process approach

At any point in time, top management will have among their issue, a list of critical ones. These critical issues are the key for shaping his/her preferred direction at that moment. Eliciting these critical issues from each of them will provide for the right co-ordinating effort, and hence the CSFs approach.

In general the CSFs approach involves a three step process [10]:

*   Interviews with relevant managers and key staff.

*   Focus group sessions to evaluate and characterise the relevant CSFs.

*   Feedback, critique and adoption of these CSFs to provide final CSFs statement.

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Interviews will be held by a facilitator for each of the selected staff to extract a list of personal and organisation's CSFs. These interviews will be conducted by first briefing the interviewee on the subject of CSFs, and then requesting the interviewee to write down a list of three to five "things" which must go well if the organisation's business is to succeed or if they go wrong the business fails.

The collected CSFs will be grouped by eliminating repetitions, and through a group session a prioritised list of the organisation's CSFs will be agreed upon.

From the organisation's ranked list of CSFs, two outputs are expected, as shown in Fig. 1.These outputs are the critical performance business entities, and the list of critical assumptions (LCA). All these will be generated from the CSFs by a nominal group process[11]. This group process technique has two basic phases: generation and prioritisation.

A planning group session will be conducted involving all the participants of the CSFs exercise, under the leadership of the facilitator. In this session, the participants will be provided with the developed CSFs and asked the following nominal question:

(1) *What are the assumptions about your organisation, competitors, or industry that lead you to believe each of these CSFs is valid?.*

or *What would have to change about your business, industry, and so on to cause you to change or delete a CSF?.*

A nominal group or idea writing technique for generation and a clarification stage will provide for opportunities to define issues,

For the external view, a further analysis will be conducted to arrive at the critical competitive forces (CCFs). In simple terms, critical competitive forces (CCFs) is one or two forces out of the five Porter's competitive forces [12], which are assumed to be the major competitive players of the organisation in the coming years. These forces reflect the organisation's expected future environment, and hence its external influence.

Porter [12] argues that five major sources affect the competitive position of a firm: (1) intra-industry rivalry; (2) customer power; (3) supplier power; (4) threats of new entrants; and (5) possible substitute products. The description of these competitive forces will provide a basis for evaluating each assumption and mapping each assumption to a particular force. This analysis will be conducted by the facilitator but a consensus of the entire group will be required, and this will be achieved through discussions and conflicts resolution. The final output here, the CCFs, will be some kind of prioritisation on the five competitive forces depending on the amount of critical assumptions falling under the particular force.

CONCLUDING REMARKS

In this paper it has been shown that the final output of the proposed process CSFs approach is the critical areas of business and the critical external forces. However, the major output is the process of arriving at those results. It is also shown that the group discussions and interaction among the top management constitutes the process, while the CSFs approach provides the guiding principles. In addition, the organisation's IT strategic direction is forged through directing the IT resources to the critical areas agreed upon in the process.

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