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Analysis of strategic leadership models in information technology

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Abstract

Strategic leadership of the company includes the strategic management of Information Technology (IT) [1] in the context of business relationships. Companies do not exist in isolation. Multiple constituents make up a relationship network that constitutes the vital resource needed to fulfil the mission of a business.

To leverage a company's business relationships [2] basically, a relationship "lens" is needed that can act as a guiding process for strategy creation. In order to engage and manage each business relationship and to execute relationship strategies, the relationship engagement cycle creates the phases necessary to acquire, learn about and build memorable experiences with each relationship and to establish trust and loyalty with the most valuable relationships. IT, in many various forms, is a key strategic enabler of the relationship engagement cycle. The literature review reveals that such issues are often approached with the use of computational methods [3-17]

This is exactly where a Dynamic Simulation Model for strategic management [18] can give the solution, by building greater transparency into the current IT landscape and making explicit its contribution to the business rising of the company. The company strategy and business requirements are combined to fulfil the requirements for IT: an ongoing process that helps to build a picture of the target architecture, designing implementation plans and managing the process of putting plans into action.

Right from the start, the toolkit must enable management of the company [19] in a spherical way and include every aspect of the company architecture: processes, business organization and IT structures, as well as software support. Yet it also has to be introduced in reached stages so that it can deliver tangible success. Business departments, senior management, and IT teams all have to be convinced for the significance of the Strategic Leadership Model in success.

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Keywords: Strategic Leadership; Information Technology; Dynamic Simulation Model

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1. Understanding leadership strategy

First of all, we have to understand what a leadership strategy [20] is, so we have to be clear about what we mean by leadership. Leadership begins with persons in leadership positions, but it is not enough. The opportunity of IT Company to accomplish its vision does not depend simply on the abilities of will of a single great leader, or even upon the effectiveness of the company's management structure. These factors are important, but don't constitute help us understand why some companies achieve their aims, where others fail.

Instead, inquiry results has shown, we must comprehend leadership culture, as defined by the submissions of formal and informal leaders cooperate to influence organizational success. It is not the only factors the number or quality of individual leaders that define organizational success, but the capacity of formal and informal leaders to arrange in the support of organizational visions that finally makes the difference. Thus, when we refer in leadership here, it is both the leaders themselves and the relationships between them. At different times, the idea that leadership is bigger than the individual leader has been mentioned to as interdependent, collective or connected leadership.

In more lusty definitions, leadership includes both formal and informal leaders. Observations of actual IT organizations in action are rarely as neat and tidy as their organization charts would suggest. Communication, sway and cooperation are occurring up, down and across the IT Company, almost as if the company diagram didn't exist, as revealed by the research of various people on mapping informal association within companies. To blink this reality in any discussion of leadership is to miss the aim of what is happening and what must be managed if strategies are to be created successfully.

2. IT and Company's Strategy

The managerial chain of actions in current information systems [21] starts with managers defining what information is needed, when, and for whom. On this research, with the aid of Dynamic Simulation Model, follows the gathering of information in data-entry usable formats and it ends with the demonstration of processed information in human understandable forms, to facilitate managing changing objectives - a dynamic simulation process. Thus, an IT system composed of the input-data entries, its processing and analysis, and latest presentation - output - to accommodate proper decisions. Taking this for granted, the biggest accounting companies now designs information systems for its clients, involving all levels of management.

Information processing view defines information as: statistical incentives capable of altering an individual's anticipation and evaluation in problem solving or decision making. The key words here are the fact (happening), human being (the person in charge), and stimuli (what data need be processed and presented to whom and in what type). Another suggestion is that information is data recorded, organized, related and interpreted within context to impart meaning. But to impart meaning, the human mind is assumes - the manager's mind. This is supported by indicating that in human communication systems [22], the method of exchanging data. This definition indicates that information is considered as a fact which involves two factors: manager and data. Recently we have given a definition usable in a decision-making framework: knowledge is the level of potential courses of action which an individual has.

Therefore, using managerial information to assist strategic decisions in an IT company, we use some databases with their compilation of real data, both internal and external to our company and information. For business reasons, information theory can usually be applied only to cases when potential courses of action in a decision-making problem are defined.

Key concepts for defining information are following:

- The contents of information should be able to separate information from data
- Information should be determined as an event, not an object
- The meaning of information should be related to the change of a person's cognitive states to making a

decision

- To magnify the use of the information concept in Management Information Systems, in preference to the concept of information should be determined before the ways of action are known in a decision process
- It is important to provide some rules for the quantity and quality of information [23] in the contents of its definition.

Today's managers must take decisions on a wide range of matters and problems - that is their position. For an IT system, part of the data needed is stored or available as the computer database, and the rest may be stored in the human mind as the mental database. The difference in properties and languages of these two "databases" can produce communication problems and endanger the effectiveness of information processing. System plan, usage and interface of the two "databases" are a critical coefficient for information decision processing. From the view of a decision process, the purpose of building, or representing a database, is to provide data for a decision maker in a macro perspective. But the plan of information processing means reducing the sum of information required for a decision problem, so it is a micro perspective. This is a main difference between any database system and the information system used for any single decision.

3. Problematic

In order to better analyze Strategic Leadership model in IT we conducted a survey with a three questions problematic. Firstly, we want to analyze how we can implement the Strategic leadership in IT. Secondly we want to discover the qualities of Strategic Leaders and how they can contribute to the development of IT companies. Eventually, we will summarize how we can create Leadership Development Strategy for an IT company.

3.1. How to implement strategic leadership in IT?

Strategic leadership refers to a manager’s opportunity to enunciate a strategic vision for the company [24], and to motivate and persuade others to acquire that vision. Strategic leadership in context of IT can also be defined as taking advantage of business strategy in the management of IT resources to provide worth to the business. Strategic leaders create IT organizational structure that is aligned to the business, allocate resources that understand business goals and objectives and express IT strategic vision that is a sub-set of the organizational strategic vision.

Strategic Leadership provides the vision and direction for the success of a company. As change has become a staple in companies, all executives need the skills and tools for both strategy formulation and implementation. Managing change is very important for IT companies and hence there is a growing need for strategic leaders in IT who not only provide a sense of direction, but who can also build ownership and alignment within their teams and businesses to drive and implement change.

The objective of an IT leader should be to develop an environment in which his IT professionals can forecast the company’s objectives in context of their own IT function. Being a strategic leader requires that you first understand business priorities [25] and their long term and short term goals as well as have a clear direction on how IT can contribute to it in a value-added way. Being an active supporter of the company’s strategy is one of the key elements of strategic leadership for an IT leader.

3.2. What are the qualities of Strategic Leaders?

Below we present some of the most significant elements a strategic leader must have:

- Think strategically [26]: Strategic leadership is about leading, guiding and influencing your group members to think strategically about their own competencies.
- Ability to look at the big vision: Strategic leadership requires the ability to predict and understand the work

environment. It requires detachment and ability to look at the broader vision. They have a generic point of view and a good working ability about many issues that are of organizational importance.

- Change Adaptability: Adapting strategy to changing business requirements [27] is the aim if a leader wants to remain essential to business. The procedure of estimating your available leadership knowledge and gauging your team to lead the change to enable business meet its objectives is change adaptability.
- Dedication: Powerful and effective leaders exhibit their dedication [28] to the overall vision of the company and align their departmental vision to overall vision.
- Motivation [29]: Strategic leaders must have a desire for work that goes beyond power and money and also they lay out in their members to motivate them to achieve objectives with power and decisiveness.

Leaders who act strategically are able to see a range of chances and guidance, far in the future of the current phase of organizational development, like a good chess player. For the IT Leader, there must be a continuous focus to comprehend how their function provides value to the organization and a series of internal and external reactions that may modify the action which need to be taken at future stages to increase that value.

3.3. How we create the Leadership Development Strategy for an IT company?

The leadership development strategy [30] should determine the movements that must be taken to preserve, develop or gain the leaders and the leadership skills required by the business strategy and will cover the issues that follow.

- Individual development plans [32]: These are plans that leaders make for their progress in a time margin. The best plans are inclusive, covering work as well as program activities, and are discussed by the individual leader with their manager.
- Work assignments [33]: Work assignments are often not received as important, as an opportunity to help leaders develop concrete possibilities or practice basic attitudes. To increase the focus on learning from work assignments, it's important to have specific aims, possibilities to receive feedback on improvement and a mentor or a leader to consult learning strategies.
- Special assignments: There are multiple benefits to binding learning to project disposals. If the project disposals involve significant work, learning from the project takes on relevance that may not exist as loudly in other learning environments. Group members can supply helpful feedback, and the relationships that are developed in projects with team members getting more and more stronger.
- Coaching/mentoring/feedback: While the worth of coaching and mentoring [34] is greatly appreciated, it is rarely realized in practice because those doing the coaching or mentoring are not sufficiently qualified or dedicated. Flippant coaching is canceling and may even harm relationships that are critical to career success.
- Leadership meetings and events: Leadership meetings and events are sometimes great opportunities for people to learn, as well as to receive information and knowledge. Given the high costs of concentration people these days, every try should be made to prying these meetings and events for multiple aims, including learning.
- Executive engagement in talent development [35]: Many of the benefits desired from executive progress will not exist unless senior executives buy into the process, support the investments that take place and normalize the behaviors that are desired. The construction of a different leadership rule starts with those at the top stepping up and stepping forward to display their personal engagement and support for change.
- Employee group activities: Once leaders are dominants, it's possible to engage employees in a significant way. Many employees are unofficial leaders, whose help is necessary in achieving organizational aims. Engaging them also helps leaders remain to develop, as they receive feedback on what works or not as they undertake to create direction and commitment.
- Leadership by level, function and location: The leadership evolution strategy should take into account differences in requirements by function, level and location. The meaning of a leadership pipeline with recognizable turning points that call for higher levels of leadership capacity is widely accepted. The pipeline

meaning needs to be completed with attention to the specific needs of learners in various functions and locations.

4. Dynamic Simulation Model

The potential advantages of dynamic simulation model is that based on the problematic and the results of our research we have the possibility that we can attribute values to the dynamic simulation model, customizing all the factors involved in the questionnaire of the problematic. All parameters can be changed to get different results each time, taking advantage of the different information that gives us the problematic.

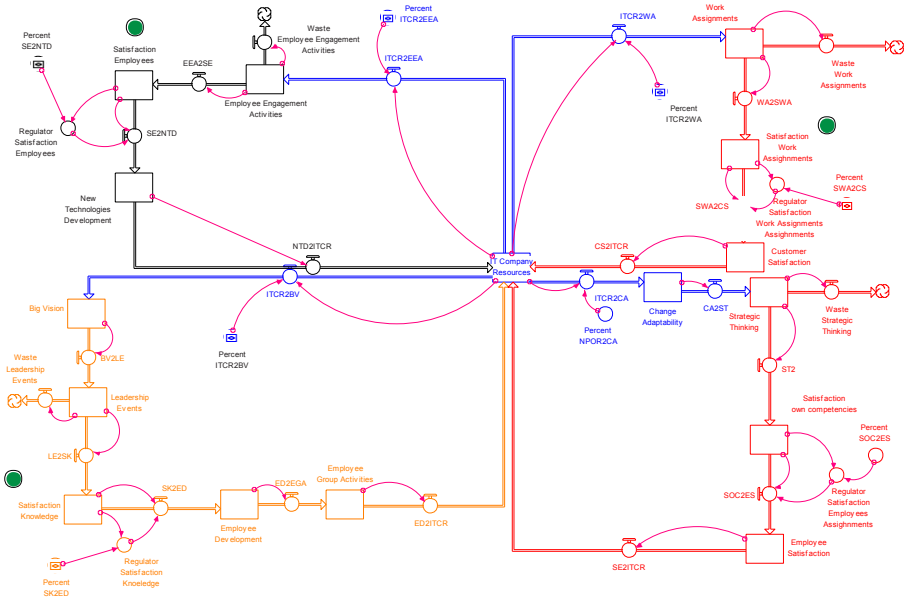

Fig. 1 Dynamic Simulation Model

12:35 PM 6/28/2012 Table 1 (Company Development)

Months	Satisfaction Work Assignme	Waste Work Assignments	Percent ITCR2WA	Customer Satisfaction
Initial	27.00		6.00	0.00
1	53.64	2.96	6.00	0.00
2	77.32	2.63	6.00	0.00
3	80.16	2.22	6.00	17.15
4	80.22	1.95	6.00	22.89
5	79.53	1.83	6.00	24.40
6	78.86	1.79	6.00	24.51
7	78.30	1.77	6.00	24.26
8	77.83	1.75	6.00	23.93
9	93.42	1.73	6.00	7.57
10	91.30	1.70	6.00	9.76
11	89.68	1.67	6.00	10.12
12	87.06	1.65	6.00	13.02

Fig. 2: Satisfaction Work Assignments in conjunction with the Customer Satisfaction

The conjunction between IT Company Leadership Resources, Employee Engagement Activity and Satisfaction, Leadership Events and Knowledge Satisfaction, Work assignments and Customer Satisfaction, is dynamic. Was therefore a qualitative and quantitative research in 100 employees, 20 IT firms and 20 leaders.

As seen from the Dynamic Simulation Model, the results change when changing the provision of resources to agents. Depending on the sources that provided by the IT Company Leadership Resources, involving knowledge, personal information and personnel training, changing the percentage of employees who work in IT companies.

The results of the Dynamic Simulation Model are shown in tables and graphics that we provide.

12:35 PM 6/28/2012 Table 2 (Satisfaction)

Months	Satisfaction Employees	Satisfaction Knowledge	Satisfaction Work Assignments
Initial	31.50	58.50	27.00
1	62.58	93.95	53.64
2	77.94	105.40	77.32
3	76.71	104.23	80.16
4	74.05	100.02	80.22
5	81.00	96.76	79.53
6	76.08	94.85	78.86
7	83.27	93.75	78.30
8	78.25	93.01	77.83
9	84.43	92.37	93.42
10	78.38	91.65	91.30
11	83.94	90.88	89.68
12	77.62	90.16	87.06

Fig. 3: Satisfaction Employees in conjunction with Satisfaction Knowledge and Work Assignments

Fig. 4: The resources of the IT Company in conjunction with Work Assignments and Employee Satisfaction

5. Support for decision makers

During creation of the model there is needed to verify the theoretical review and the requirement to create the user interface, that the user can manage the parameters of dynamic simulation model. There are three main sections on this user interface: the employee engagement activity, the leadership events and the work assignments.

The employee engagement activity section allows the decision maker to determine the amount of satisfaction of employees and new technologies development. The leadership section allows the decision maker to define the level of leadership events, the level of knowledge satisfaction and the development of the employees. In the work assignments section, the decision maker can define the projects that can be undertaken by the company and further, on customer satisfaction. To begin the simulation, the user chooses all the values of the inputs that are desired, and then clicks the run button. The simulation runs for a period determined by the user and pauses to allow the user to review the effects of the decisions made.

The prototype provides the decision maker with various forms of support that guide them through the decision making process. These guides range from the use of status alarms and notifications to the use of visual aids to enhance learning and understating of various relationships in the context of Analysis of strategic leadership models. To aid the leaders' executives in making strategic decisions, the user interface of the sustainability model alerts the user with various notifications during the course of the simulation.

For example, if the Employees Engagement Activities is low a message pops up to notify the user, that their satisfaction is unsustainable. It also alerts the user if the employees are over worked. When IT Company Resources satisfaction Employees, Knowledge and Work Assignments, a message pop up to notify the user and

some of the resources returning to IT Company, etc. New Technologies Development and Customer Satisfaction were also kept in mind while designing the prototype and user interface.

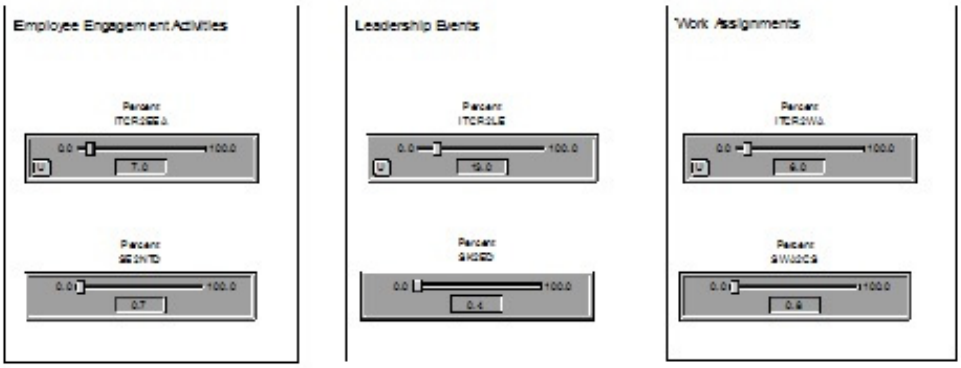

Fig. 5: The IT Company simulation interface

This prototype caters from novice users, who may only navigate through three or four main pages, to the expert users who may take advantage of the advanced functionality available in the prototype. The interface was kept simple and designed with ample ‘'help” or “?” buttons that provide the decision makers with a description of various concepts or explanations to improve user autonomy. Color templates as well as repeated and common items were kept consistent so as not to confuse the user and improve usability.

6. Conclusions and future research

Development of IT at present is the fastest progressive, the most far-reaching and pervasive in extending strategic opportunities and applications.

In this research, we made attempts to consider the Strategic Leadership Models in IT, its difficulties and importance in an organization. One may conclude that Strategic Leadership is the "soul" of any organization. Both public and private sectors must be bounded to seeking organized information before taking decisions. Management problems will be provided with specific solutions through simulation models. Today's managers must have specific and absolutely useful information. This situation can be avoided where a powerful and functional Strategic Simulation Model is put in place.

Yet, past strategic management literature and research in dynamic simulation have provided evidence that several other phenomena besides leadership, such as organizational culture [36], R & D strategy [37], business environment and structure [38,39] and SHRM [40] contribute significantly to firms’ success. Thus, future investigators should further scrutinize the linkages between these factors.

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