Role of computerized information systems in policy and strategy formulation.A discussion paper.

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Abstract

The taste of the business environment ending is now determining the beginning and the architecture of an organization. As every business exists to serve a defined or targeted market, there is an endless war of remaining relevant in the market as well as in the business. This alone calls for a business to define some important parameters like the business policies, business strategies and aligning of organizational resources together. In the alignment of resources there is also great need to look at the computerized information flow amongst others. The main thrust of strategizing is to ensure that the business achieves its objectives as a going concern. The integration of systems at all levels of the organization is of great importance incoming up with policy strategies in any organization. Good communication channels are also created. However, some challenges are faced in the use of information systems as they are exposed to the Internet.
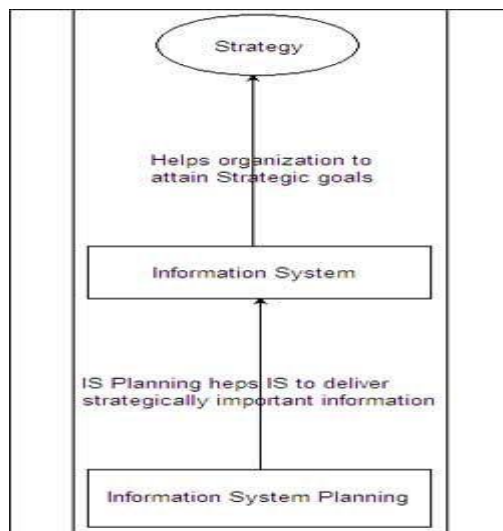
Key Words: Computerised information systems, policy and strategy formulation.

Integrating Computerized Information Systems with Policy and Strategy Formulation

As the business plans for its operations, it is critical to ensure that right at the strategy formulation stage, all aspects of the policy issues as well as the information systems requirements to come up with an efficient and effective strategy is attained (Meyer, 2009). In strategy formulation they are three aspects that are critical in terms of undertaking the processes of the strategy: operational level, tactical level and the top management level. Issues to be covered are: how ideal and applicable (suitability), is it practical (feasibility), can the whole organization agree to it (acceptability) and can the strategy stand the changes (future) (Meyer, 2009). The main thrust of strategizing is to ensure that the business achieves its objectives as a going concern. Figure 1 on page 2 shows the strategy formulation process and information systems inclusion.

Having gone through the strategy part, it is important to look at the controls that will govern the operationability of strategy. This is achieved through the proper formulation of policies, rules and standard operating procedures to control the conduct of employees, customers, competitors to mention a few. Policies should follow a normal process formulation to avoid challenges at implementation. These processes entails: identifying policy areas, identifying various alternative

policies because not all give the intended results, selecting the most appropriate policy, testing the chosen on by subjecting it to trials and finally implementing the policy (Singh, 2016).

Figure 1: Strategy formulation process and information systems

According to (Singh, 2016) these stages must be done taking into account that there is total involvement from members of the organization, it must be customized to ensure that organizational goals are achievable, a policy should not fight the dictates of the environment but rather neutralise opposing factors. This policy must be extensively marketed to the internal members through all possible means and must always be reduced to black and write for future reference.

Referring to the above diagram, it shows that the computerized information system is the vehicle used to disseminate information to all stages of strategy formulation in an organizationbringing in simplicity in realizing business goals and objectives (Thakur, 2017). It therefore entails instituting all types of information systems that are relevant to the organization that help in simplifying the business processes, decision making, communication, controlling and enforcement of policies and procedures (Hasan, 2014). These systems are subjected to testing during the testing of policies before implementation to see their suitability and applicability in achieving organizational goals. Of paramount importance is the fact that as information systems delivers important aspects of improving efficiency and effectiveness within an organization, they also have information systems objectives of confidentiality, integrity, availability, authenticity, utility, non- repudiation and responsibility (Excellence, 2014)

Importance of Computerized Information Systems in Strategy and Policy Formulation

If the strategy, policy and information systems are designed independent of each other, the organization will be a disjointed and difficult to coordinate. However, the proper integration of these brings is more advantages to the organization than anything else.

Every organization strive for a goal achieving strategies and they cannot be achieved without looking at policy objectives of securing organization goals through protocols of confidentiality, integrity, availability, authentication, responsibility and non-repudiation (Excellence, 2014). Confidentiality will ensure information is not communicated to unauthorized people. Integrity information will be prevented from unauthorized changes. Availability will ensure relevance of information by accessing and retrieving accurate information at the right time of need.

Computerized information systems derive the best advantage of being able to integrate strategy objectives and policy objectives by processing data into useful information that is circulated for various purposes within an organization (Markgraf, 2018). For example, a company can achieve cost leadership strategies as a result of being fed with timely and accurately generated reports.

Communication is improved to employees, customers, market place, shareholders using most appropriate technologies while maintaining the levels of information category of top secret, confidential and public class data. This implies that correct information will be directed to correct audience (Kostadinov, 2018). Good communication channels and proper information given to the right audience brings motivation, satisfaction, well co-ordinated functions and the entire organization will be motivated to attain corporate objectives.

Decision making at every level will be enhanced by paying attention to the requirements of the demands both at macro and micro level. This will improve the quality of decisions arrived at and evaluated to the strategic goals and objectives to outwit competitors easily as the information systems suggest some solutions (Davoren, 2018).

Every strategy includes a number of business processes and defined expectations and results, computerized information systems would come in hand with the appropriate information system for a particular level, for example, transaction processing system for lower operational staff, management information system and decision support systems for managerial level and strategic information system for top level management. This will help to ensure that employees with approved rights and privileges can assess only the information they are supposed to be working on.By so doing, data confidentiality is upheld and data integrity is achieved thereby reducing data redundancy. This further eases the business processes by developing organizational culture and routines (Davoren, 2018). Enterprise Resource Systems will coordinate the whole business.

Businesses require information to be kept safely and to be easily retrievable for further analysis. This is only achieved through the use of computerized information systems. The use of relational databases can be employed to store terabytes of information processed daily (Davoren, 2018). A

good example is computerized accounting that can do the capturing, processing, report generation and information stored in a database (Hardler, 2015).

Computerized information system can help significantly in detecting, preventing and correcting business information so much that the original strategy plan remains on course. In the process of prevention, data integrity is achieved by putting in place internal and external controls that can be detected as breaches by information systems, for example, access controls and security authentications (Laverty, 2018)

Computerized information systems have improved the search for quality and cheap raw materials through globalization. This has reduced the hassles of strategizing and coordination of the distribution channels thereby value addition is incorporated at strategy level.

More paying new jobs have been created such as programmers, system analysts and so forth.

Shortcomings of Computerized Information Systems

Acquisition, installation and training costs for computerized information systems can prove to be expensive for small businesses (Davoren, 2018). This can prove to be difficult for the organization and installing low cost information systems may fail to deliver intended results as set out.

Computerized information system has reduced the world into a global village and that has brought a number of challenges faced today both from within and outside the organization that threaten viability (Laverty, 2018). A good example is the threat companies are encountering from phishers and hackers who try to steal their identity and in the process are losing sales.

Most employees lose jobs as a result of introducing computerized information system as most operations will be automated (Muhsinzoda, 2015). In most cases this causes employee resistance to computerized information system as a way of trying to preserve their job security.

The use of computerized information systems is normally done in a common language that is understood globally, for example, English. This means that there dilution of other cultures in that respect and organization suffer consequently (Muhsinzoda, 2015).

Improperly coordinated strategy, policy and information systems results in low staff morale, inefficient and ineffective production tendencies and missing of the overall objective of the business.

Conclusion
The importance of synchronizing the strategy, policy and computerized information system can never be over-emphasized in this 21st century. There is need for clearly and well-articulated business strategies that incorporate policy objectives, strategy objectives as well as information system objectives so that results are achieved. It is imperative that any organization experiences the advantages and disadvantages of installing computerized information system to smoothen up

business processes and routines, decision making process and above all the efficiency and effective way of producing goods and services that impacts positively on quality. In this day and age, computerized information systems is now walk the talk because you cannot do without at individual level, family level and worse off at business level.

References

Davoren, J. (2018). The Three Fundamentals of Information Systems in Business. *Copyright Act 2018*.

Excellence(NHS), N. I. (2014). Information Technology Policy and Procedures.

Hardler, G. (2015, December 26). Role of Computer Based Information System. *http://www.itseducation.asia/computerized-accounting.htm*.

Hasan, Y. (2014). Types of Information Systems in Business Organizations. *International Journal of Research*, 1279-1289.

https://www.techopedia.com/definition/24838/information-security-policy. (2018). Tachopedia.

Kostadinov, D. (2018). *https://resources.infosecinstitute.com/key-elements-information-security-policy/#gref*.

Laverty, S. (2018). The Advantages and Disadvantages of Computerized Security System. *https://www.techwalla.com/articles/the-advantages-and-disadvantages-of-a-computer-security-system*.

Markgraf. (2018). The Importance of Information System in an Organization. *Journal of Organizational Computing*.

Meyer, C. (2009). Exploring Corporate Strategies. *https://bizfluent.com/about-6689983-definition--organization-strategy-.html*.

Muhsinzoda, M. (2015, December 6). Advantages and Disadvantages of Information Systems. *https://blogs.deusto.es/master-informatica/advantages-and-disadvantages-of-information-systems/*.

Singh, K. (2016, May 29). What is Policy Formulation Process. *https://open.lib.umn.edu/principlesmarketing/chapter/2-3-developing-organizational-objectives-and-formulating-strategies/*.

Thakur, D. (2017). Information and Systems Concepts. *http://ecomputernotes.com/mis/information-and-system-concepts/informationsystem-and-businessstrategy*.