

Sample research paper on synthesis

[Business](#), [Management](#)



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Information Infrastructure alignment

Introduction

The potential of information technology to transform organization has been a constant subject of analysis since the introduction of computer technology in the last quarter of the 20th century. With every major technological innovation, there have been strong allegations that companies and organizations would have radically to integrate the opportunities availed by these new technological capabilities. The opportunities of changes within the organization caused as a result of new computer technologies have been subjected to debate in the light of different views on his technology itself together with the new perspectives on organization’s management designs (Tallon, & Pinsonneault, 2011).

The information infrastructure entails to technology and the processes that

an organization has initiated and implemented in a bid to facilitate communication and information sharing in all the departments of an organization. The organization structure, however refers to the specific hierarchies, team structures, reporting relationships, workflows and information flows within the organization; in this case the mental health care system. The structure of an organization directly dictates the design of the information technology infrastructure which itself provides support for the organizational structure. This symbiotic relationship depends entirely on the alignment of the two structures. The understanding of the ideal means of alignment of the information infrastructure with the organizational structure aids in the implementation of an ideal infrastructure for the organization's technological needs. Aligning information systems to the organizational strategic goals has appeared to be a concern for managers over the last decade. Alignment is defined as “ the capacity to demonstrate a positive relationship between information systems and the accepted financial measures of performance.”

Managers should foresee to achieve a good alignment between information systems and business for smooth work of the organization. Many organizations structures IT/Are and information flow in a way to be centralized, thus resulting in the control of information, which in turn may result in significant power structure within the company [1]. While, information systems can provide encouragement how an organization is structured, it can also “ centralize decision-making at a certain level as it increases the capacity to process information “ Changes in strategy, rules, and procedures increasingly require changes in hardware, software,

databases, and telecommunications The relationship between information systems and organizations' results from the growing reach and scope of system projects and applications [

Tiwana, & Konsynski, (2010) described IT infrastructure as the enabling foundation of shared IT capabilities upon which the entire business depends on. This foundation is standardized and shared by business functions within the organization, and typically used by different organizational applications Byrd and Turner (2000) provided a thorough definition of IT infrastructure as: “ the shared IT resources consisting of a technical physical base of hardware, software, communications technologies, data, and core applications and a human component of skills, expertise, competencies, commitments, values, norms, and knowledge that combine to create IT services that are typically unique to an organization. These IT services provide a foundation for communications interchange across the entire organization and for the development and implementation of present and future business applications.”

The organizational structures define the methods in which information flows within it, this can include patient diagnosis reports, inspection reports, pharmacy inventory cost information to new strategic ideas. The flow of information varies from organization to organization; some companies have a system in which information flows in a top- down fashion or bottom-up fashion regarding very strict hierarchy protocols while others handle information flow freely in egalitarian teams. The information infrastructure should always align with the flow of information in a manner that those who need the information have ready access to it while those who do not require

it are barred from accessing it. For example, if the pharmacy is structured to share information about patients' progress, the healthcare- wide customer relationship management database can facilitate the information sharing.

Literature review

Over the years, several studies and research have been conducted about information alignment. Information experts have identified that Information Technology- organization, strategic alignment as a major management concern (Wang, Liang, Zhong, Xue, & Xiao, 2012). The definition of information infrastructure includes a variety of components, based on studies by Bickel (2012) information infrastructure encompasses a group of shared, tangible IT resources that provides a foundation which enables the past, present and future business applications. These resources include computer hardware and software, network and telecommunication technologies, key data, core data- processing applications and shared IT services. In addition to this, information infrastructure also entails the alignment of information technology plans to the organization's plans and objectives, the information technology architecture and the skills of the personally.

In a bid to answer some of the challenges presented by information alignment, many scholars have directed most of their efforts and research on the understanding of how to best to align businesses and IT to generate value for their firms (Tiwana, & Konsynski, 2010). The organization's information infrastructure basically integrates technology components to support the business needs of the organization, but the infrastructure is more complicated.

Organizations are dealing with increased interest of developing technological solutions which can interact with existing technological systems hence improving on the current systems. There is no doubt that ensuring or cultivating an alignment between organizations and Information Technology strategies increases the overall profitability and generates a competitive advantage over other competitors (Tallon, & Pinsonneault, 2011). Studies have shown that failure to align information flow with the organization has led to wastage of resources, poor service delivery and failed information technology initiatives leading to the eventual failure of the organization (Brancheau, Janz, & Wetherbe, 2006).

The studies concerning the information infrastructure and technological standards in organizations is not a new field, however, at the turn of the millennium, there has been increased enthusiasm in the study of the socio-technical dimensions of the information infrastructure. Due to the importance, potential implication and the persistence nature of information alignment, stakeholders and scholars have developed alignment priorities for organizations.

Alignment of the information infrastructure of the organization can enable strategic innovations in the organization and at the same time could stifle such innovations (Wang, Liang, Zhong, Xue, & Xiao, 2012). The flexibility of information infrastructure improves the system developers' capability of designing and building up systems that can meet business objectives. Information flexibility in an organization elicits several characteristics in connectivity, compatibility, and modularity. The studies concluded that organizations with high modularity, compatibility and connectivity have a

high technical Information technology infrastructure flexibility hence easier to align.

IT infrastructure flexibility runs through the characteristics of connectivity, compatibility, and modularity. Studies have maintained that an organization with high modularity, compatibility, and connectivity would have high technical IT infrastructure flexibility.

Compatibility is the ability to share any type of information across any technology component throughout the organization (Tallon, & Pinsonneault, 2011). Other studies have noted that IT compatibility helps span organizational boundaries, empower employees, and make data, information, and knowledge readily available in the organization (Brancheau, Janz, & Wetherbe, 2006).

Connectivity is the ability of any technology component to communicate with any of the other components inside and outside of the organizational environment (). Research has emphasized that IT connectivity enables seamless and transparent organizations that are independent of time and space. Connectivity facilitates the sharability of IT resources at the platform level.

Modularity is the ability to reconfigure easily; add, modify or remove technology components (Brancheau, Janz, & Wetherbe, 2006). The research also stated that modularity is the standardization of business processes for sharability and reusability, for example, structured programming and component-based software architectures). Research has also suggested that modularity is a continuum describing the degree to which a system's components can be separated and recombined.

Other studies have specifically classified the alignment of four organizational and Information technology components to include the business strategy, the Information technology study, the organizations infrastructure and processes and finally the information technology infrastructure and processes. The information alignment, therefore, refers to the compatibility of two or more of these components in line with addressing the needs, demands, goals and objectives of all the departments of the organization to achieve harmony.

The literature review points out that strategic IT-business alignment and core business applications are embedded in the definitions of IT infrastructure and IT infrastructure flexibility. However, the actual relationships between IT infrastructure flexibility and strategic IT-business alignment and between IT infrastructure flexibility and business applications have not been empirically tested. We test these relationships through our conceptual model.

Analysis

In the business, Fields of today, it is universally accepted that information system awareness is important for organization managers for survival and prosperity. Undoubtedly, information system has emerged as an essential domain in all types of businesses as it presents an opportunity to integrate information system with their own business targets. In the business world, a strategic plan is completely different from the operational plans. The strategic plan is more of a visionary plan which is conceptual and direct. This is different to the operational plan, which is short term, more professional, more implementable and gradable.

Alignment is the degree to which the needs, demands, objectives, goals and

structures of a concerned component i. e. The information infrastructure is set to be consistent with the needs, demands, goals, objectives and structures of another entity i. e. The organization structure (King. & Teo, 2007). The alignment of the two functions. There are three alignment strategies that can be applied in the organizations; intellectual alignment, operational alignment and cross-domain alignment.

Information alignment allows organizations to reduce costs, which can be translated to lower service costs to the customers. The lower service costs translate to happy consumers. The cross- domain alignment

There are approaches that have been made available by professionals in order to align information technology with business structures. The most common strategy is known as the Strategic alignment model. The model is based on two fundamental strategies; strategic integration and functional integration. Strategic integration; this domain focuses on the strategic management research which relates to the integration strategy formulation and implementation, strategic integration entails the alignment between the external and internal demons. This integration in cooperates the classic open system which focuses on the organization strategy. Functional integration; this domain builds on the tradition of information system research which targets on the integration of information management with the management of another line and functions of management. The functional integration involves the integration between the organization and the information infrastructures which are consistent with the recent trends towards the integration of different functions to attain competitive advantage over other organizations.

The cross- domain alignment involves the relationships between domains, which is a middle edge between the two dimensions. The two dimensions dictate the four strategic choice domains of business strategy, information technology strategy, organizational infrastructure and processes and information systems infrastructure and processes (these four domains form the basis of Strategic alignment models).

- The concept that underlies the alignment is dependent on four concepts
- The consistency in terms of cross-domain relationships
- The completeness of the alignment process
- The validity of the alignment process
- The comprehensiveness of the alignment process

Functional integration

The functional integration focuses on a strategy for the management of an organization function. In this domain, there is an increased recognition of the perspective in the organization functions such as marketing, finance, and information technology. This domain focuses on the alignment of organizational strategy and information infrastructure strategy and also the alignment between organizational infrastructure and the process and information system infrastructure and processes (Tallon, & Pinsonneault, 2011). The functional integration between the business and Information infrastructure is always focused with the integration between the positions of an organization in the product- market area and the position in the information technology marketplace. It is, therefore, appropriate for the information alignment to apply the two strategies named above as an important requirement for realizing the values and profits of information

investment. These strategic options affect both the transformation of the organizational processes and also the designs of the information infrastructure and processes.

Functional integration also involves the alignment between the organizational infrastructure, information infrastructure and the processes that accompany them. This alignment includes the ability to design, institute and utilize the information infrastructure within the organization. The design of the alignment involves the determination of the requirements needed for the information system infrastructure. These two forms of alignment show the need for integration between the organization's operations and the information operations of the organization.

Cross-domain alignment

This is the most common alignment methodology used by organizations. This alignment depicts the classic linkage view of today's world. The creation of an alignment between organizations strategy and the information infrastructure needs processes which require the specifications of work processes, roles and authority structures in a bid to relate to the manner in which the information infrastructure would impact the outcomes of the organizations targets and goals. The organization's structure must always be broken down into smaller units, which define the needs and purposes of the information infrastructure and processes. Cross-domain alignment strategy can be automated which makes the emerging technology to alter and influence the organization's operational processes. This strategy emphasizes the potential value of information structure and how these processes provide a service organization to support the expected potentials. The cross- domain

alignment employs the logic and meanings through the two basic dimensions of integration; functional and structural.

The four domains of the cross-domain model

The rationale which supports the cross-domain model is dependent on four domains; organization strategy, organizational infrastructure and processes, information technology strategy and information system architecture and processes.

The organizational strategy is the choices made by the management that concerns the positioning of the organization into a competitive position within the business market or scope. This domain focuses majorly on the set goals, means and assumptions pertaining to the strategies, which position the organization in a favorable market share position. Most focus on these domains focuses on questions, which deal with organization targets and the specified orientation to be competitive.

This domain is viewed in terms of distinctive competencies and government structures. Distinctive competencies examine those efforts of the alignment strategy, which enhances the distinctive, comparative advantages over other organizations with the same interests. This component focuses on; pricing, quality, value-added services, delivery channels and the public image of the organization.

The governance structures involve the articulation and collaborative means of finding a competitive edge, which includes value-added partnerships and strategic alliances. The business domain of the organization requires proper and effective alignment of information flow for optimal progress.

The organizational infrastructure entails the internal arrangements, which

include the internal arrangements, which support the management of the organization. There are wide ranges of possibilities, which can be formulated in a bid to support the organization strategy issues. The information technology strategy is choices, which entail to the positioning of the business in the information technology field. The domain includes technology scopes, distinctive competences, and governance structures. While information system infrastructure and processes are defined as the choices, which pertain to internal arrangements and the processes which determine the range and types of information system product and services which can be used to deliver the organization.

Conclusion

Organization and information infrastructure alignment is a critical issue of organization management. Information technology infrastructure is important to all the business processes in the organization. The organization's information infrastructure, primarily focus on the integration and alignment of business functions. Inevitably, the competitiveness of the organization is entirely dependent on the flexibility of the information infrastructure because this will enable the organization to develop new processes and applications quickly. The faster the information infrastructure is aligned to the organization the quicker the improvement of its service delivery will be.

An information infrastructure which is flexible makes it possible for an organization to foster closer links between the information infrastructure and the organization's strategy. The alignment is very critical as it allows the management of the organization to respond promptly toward the dynamism

of operational environments. Proper alignment enables flexibility which in turn makes the organization more suitable to develop new applications and make changes to the existing applications. Such quick, rapid modifications and solutions make it possible for the organization to adapt to the always-changing business environment.

Organizations managements understand the significance of information alignment. The overall benefits that an organization would get from improved information alignment includes; improved processes and protocols and increased customer satisfactions. In order to enjoy these benefits, the organization would need to undertake changes and be always ready to adjust to the effects of the alignment process. Information systems which are properly implemented elevate the efficiency and effectiveness of major organization's activities.

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