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# The Art of Value Creation with Information Technology Potentials in Business Planning – the Role Strategic Information Systems

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**Abstract**
Value creation has to do with delivering products or services to clients at lower prices and as well as distinguishing the products or services from competitor in terms of improved quality, more functionalities, enhanced customer service that are clearly distinguishable from competitors'. To create effective value, entities can no longer develop a business strategy separate from IT strategy and vice versa. The fusion of business and IT strategy is increasingly one of the most dramatic developments affecting organisations today. IT strategy in business planning coincides with the role of Strategic Information Systems. 'Strategic information systems' is, therefore, a long term plan to combine innovative Information Technologies with up-to-date managerial skills to tap potentials in technology to cut down waste and cost to improve profitability. This article analyses the role Strategic information systems can play in realising the idea that Information technology is a potential for the creation of stakeholder value by focussing on organisations' business processes placing the analysis in the context of Porter's value chain. The article considers possibilities of capturing value in emerging economic environments where, due to competition, the Internet, mobile business intelligence and innovative collaboration systems and other technologies have become capabilities for achieving competitive advantage. Secondly, the paper demonstrates the technologies that organisations endeavouring to create value have striven to make it with.
**Key words:** Information Systems, IT, Support, Strategy, Investment, Service, Profitability, Value-chain, Value creations, Collaboration, Business Intelligence, Competitive Advantage.

## 1.0. Introduction:

Value creation is diversely described by many authorities. To be terse with it here, value creation can be explained to be all the activities in production or service in which a deliberate thinking is put to reducing, as much as possible, all unnecessary activities that increase cost of production or service so that profits are also increased. One very critical potential for achieving cost reduction and increasing productivity and efficiency is Information Technology (IT). The function that materialise IT potential is Information Systems (IS). In modern times, organizations in all sectors of industry, commerce and government, are fundamentally dependent upon Information Systems (Tanriverdi, 2006). 'Entities can no longer develop a business strategy separate from IT/IS strategy and vice versa. Accordingly, there is a need for integration of sound business and information technology planning and the incorporation of effective finance and management controls within new systems' (Skidmore, 2002).

Information technology resources are necessary to tap strategic business opportunities in such a way that there is an impact on the organization's products and business operations by mechanising these for better economy, efficiency, control, and effectiveness, hence creating value to both the business and its customers (Bhatt et al, 2005). Information systems strategy, therefore, has become such an integral and necessary part of the business that for the purpose of directly influencing market share, earnings, staying competitive globally and in all other aspects of marketplace profitability, it will be naïve and disastrous to ignore IS strategy (Coltman et al 2007).

Michael Porter's value chain model provides a generic template for considering an organisation's key business processes. The underlying principle of the value chain model is that it permits organisations to focus on their internal processes. One of the key aspects of the value chain model is the recognition that organisations are more than a random collection of technology, money and people. These resources are of little value unless deployed into activities and organised into systems, which ensure products or services are produced which are valued by the final consumer (Oh & Pinsonneault, 2007). Information systems and technology resources are more valuable in achieving a business' objectives especially when they are combined with changes in business practices and management behaviour. The firm's resources and capabilities together form its distinctive competencies that enable *innovation, efficiency, quality,* and customer responsiveness, all of which can be leveraged to create a cost advantage or a differentiation advantage. Thus, the business can use information systems strategy for better,

timelier information about its own needs that can lead to lower cost of operation which will also help to improve business process and to increase customer satisfaction levels. The greater the use of IT capabilities, the more likely the firm is to develop unique capabilities and the firm's core IT infrastructure will generate higher value (Dakshinamoorthy, 2010).

## 2.0. Statement of Problem and purpose of research

'Information technology is affecting the way in which organisations are structured, managed and operated. One of the most dramatic developments affecting organisations is the fusion of business and IT strategy (Spremic and Popovic, 2008). Information Technology (IT) is often used interchangeably with Information Systems (IS) but in reality they are not the same. In fact, many people confuse the two disciplines and tend to think that the distinction is not relevant (Chen et al. 2010). However, Information Technology (IT) consists of hardware such as desktop, laptops, and mobile technologies e.g. PDA's and even cell phones, web and network technologies including enterprise software technologies such as Enterprise Resource Planning (ERP), Customer Relations Management systems (CRMs) and Supply chain management systems (SCMs). IT also includes the design of software that is used on all these devices ranging from System Software (e.g. Operating systems e.g. Windows, Macintosh, Linux etc.) to Applications or productivity management software (e.g. Microsoft office, games software, Accounting packages etc.).

Information systems, on the other hand, comprise a body of knowledge about how an organisation organises resources in a logically co-ordinated manner such that problems could be identified, solutions designed from different perspectives, a best alternative implemented and controlled in order to achieve the organisational objectives. Information system (IS) is management skills. It is, therefore, not primarily technological as seen in IT above but it involves an understanding of strategic and operational business planning and associated IT issues; the ability to perform appropriate analyses of IT investments; an understanding of IT related benefits and risks; the ability to stimulate and manage organisational change; and the ability to communicate effectively about IT issues. Information systems are, therefore, increasingly viewed as a potential means to achieve competitive advantage which is also the source of value to stakeholders' (Skidmore, 2002). Chen et al. (2010) have opined that 'whereas strategy in management studies has drawn a long tradition of scholarly debate, Information Systems (IS) strategy research, by way of comparison, has tended to eschew explicit discussion of what IS strategy is and, instead, has focused more on how to conduct strategic planning, how to align IS strategy with a given business strategy, or who should be involved in forming the strategy'. Available literature investigated in the area has revealed that research work on the assessment of the role of Information systems on value creation is that relatively far less research has been conducted into the topic and the researchers' own interpretation and suggestion are that this research paper is very appropriate as it will clarify the purpose of IS strategy and also add to the literature that may be required to fill gaps identified above.

In developing countries like Ghana, there is widespread emphasis on literacy in the use of contemporary Information and Communication Technologies. Use of Computers and Mobile technologies in the administration of business concerns is increasing. The effectiveness of the application of the skills in achieving business objectives is still a missing link because people are putting too much effort in computer (IT) literacy at the expense of information (IS) literacy as discussed above. As a result, business processes continue to be tedious and huge amount of monies is wasted in both private and public sector corporations. Problems in value creation processes continue to persist in Ghana and other developing economies' businesses despite the widespread increasing skills and use of hardware devices such as PC, Desktops and powerful mobile devices as well as communication media such as the Internet to perform tasks (Anomah and Aduamoah, 2013). Information Systems literacy, which is the ability to use the Hardware, software and network technologies to identify business problems and to create solutions to assist a business organisation to achieve its objectives seems to be overlooked. There is therefore, a dire need for clarity between the roles of IT and IS in the process of value creation in a business. This paper is also purported to elicit the ways Information Systems strategy can support businesses to achieve operational excellence as practised by companies that have sought to create value to their stakeholders.

### 2.1. Research question:

*What role can information systems strategy play in business activities to minimise cost and waste in order to improve quality and profitability in business concerns?*

## 3.0. Literature review:

Strategy is a value creating art of which 'provides the intellectual frameworks, conceptual models, and governing ideas that allow a company's managers to identify opportunities for bringing value to customers and for delivering that value at a profit'(Normann and Ramirez, 1993). Porter (1980) asserts that value creating strategy of a firm is defined as a set of value adding activities it carries out in order to create and deliver value that is

either low cost price leadership strategy or product or service expansion strategy. Porter states that, 'every value activity has both a physical component and an information-processing component.' The physical component includes all the physical tasks required to perform the activity. The information-processing component encompasses the steps required to capture, manipulate, and channel the data necessary to perform the activity'. Porter developed, thereof, the value chain model which provides a generic template for considering an organisation's key processes. The underlying principle of the value chain model is that it permits organisations to focus on their internal processes.

Every functional area, e.g. finance, marketing, payroll etc., of the organisational processes has its own information systems to assist it achieve its objective whose aggregate will be to achieve the organisations overall objective. There is lots of new technology on the horizon impacting on the processes a business is conducted. In many ways, the move towards new methods of business operations is happening right now, which is why it is so vital businesses create the correct strategies to ensure that they stay ahead of the curve. The enormously rapid development of information systems and information technology over the last few decades has changed society more than any other technological development encountered. The development has threatened the previously socially accepted distribution of power, money, rights and obligations within the world of work and the ways that they operate and provide service (Wood, 2013). An important outcome from value chain analysis is the identification of information needs and flows within an organisation.

According to Normann and Ramírez (1993), the traditional thinking about value is grounded in the assumptions and the model of an industrial economy. According to this view, in a supply chain, every company occupies a position on a value chain. Upstream, the supply chain comprises suppliers provide inputs. The company then adds value to these inputs, before passing them downstream to the next actor in the chain, the customer (whether another business or the final consumer) – a network of consumers and consumers' consumers.

The current trend has been that competitive environment increasingly has become volatile and strategy is no longer a matter of positioning a fixed set of activities along a value chain. Successful companies do not just add value; they redefine, redesign and reinvent it. The focus of strategic analysis is not the company or even the industry but the value-creating system itself, within which different economic actors - suppliers, business partners, allies, and customers - work together to co-produce value (Piccoli & Ives, 2005). The principal role that information systems have performed in the past has been one of operational and management support. Currently the intercept between activity that create value and actors who co-produce value is Information Systems. The most important objective of information systems is for a business to create and improve relationship with their customers and suppliers. Companies have begun using information systems strategically to reap significant competitive advantage. If a business can use information systems to learn more about its customers, serve them better and ensure that they continue to come for more product and services, the business can increase revenues and profits remarkably (Dakshinamoorthy, 2010). 'IS strategy is developed as an inherent part of the business strategy. Therefore, IS strategy is not a strategy in its own' (Chen et al. 2010). By IS strategy, the organisation will be in the position to identify its competences, which critically underpin the organisation's competitive advantage which is very important to the fortunes of the business.

## 4.0. Method and theoretical framework of Analysis:

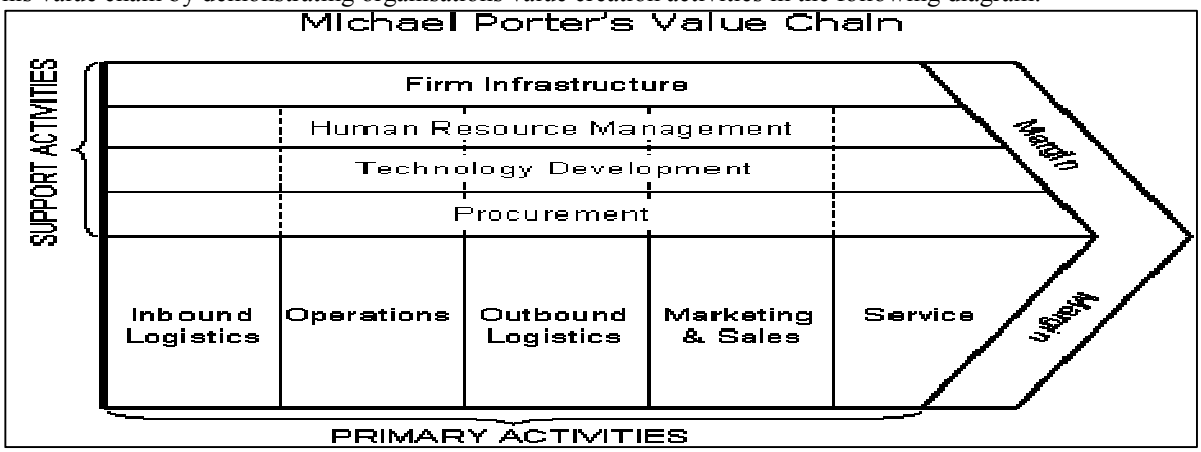
This research is an analytical literature review. Information systems must be integrated to achieve its maximum result. This is often referred to as cross-functional systems. To implement such complex systems in an organisation, one must consider critically the organisation's core processes. One of the best tools for doing this is the Value Chain analysis developed by Michael Porter. This can simply be described as a network of value creating activities (Dakshinamoorthy, 2010). Value chain analysis is useful in identifying the individual activities, which are necessary to underpin the organisation's operational strategies and how they link together, both inside and outside the organisation. If an organisation uses the model to analyse its current position, the analysis will highlight where competitive strategies can best be applied in a business. This will permit an organisation to develop a variety of information systems for those basic processes that add the most value to a company's products or services and thus the overall business value of the company.

The researcher, therefore, exploits Porter's value-chain criteria based on the theoretical framework of value creating activities by Porter to identify various critical business processes. The objective is to elicit key issues raised by Porter to support the criteria for the research analysis the purposes of this analysis for a literature review. These business processes are then put under the investigation to identify potential contemporary information technologies that have been used or that may be potentially harnessed to reduce cost, improve efficiency and effectiveness in product and service delivery and satisfaction in customers, thus, creating value.

In the majority of businesses there is a requirement to meet a threshold competence in all of the activities if the business is to survive. This identification can be used to develop effective information systems strategies (Institute of Management Accountants, 1996). From a Value Based Management point of view, Porter's value

chain can be seen as one of two dimensions in maximizing corporate value creation. The firm creates value by performing a series of activities that Porter identified as the value chain (Quickmba.com, 2010). Porter explains his value chain by demonstrating organisations value creation activities in the following diagram:




Source: http://finntrack.co.uk/learner_support/images/picture_porter_value_chain.gif

**5.0. Analysis:**

Value Chain Analysis describes the activities that take place in a business and relates them to an analysis of the competitive strength of the business (Bhatt & Grover, 2005). Influential work by Michael Porter suggested that the activities of a business could be grouped under two headings – Primary Activities and Support Activities. Although, it is rare for a business to undertake all primary and support activities, primary Activities involve those core functions that are directly concerned with creating and delivering a product. According to this analysis the primary activities comprises the following five activities: Inbound logistics, Operations, Outbound logistics, marketing and Sales and Service. Support Activities, on the other hand, are not directly involved in production; however, they may increase effectiveness or efficiency in the business' bid to create value. Support activities comprise four main functions – firm infrastructure, procurement, human resource management and Information technology (IT). In this analysis, the focus is to find out how companies seeking to reduce cost, improve quality of service or products, increase profit and, thereby, create value may harness IT potentials - an indispensable support activity in reaching those business objectives as a business strategy. The table below dilates on this:

| **Activity** | **Comments – the role of IT in creating value** |
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| ***Inbound Logistics*** | This involves all activities concerned with linking up with the company's upstream supply chain and hence concerns receiving and storing externally sourced material. The role of IT strategy is to find solutions by exploring the available or innovative technologies to support the functions of co-ordination, communication and collaboration with partners for efficiency to prevail. Service Companies seeking to reduce cost and improve upon efficient customer services have exploited technologies such as Extranets to ensure speedy and cheap collaboration with partners. Extranet network technologies have ensured efficiency in Just-time-management (JIT), Material requirement planning (MRP). Supply Chain Execution systems are technologies used to track orders on their way. In manufacturing, systems, stock controls have exploited barcode scanning technologies as well as Radio-frequency identification (RFID) to reduce time cost and financial cost. |
| ***Operations*** | In production, resource or inputs (e.g. materials) are converted to outputs (e.g. products). To improve upon quality, efficiency of business processes and increase customer satisfaction, according to Piccoli, & Ives (2005), the use of Information Technology cannot be underestimated. Therefore, to achieve these business objectives, technologically innovative techniques must be planned for new companies and a redesign of existing processes are required to achieve a value-added products or services. Obviously, IT cannot solve basic organisational problems, but the essence and role of IT strategy is the use of the IT to provide integration through communication, effectiveness and efficiency with the objective of obtaining value for money for both customers and producers.<br>In manufacturing robotics can automate some processes, thus reduce human factors which often are quite expensive and slow, make large scale production possible, thereby improving productivity and reducing cost of production. This, in turn, it will help reduce product and service |

 

prices and thus add value to customers and consumers. For example, Computer Aided Manufacturing (CAM) which involves a variety of software models including, Production control, supervisory systems**,** Materials requirement planning (MRP) and MRPII**,** Capacity requirement planning have been used improve upon production efficiency, economy and effectiveness.

Likewise, Computer Integrated Manufacturing (CIM) integrates all aspects of an organisation's manufacturing activities. Flexible manufacturing systems include:

- Machine tools
- Materials handling conveyor sets
- Automatic guided vehicles

Moreover, companies seeking to create value have exploited Enterprise Resource Planning (ERP) systems. These systems take Material Requirement Planning (MRP, MRPII) systems a step further and are not restricted to certain types of organisation. ERP systems are used for identifying and planning the enterprise-wide resources needed to record, produce, distribute and account for customer orders.

Today's organisations are composed of dispersed and mobile workforces, outsourced teams and external consultants. Until recently, collaboration meant bringing all your team together in the same room and using whiteboards to work together or video conferencing equipment for a point-to-point connection. With employees now separated much more by time and distance, a range of communication tools are being used by enterprises to keep everyone connected. The work of these teams is not composed of separate, individual actions, but connected tasks with a desired outcome – any one person or any one function cannot meet today's challenges alone. A group of people who willingly participate and provide their insights to address the increasingly interdependent issues is needed, and collaboration within this group and with other groups is necessary because one person no longer has the answer. As a result, operations in modern organisations have become complex (Anomah & Agyabeng 2013). Companies seeking to improve efficiency in the operations have exploited the following different simple to complex technologies to plan their activities:

**Desktop Application Sharing** allows users to share documents or information on-screen without having to send a copy to others. It is ideal for real-time document control, enabling distributed team members to add their own input. However, it requires a network with a high bandwidth to maintain a quality connection.

**Mobile Business intelligence (BI):** When mobile BI is embedded in a business application, new efficiencies and decisions can be enabled. The convenience of mobile BI makes the lives and jobs of executives and staff easier. Shuffling in and out of meetings for hours on end doesn't give an executive much time to sit in front of the computer at his or her desk. The ubiquitous access to key corporate information combined with an intuitive mobile user interface can create a vastly improved and more engaging experience. Since many now have a mobile device or two at their disposal, they can access and view timely reports and dashboards to help make better decisions, quicker than ever before. This new IS strategic initiative known as 'Bring-your-own-device' (BYOD) is supporting businesses obtain high productivity, efficiency and customer value. There are not only new device types coming online but also rich-media applications that integrate voice, instant messaging, video, and email with enterprise software. This adds a new dimension of integration so that sales executives and other employees can communicate on real-time basis with the increasingly emerging technologies, such as virtualization, which need specific security and compliance requirements. Companies can keep up with mobile technology innovation more effectively by catering to consumer devices rather than by adopting technology at the slower traditional pace of business (Faulkner, 2013).

**Email is** well-suited for distributing information to multiple contacts simultaneously but it is not ideal for real-time collaboration, such as multi-user version control of documents.

**Instant Messaging (IM) offers** the benefits of immediate one-to-one communications superseded email. At its core is 'presence' – the ability to see if someone is online and available to communicate. As a starting point for collaboration IM is useful but it can become limited when used by larger groups or if a conversation goes on too long.

**Enterprise-Level Social Media, such** as Yammer or Jive, offer a secure system for real-time conversations and can be linked to other popular enterprise platforms like Salesforce.com. These networks are most often limited to sharing links or creating group conversations rather than facilitating real-time document collaboration.

 

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| | **Tele-presence** is another established enterprise technology that delivers high quality two way video and mixed media projections to offer an immersive collaboration experience. For many organisations, however, the costs can be prohibitively high and it requires dedicated facilities in order to provide a similar experience to face-to-face meetings. However, some service and educational organisations have used video-audio conferencing, web broadcasting (webinars) and other web-streaming technologies to reach out to the global marketspace at a much reduced inconvenience and cost (Steve, 2013). |
| ***Outbound logistics*** | Outbound logistics include those activities associated with getting finished goods and services to buyers. In manufacturing, this may involve warehousing and channels of distribution. To ensure cost reduction to both the enterprise and the customer IS strategy has a role of planning the technologies that could be implemented to achieve that. Since cost could increase at this level by tall chain of distribution, the internet e.g. e-commerce capabilities may be able to reduce the long chain of inter-mediation so that buyers can deal directly with producer, thereby, creating mutual value to partners. Service firms that may not have clear demarcating lines between operations and outbound logistics are well served by the use of Web technologies (Barua, Konana, Whinston, & Yin, 2004).<br>Among other benefits to producers, E-trading has extended the potential market place for businesses. The internet (E-Commerce) has now made it possible for relatively level playing field for all companies regardless of size. Small companies are now competing with the established large international companies in many sectors on this platform. Consumers also, among numerous benefits, now have the ability to search for items or services via the Internet in minutes and operate secure online business transaction 24/7. Previously, similar searches may have taken days or weeks. Rather than visit shops or businesses, the consumer can now sit at home and make enquiries any time offering much greater value than before. Businesses working hard to improve on their operations do not underestimate the power of web-technologies (Bakos, 1991). |
| ***Marketing and sales*** | Marketing activity is essentially an information activity - informing buyers and consumers about products and services. Marketing and sales can be made more effective by planning it with information technology like customer databases enabling **market segmentation**. The Internet has become widely accepted as a medium for communications and as a virtual market **place**. With internet technologies a business has an extended market space, to promote its **products** or **services** and can use several **pricing** modules (e.g. auctioning, name your own price etc) to improve revenue as well as provide value to customers. **Promotion** is conducted cheaply with global outreach with different types of web technologies and social networks**.** Other contemporary technologies used by business seeking to create value by reducing cost in time and money have used phone calls, e-mail, online services etc to perform this function. "With the use of cookies, the surfing behaviour of a person on the Internet may easily be tracked." This profiling can be done for all customers together, a specific group of customers, or for each individual customer separately. The browsing conduct of the user of the Internet is perfectly transparent. Everything that happens in cyberspace is registered somewhere, for that is how the Internet works." With the large collection of data gathered in a certain period of time, detailed profiles can be made of customers. In practical terms these data are collected and can be used for marketing purposes. With the profiled data of customers and potential customers:<br>• A variety of market research companies use of IT to monitor consumers' buying habits<br>• Buying and analysing a mailing list is a more precise method of targeting particular groups of consumers than television advertising.<br>Concerns arise in relation to the limits of profiling and use of data (Roosendaal and Van Esch 2007). Many successful companies have gained great share of local and global market share by Electronic Strategy (e-Strategy). Many businesses are taking a focused look at the impact of the Internet and Electronic Commerce on their future. This includes electronic transactions through e-tailing and mobile commerce. E-Strategy, therefore, helps create stakeholder value.<br>One of the reasons for that growth in M-Commerce is that many of the modern e-collaboration technologies allow workers to interact with one another at the most convenient time for them, and from geographically distributed locations. Bring-Your-Own-Device (BYOD) strategy whereby sales and business executives are allowed to bring their own private devices to operate with convenience has become a source of operational efficiency and cost cutting objective. BYOD initiatives should, however, establish a more secure, more enduring, data-centred foundation for mobile device usage. Supermarkets using automated Electronic Point of Sale) EPOS systems are obtaining a precise hour-by-hour idea of how products are selling to enable |

 

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| | speedy ordering and replenishments. These activities have direct link with the next activity – Service, particularly on CRM (Faulkner, 2013). |
| ***Service*** | Service involves activities associated with keeping customer confidence and cordial relationship before, during and maintaining product performance after the product has been sold, i.e. after sales services. This is, in fact, one of the greatest functions of business information systems. This is maintained using modern **Customer Relations Management (CRM)** tools.<br>Planning CRM will involve the application of methodologies, software, and usually internet **(web)** capabilities that help an enterprise manage customer relationships. **CRM** strategies can vary in size, complexity, and scope. Some companies consider a CRM strategy only to focus on the management of a team of salespeople. However, other CRM strategies can cover customer interaction across the entire organization which partly will coincide with the organization's knowledge management systems. Many commercial CRM software packages provide features that serve the sales, marketing, event management, project management, and finance industries, E.g. an enterprise might build a database (knowledge base) about its customers that described relationships in sufficient detail so that management, salespersons, service staff and maybe customers, could access information, match customer needs with product plans, remind customers of service requirements and know what other products a customer had purchased.<br>**CRM** includes many aspects which relate directly to one another:<br>i. **Front-end operations** – This, traditionally, involves direct interaction with customers, e.g. face to face meetings. However, with E-Strategy, business are now able to enhance upon their operational efficiency by the use of e-commerce capabilities such as:<br>*Sellers' portal:* a single point of access through a web browser to business information inside and or outside an organisation.<br>*Electronic catalogs:* the presentation of product information in electronic form – the backbone of most e-selling sites.<br>*A shopping cart:* An order-processing technology that allows customers to accumulate items they wish to buy while they continue to shop.<br>*Search engines:* program that can access a database of internet resources, search for specific information, keywords and report results.<br>*Payment gateways:* The service that automates the payment for Internet transactions between the shopper and merchant. The payment gateway (IP payment gateway) is the infrastructure that allows a merchant to accept credit card and other forms of electronic payment (Anomah and Aduamoah 2013).<br>ii. **Back-end operations** - Operations that ultimately affect the activities of the front office (e.g., billing, maintenance, planning, marketing, advertising, finance, manufacturing, etc. as discussed above) (Turban, King, Viehland and Lee, 2006). Supply chain execution systems allow a processes of tracking the physical status of products all the way through distribution centres and warehouses until the goods are delivered to the retailers or customers with different interactive methods such as customer service desk, emails and websites known as *customer touch points*.<br>iii. **Business relationships** - Interaction with other companies and partners, such as suppliers/vendors and retail outlets/distributors, industry networks (lobbying groups, trade associations). This external network supports front and back office activities. Use of cheap web technologies such as voice-over-internet-protocol (VOIP), artificial intelligence systems (AI), Social networks, Chartrooms and **Instant Messaging (IM) are being exploited to drastically cut down business expenses in interacting with their partners.**<br>iv. **Analysis** - Key CRM data, which coincide with Business Intelligence (BI) systems, can be analyzed in order to plan target-marketing campaigns, conceive business strategies, and judge the success of CRM activities. BI systems provide the ability to analyse internal and external business information in order to support and improve management decision making across a broad range of business activities. BI systems are used to facilitate all the important organizational processes and changes through the organizations in order to achieve their overall goals. In business a lot of these data has to do with day-to-day transactions such as managing inventories, making shipment to customers, managing payables and receivables, market share, number and types of customers, revenue, profitability and storing employee data (Kernochan, 2011). |
| ***Firm*** | Here, IS strategy is concerned with a wide range of support systems and functions such as |

 

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| ***Infrastructure*** | finance, planning, quality control and general senior management and how the functions are coordinated to achieve the overall objectives. At this stage IS strategy considers network technologies such as Intranets or Extranets that may be suitable. Database and data-warehousing technologies are designed to ensure the organisation may not lose track of any event. 'Mountains of data are being created, stored and accessed by ever more users over expanding geographical areas. IT infrastructure is becoming more complex as virtualization, cloud computing and on-demand computing are re-engineering the way networks are deployed and configured. Government and industry regulations are tougher than ever and require strict documentation. Users are demanding more data-intensive applications that they can access from virtually anywhere - whether they are in a branch office, working from home or checking in from their local coffee shop' (Kaseya, 2010). There are quite possibly as many business software solutions to operate on the networks as there are businesses. However, many of these, according to Power (2008) can be broken down into just a few general types of information systems. These types are the **Transaction Processing System** (TPS), the **Decision Support System** (DSS), the **Executive Information System** (EIS), the **Office Automation System** (OAS), and the **Expert System** (ES). |
| ***Procurement*** | This concerns how resources are acquired for a business (e.g. sourcing and negotiating with materials suppliers). Extranet can automate some purchasing decisions with suppliers. Paperwork can be saved if the organisation's purchase systems are linked directly to the sales order systems of some suppliers e.g. by Electronic Data Interchange (EDI), (Coltman et al 2007). This has drastic business expense reduction effect. |
| ***Human resource Management (HRM)*** | HRM activities are concerned with recruiting, developing, motivating and rewarding the workforce of a business. To improve workers motivation, cut cost and to manage human capital efficiently, IS strategy, in many successful companies has been that repetitive functions are done by robotics. The internet (corporate portal) has been used to carry cheap recruitment advertisements and the same internet has been useful in facilitating potential employee selection through online aptitude test techniques. This has enabled leading companies e.g. Merchant Bank, to reach out to the global job market for high quality of staff.<br>Organizational learning and knowledge sharing are not new concepts. Knowledge management has evolved from advancements in information management and the reduced costs of web-based technologies and digital storage. Technology is not the most important dimension of knowledge management. However, most agree that technology such as corporate portal, expertise locator, chat rooms, distributed online collaboration, desktop video-conferencing, webinars and other digital knowledge sharing tools, enable knowledge sharing, integration and collaboration (Schulte and Sample, 2006). |
| ***Technology development*** | No matter their size or scope, nearly all organizations, dependent on information systems to some degree. Systems, networks, and software have become more powerful, their abilities to assist us in business have become quite vast. As technology progresses, so too does the complexity of the tools that can be utilized by organizations in order to boost efficiency and improve the speed and accuracy of information transmission to support operations and other core activities. Many of these systems are designed by the organisation to integrate with almost any type of function imaginable in the organization, and can help increase production in many areas. The IT support activities in an organisation, as has been clearly detailed above in the analysis, are concerned with managing information processing and development and, more importantly, creation and management of "knowledge" in a business. For an organisation to be able to achieve competitive advantage, it has to be able to exploit its IT Resources and Capabilities very efficiently to attain a strong Distinctive Competencies. One important strategic resource to a well-meaning organisation is its Knowledge Base. In relation to Information Systems, Knowledge and Knowledge management describe the process of collecting, storing and using the knowledge held within an organisation. IT support centres are cost-centres. The management of cost-centres are critical to the strategic value-creation of the organisation. For some small organizations, these systems may not be crucial, but they help to improve the work flow and increase the turnaround of the products to the customer. For other larger organizations, these systems can be of the utmost importance, and be critical to a business' success or failure (Zhenzhong Ma and Kuo-Hsun Yu, 2007). |

 

## 6.0. Findings and recommendations

Although, investment outlays of some of the above IT/IS strategy may be prohibitive, the Return on Investments (ROI) in IT strategy in business planning is enormous. IT support is ubiquitous in all aspects of business processes and planning the operations of business activities. According to Kaseya's State of IT Systems Management Survey (2010), the main goal of the IT in an organisation is to improve user performance, with 48 per cent of respondents citing IT as their top priority and 37 per cent believing that IT increases efficiency. Though, the responses are a truism, 'Information technology is pervasive in today's business world because if it is not deliberately designed for users to access the tools and information they need, all the technology in the world would be worthless. The principal role that information systems have performed in the past has been one of operational and management support. But recently companies have begun using information systems strategically to reap significant competitive advantage'.

There are lots of new technologies on the horizon that will impact on the ways that different organisations operate and provide service value to their stakeholders. There is an increasing transformation of how work gets done. Business activities are being performed via secure app-to-app workflows that include integrated email, communications, document management, business intelligence, social business, wireless printing, and more are available and being exploited to reap all the potentials of businesses. 'In many ways, the move towards new methods of IT support is happening right now. This is the reason why it is so vital that organisation seeking to improve performance should create the correct IS strategies to ensure that they stay ahead of the curve. Whatever devices an organisation chooses to support and the strategy it creates, the end goal must be to keep your company's workforce working and the customers satisfied. This is the heart of what every Strategic Information systems is designed to do, and the strategy must be built with this ultimate goal in mind.

A major advancement in the IT service sphere is service catalogues. A service catalogue details all the hardware and software that the organisation supports to operate effectively, efficiently and economically. As cost centre, IT support service has negative impact on profit. The most shrewd service catalogue analysis and decision-making will also involve the cost of support in the catalogue. This, in turn, implies that IT users truly are customers of IT. By including the cost of support, customers are forced to make decisions as to what customised catalogue to choose. Customers then have to justify why they want a particular device or piece of hardware, and they can be held responsible for their choices. Calculating the cost of support for each device can be difficult, but if you have a firm grip of the cost of support then it should be possible to calculate it' (Wood, 2013).

## 7.0. Conclusion

Information systems and technology (IS/IT) literature analysed above clearly affirms the view that Technology does not; on its own create any value. It, therefore, remains a potential for value creation. Potentials are converted into realities by carefully planning the operations of the business IT/IS strategy. The art of planning the business with Information Technology to co-ordinate operations to achieve operational excellence, improve relationship and hence create customer and shareholder value is the role of Strategic Information Systems – the art of creating value. Information systems, therefore, is not necessarily technology but rather the managerial skills to convert the potentials in technology into outcomes such as lower cost of production, increased productivity , more profit, improved efficiency, lower consumer prices, speed and quality of service and competitive advantage – i.e. economic value.

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