

# The Strategic Use of Information Technology in the Insurance Industry

## A Case Study of State Insurance Company- Kumasi, Ghana

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### Abstract

The study aimed at finding out the strategic use of information technology in the State Insurance Company limited- Ghana, using Kumasi area office as the case study. Generally, the study focused attention on how managers and workers need to know about technology, the kind of information systems that support business needs, the benefits of adopting emerging technologies in insurance among others. Sixty (60) respondents were purposively selected which was guided by sampling procedure. Quota sampling was also adopted. Two (2) questionnaires were administered to the Area Manager and the deputy, ten (10) to all Heads of departments, thirty (30) to Senior Staff and eighteen (18) to Junior Staff. The findings revealed that most of the respondents rated the strategic use of IT in the company as playing a good role due to the fact that it has improved the workflow, respond quickly and timely on information requests and reduce cost of filling, storing and retrieving paper document, and unlike the traditional method, documents stored electronically are seldom lost or misfiled whilst at the same time it has reduced risk to a manageable extent. There was also insufficient transaction through the internet between clients and the company. It was recommended that State Insurance Company Limited should add knowledge in IT as a prerequisite for recruiting staffs with the intention of reducing the operating cost of IT.

**Keywords:** Information Technology (IT), Insurance, Risk, Kumasi, Internet, Recovery, Recruiting

### BACKGROUND TO THE STUDY

Many years ago, when life was simpler, people, did not need so much information. But as society got more complex, more information was needed, People needed to know distances, time, price, data and many other details.

Information technology devices have become the main devices through which information is entered, stored or transferred from place to place. The internet being the most widely networked system used.

Information technology helps to perform tasks at high speed. It saves time and uses less human effort as compared to other office machines. Additionally, it is more accurate and serves many purposes such as calculating, editing, drawing, and storing information. It provides large amount of qualitative information through the internet as compared to other office machines. Managers today have increasing responsibility for determining their information systems needs and for designing and implementing information systems that support these needs.

Insurance is the practice of sharing among many persons, risks to life or property, motor insurance. This is effected by each person paying a sum of money called a premium, which with those paid by all others is put into a 'pool' or insurance fund, out of which money is paid to the few who suffer loss.

State Insurance Corporation was incorporated in February 1962 by Executive instrument (EI) No.17, which was passed under the Statutory Corporate Act, 1862 (Act 232). On August 28, 1995, the corporation was converted into a public Limited Liability Company and renamed State Insurance Company Limited. It was re-registered under the Companies Code, 1963 (Act 179) and currently has paid up capital of ₵25 billion. Their Corporate vision is to provide innovative and competitive insurance and other financial services to their clients through a highly motivated and efficient workforce, coupled with a commitment to deliver optimal returns to the shareholders. Consequently, a mighty block of offices was put up at Kumasi, in the late sixties by the company to provide all classes of insurance to people in Kumasi.

The introduction of market economy in the early seventies and the advent of the Economic Recovery

Programme in 1985 to a large extent broke the monopoly of the State Insurance Company and many firms offering all classes of insurance policies sprung up in the metropolis. These firms employ canvassers who go round the city and its surrounding villages for patronage.

### **1.3. STATEMENT OF THE PROBLEMS**

In this computer age, technology is diversified and is growing at a faster rate. As a result of this, all organizations are adopting to the changing trends in information processing. The State Insurance Company is no exception to this development considering the large volume of documents processed weekly, monthly and annually in the area of insurance policies.

1. There is the need to research into how State Insurance Company is using IT in enhancing its administrative and management decision making.
2. To find out the strategic use of IT in processing the various insurance policies.
3. The types of Management Information Systems used in the State Insurance, The challenges in dealing with risks and the impact of new technology.
4. To increase our understanding of how risk assessment can be enhanced by Information Technology.

### **1.4 OBJECTIVES OF STUDY**

1. The purpose of this study is to emphasize the strategic use or application of IT in State Insurance Company, to enhance management decisions, and processing of policies.
2. Emphasize the types of Management Information Systems used in the State Insurance Company to speed up processing to reduce cost.
3. Emphasize the challenges in dealing with risks and the impact of computing on risk management.
4. Emphasize how IT has changed risk management in the Insurance industry.
5. Emphasize how to increase our understanding of how risk assessment can be enhanced by information technology.

The work will help managers to understand information systems concepts and applications.

### **1.5 THE RESEARCH QUESTIONS**

The research questions to be answered are:

1. What does the Manager and workers need to know about technology?
2. What kind of information systems support business needs?
3. What new technologies should a manager pursue to enhance decision making?
4. What benefits would an Insurance company gain in adopting of emerging technologies?

### **1.6. SIGNIFICANCE OF THE STUDY/ JUSTIFICATION OF THE STUDY**

The study will help policy makers to understand how best Information Technology devices could be used strategically to enhance the work of insurance firms.

The study is very significant to those responsible for office administration to act promptly so as to ensure that appropriate information systems are used to yield better results.

The study will help the Insurance Company to identify information systems needs that create a business advantage. That is one must understand how information technology can provide better policies, enhance existing service, and create new business opportunities. Then you will be able to plan and develop information systems that improve market share, counteract rivals and facilitate linkages with customers. The Managers and workers will also learn how Information Technology provides organizations with a competitive advantage.

### **1.7 METHODOLOGY**

The method use in this study was a survey. It involved three phases, preparation, field work, and data analysis. The principal research instruments used were library searches and the internet, interviews and questionnaires. The population for the study involved the entire workers of the State Insurance Company; since it was virtually impossible to contact the entire membership constituting the population a sample of sixty (60) respondents cutting across the spectrum of workers was chosen. Thirty (30) Junior Staff and (30) Senior staff.

The researcher framed questions and wrote them down for respondents to provide answers to them. This enabled the researcher to gather information from the company. The respondents were assured of the confidentiality of information they had to provide. The questionnaire method helped the researcher to get personnel's who actually have and know how to use computers in the company. Structured and unstructured interviews were employed. The interview method was used in addition to the questionnaire at all the offices. Every department, unit or section was reached with the interview. The interview method enables the researcher

deals with all categories of personnel in their offices.

The data gathered for the study were analyzed with the use of tables, graphs and charts. Conclusions were drawn and recommendations were made.

## 2.0 LITERATURE REVIEW

Insurance, like most of the financial service sector, is an “information intensive” industry under transition. The industry is populated by a few large firms, and a large number of small and medium-sized firms. Some years ago, the insurance industry was driven and growth oriented. Increase in premium income translated generally into increases and higher earnings.

Today the industry is very different. The competitive arena is characterised by stiffening international competition, new entrants from the blurring of traditional market boundaries between banks, brokerages, insurance carriers, and nonbank financial institutions, slower revenue growth, fluctuating interest rates, shifts in socioeconomic trends, greater products innovation, shorter product life cycles, and more diversified products. The competitive pressures in the industry have resulted in less profitable products, more intense price competition, lower product persistency, and a greater need to reduce overall administrative costs. With these changes, the insurance industry has become more cost and service oriented.

Historically, insurance has been a leading industry in the utilization of information technology. In addition to routine administrative support, insurance firms rely on information technology for product development, new business processing, product distribution, and client servicing.

### 2.1. STRATEGIC INFORMATION SYSTEMS

Many organizations looked on information systems as support functions for the essential business of the organization. Therefore the primary focus of this research is on the effects of information systems on State Insurance Company.

(Fara Warner, *Fast Company* 47 (June 2001) and Benjamin et al 1983), wrote about the business strategy foundation that helps general managers visualize how to use information resources for competitive advantage. The evolving strategic use of information resources highlights the differences between simply using information systems and using it strategically.

This chapter explores the use of information resources to support the strategic goals of an organization. It enables a general manager to understand the link between business strategy and information strategy on the information systems strategy triangle. General Managers want to find answers to questions:

- Does using information resource provide a sustainable competitive advantage?
- What tools are available to help shape their strategic use?
- What are the risks of using information resources to gain strategic advantages?

### 2.2. EVOLUTION OF INFORMATION RESOURCES

Information Systems strategy from the 1960s to the 1990s was driven by internal organizational needs. First, comes the need to lower existing transaction costs. Next was the need to provide support for managers by collecting and distributing information. An additional need was to redesign business processes. Each era begins; organizations adopt a strategic role for information systems to address not only the firm’s internal circumstances but its external circumstances as well. Companies seek those applications that provide them with competitive advantage over competitions. They seek applications that keep them from being outgunned by startups with innovative business models or traditional companies entering new markets. For example a plethora of “dot-com” challenged all industries and traditional businesses by entering the marketplace armed with internet-based innovative systems.

### 2.3. HOW CAN INFORMATION RESOURCES BE USED STRATEGICALLY?

Information resources should be directed strategically to alter the competitive forces to benefit the firm position in the industry. According to Ahonen (2002), eBusiness is reality on every line of business. In insurance business the use of eBusiness solutions has been more conservative and moderate than on many other areas. This is partly a result of strict legislative control and public regulation. Since 1996 when the first insurance company opened its www-sites the development has, however, been continuous.

At the beginning the focus of the Internet services provided by insurance companies was on information-based services. Since then insurance companies have moved to create and provide also interactive services on the Internet. The reason behind this development is e.g. cutting costs, speeding up transactions and service, better accessibility and other benefits.

At the moment it is possible to buy some simple insurance services, such as travel insurance, via Internet, but so far full line of insurance cover is not available. However, many insurance companies have prioritized business-to-business Web-facilities that enable corporate customers to update their insurance cover,

seek claim compensation and to get information via Internet.

The insurance industry has faced considerable problems as the complexity of identifier system has hindered the increase of electronic transactions. This concerns especially large companies.

From the consumers' perspective, electronic insurance services are not yet as developed as business-to-business services. The small and medium sized companies are facing the same problems. Therefore, one of the main challenges in the future is to simplify electronic systems in order to get consumers and smaller companies as e-customers. However there were also some benefits the insurance company saw that eBusiness has brought. For example, updating information is much easier than before because it can be executed faster and with lower costs by only conducting the changes needed on the Web. The interaction between the company and customers also becomes faster but more development in identifier systems is required.

**Michael Porter (1988)** said using Information resources to influence competitive forces provides the general manager with a classic view of the major forces that shape the competitive environment of a firm. Each force will be explored in more detail from an information system perspective.

### **1. Potential threat of New Entrant**

Barriers to entry help the firm create a stronghold by offering products or services that are difficult to displace in the eyes of the customer based on apparently unique features. Such barriers include controlled access to limited distribution channels, public image of a firm, and government regulations of an industry. Information resources also can be used to build barriers that discourage competitors from entering the industry. For example Life Insurance Company created information system infrastructure that connects the local sales agent with comprehensive information about products and customers. An insurance company entering the marketplace would have to spend millions of cedis to build the telecommunications and information systems required to provide its sales force with the same competitive advantage. Therefore, the system may be a barrier to entry for new companies.

### **2. Bargaining Power of Buyers**

Customers often have substantial power to affect the competitive environment. This power can take the form of easy consumer access to retails outlet to purchase the product in large volumes at super stores. Information resources can be used to build switching costs that make it less attractive for customers to purchase from competitors. Switching costs can be any aspect of a buyer's purchasing decisions that decrease the likelihood of "switching" his or her purchase to a competitor. Such approach requires a deep understanding of how a customer obtains the product or service.

### **3. Bargaining Power of suppliers**

Suppliers bargaining power can reduce a firm's profitability. This force is strongest when a firm has few suppliers from which to choose, the quality of suppliers inputs is crucial to the finished product, or the volume of purchases is insignificant to the supplier. Through internet, firms continue to provide information free as they attempt to increase their share of visitors to their web sites. This decision reduces the power of information suppliers and necessitates finding new ways for content providers to develop and distribute information.

Many internet firms are integrating backward within the industry by creating their own information supply and reselling it to other internet sites. Well funded firms simply acquire these content providers, which is often quicker than building the capability from scratch.

### **4. Threat of substitute Products**

The potential of a substitute product in the marketplace depends on the buyers' willingness to substitute, the relative price-to-performance of the substitute, and the level of switching costs a buyer faces. Information resources can create advantages by reducing the threat of substitution. In the financial services industry, For example, Merrill Lynch used innovative Information System to create a product called the Cash Management Account. This account combined the benefits of a brokerage account, a money market account, a Visa credit card, and a checking account into a single product. Other firms lacking Merrill Lynch's information system were unable to provide all these services in a single account. The Cash Management Account helped attract many new brokerage accounts and allowed Merrill Lynch to build customer relationships that helped retain each account. Customers and potential customers could not easily find substitutes. Other brokerage firms took years to develop similar products. Even when substitutes became available, Merrill Lynch still enjoyed an advantage because competitors had to overcome the cost to the customer of switching accounts. For competitors to be successful, they needed to offer not just a substitute, but a better product, so far none has.

### **5. Industry Competitors**

Rivalry among the firms competing within an industry is high when it is expensive for a firm to leave the industry, the growth rate of the industry is declining, or products have lost differentiation. Under these circumstances, the firm must focus on the competitive actions of a rival in order to protect market share. Intense rivalry in an industry assures that competitors respond quickly to any strategic actions. For example, when a large bank developed an ATM network, several smaller competitors joined forces and shared information resources to create a competing network. The large bank was unable to create a significant advantage from its

system and had to carry the full costs of developing the network by itself. Information resources were committed quickly to achieve neutralizing results due to the high level of rivalry that existed between the local bank competitors.

One way competitors differentiate themselves with an otherwise undifferentiated product is through creative use of Information Systems. For example, FedEx adds information to its delivery service helping it differentiate its offerings from those of other delivery services. FedEx customers are able to track their packages, know exactly where their package is in-transit, see who signed for the package, and know exactly when it was delivered. Competitors offer some of the same information, but FedEx was able to take an early lead by using information technology to differentiate their services.

#### **2.4. TYPES OF MANAGEMENT INFORMATION SYSTEMS USED IN INSURANCE COMPANY TO SPEED UP PROCESSING AND TO REDUCE COST**

In the insurance industry, computers are used in analyzing insurance data and for figuring out premiums, billing, investment, analysis, policy approval, keeping track of policy holders, records and processing claims. Computers are used for statistical analyses of the risk involved in insuring various groups (life/accident). The data bases required to store and utilize this mass of data efficiently and effectively are necessarily enormous and integrated data processing systems is being used.

**Michael Charest Extreme Software, Incorporated**, said insurance is a content business. Policy, applications, claims forms, employee files, procedure manuals – are types of content. Historically, for insurance companies, content has meant paper. Manila envelopes containing forms, memos, and notes are passed from person to person in the course of issuing a policy or settling a claim. These processes are time – consuming, require a number of people to complete them, and have a high potential for errors. Insurance companies have long sought ways to reduce the mounds of paper and create more efficient processes. The tools to achieve those goals – document scanning, optical character recognition, workflow – continue to mature. Yet few companies have deployed these tools in a strategic framework that allows them to handle efficiently the massive information associated with insurance operations. Now, however, the landscape is changing. Enterprise Content Management (ECM) is emerging as a solution to the paper puzzle and a foundation for improving processes and operations.

##### **What is Enterprise Content Management? (ECM)**

Is the ability to store all business content in one central repository and make it available for processing, review, and other corporate uses? People throughout the organization can share and use digitized content, whether it is a document, data or email message. An insurance company is an ideal organization for ECM deployment because documents like contracts must be moved from one specialist to another for processing. The ability to point to and retrieve electronic content in a repository instead of routing physical document copies can lead to huge efficiency and productivity gains.

The paper-Laden Process:

Consider the example of opening an annuity for a client. In most companies, an agent or broker fills out an application and mails it to the insurance company. Someone in the company mailroom opens the application, determines what the form is, and routes it to the new business.

##### **The elements of an ECM solution**

The key element of Enterprise Content Management Solution

- Content acquisition – the capture and digitization of content. Any form of content – paper or electronic – is put in a standardized format for the content repository;
- Content repository – the actual environment where electronic content, as well as the metadata that describes the content, is stored;
- Business rules, policies, and security – guidelines and requirements for maintaining content, including version control and security measures. Business rules can either be applied to content within documents or refer workers to specific rules documents; and
- Administrative tools - dashboards that give executives and managers the ability to conduct status inquiries on people and processes.
- Cost reduction – improved efficiency, increased capacity, and workforce reduction;
- Reduced time to market – support for new business services, new products, and new brand messages;
- Better usability – ease of access to all content across all systems and platforms;
- Digital convergence – an ability to meet increasing demands to create a digital content master and re-express content quickly;
- Increased value – improved user and customer experiences, asset recognition, and reduced transactional “friction” and “float” ;
- Cross-department collaboration – an ability to meet demands for integrated, automated support of

processes involving multiple departments within the organization; and

- Productivity Improvement – A primary benefit of ECM is the potential to achieve overall productivity improvement. By eliminating the inefficiencies inherent in creating and routing paper documents, ECM can improve cycle times, reduce errors, and increase the organization's ability to measure operational processes.

## **2.5. IMPACT OF COMPUTING ON RISK MANAGEMENT**

Managing your business exposure to risk is now more important than ever. Today, even a seemingly minor incident may result in expensive legal action. Careless hiring practices can lead to significant Workers' Compensation or general liability claims. Routine maintenance and small repair jobs left undone can snowball into major property expenses. Loss of equipment or computer data because of a fire can stop your production or even shut down your business.

With so much at stake, it makes good sense to implement a comprehensive risk management program for your business. An effective risk management program helps you understand and be prepared for the risks you face before losses occur—and that preparation can mean the difference between a profitable or unprofitable business.

### **2.5.1 What Is Risk?**

In insurance terms, risk is the chance that your business will lose money because of:

- Liability for injury or death of employees or other people on your premises.
- Liability for injuries or damage caused by products you make.
- Destruction or theft of property, equipment, machinery, vehicles or other assets.
- Loss of net income through lost sales or extraordinary expenses.
- Anything else that adversely affects the way you do business (such as interruptions to your suppliers due to a natural disaster).

**Tom Hutton, President of Risk Management Solutions Incorporated**, wrote on the impact of computing on risk management. The impact of computing on risk management has been absolutely enormous. It has helped us advance from a poor art to a reasonable science. According to him, one of the key issues which need to be considered is that, it is not technology that is going to keep us from achieving solutions, it is implementing those solutions. To achieve our goals, we do not need software to do a specific set of things tomorrow that it doesn't do today. We have to understand what the issues are that we are dealing with, how to communicate them appropriately, and therefore, how to put the technology to work.

### **2.5.2. Historical View of Underwriting**

Historically, there was a lot of art in the practice of underwriting highly volatile risk because there wasn't very much information characterizing them. A great deal of emphasis was placed on the experience of the underwriter. There was a presumption that the law of large numbers would provide some protection, and that created some stability in the industry. These practices were supported by manual tools: judgment, inspection and interesting tables.

Computers in the 1960s were used for accounting purposes. Some of the files were replaced with punch cards, which were more efficient. Analyses were replaced with adding machines. The decade of the 1970s saw a dramatic proliferation of IBM mainframes in the insurance industry. The industry used to get thick stacks of reports every week that came out of printers. Then the industry went from centralized computing to decentralize computing primarily through the proliferation of Personal Computers (PC).

### **2.5.3. The impact of new technology**

Every sophisticated institution in the world will utilize client server computing. We will be able to tap into information from outside as well as inside the company. With respect to risk management, insurers and reinsurers are now able to make real-time decisions with respect to how an individual risk impacts a portfolio, what its price implication is, how that changes the capitalization of the company, how that capitalization changes the value it is providing to shareholders.

### **2.5.4. The role of computer technology**

Insurers today can learn a lot by looking directly at what is in their portfolios.

Using computer technology, risk is analyzed by stimulating a tremendous number of events using data from a large number of sources. The output information from these models supports a number of traditional functions. The most traditional function is that of pricing, whereby one estimates the probabilities of losses of different magnitudes to determine appropriate insurance rate. However, the impact goes far beyond that. Today most of us read about Wall Street's efforts to essentially redefine insurance around the use of different financial instruments. This could not possibly occur without high degree risk quantification, and models are making possible. The likelihood of interesting financial opportunities coming out of greater quantification in the insurance industry is very, very high.

## 2.6. HOW INFORMATION TECHNOLOGY HAS CHANGED RISK MANAGEMENT IN THE INSURANCE INDUSTRY

**Karen Clark, President of Applied Insurance research**, said today, the current modeling takes into account information from lots of different disciplines, it doesn't just look at historical loss data but at metrological data, seismological data and engineering data. The modelers are knowledge integrators. He looked at the very detailed characteristics of the underlying exposures;

What are the structural types?

What kinds of buildings are we insuring?

Where are the true exposures which may produce catastrophes?

What are the probabilities of losses of all types, in different geographical areas?

He provides a lot of detail on the likelihood of different loss scenarios for different insurers and reinsurers.

Now the modelers are presenting companies with all this detailed information. The real challenge for insurers is to figure out how to use it.

The utility of modeling is to help companies to harness this information and use it to make good risk management decisions.

## 2.7. THE IMPACT OF INFORMATION TECHNOLOGY ON INSURANCE AND REINSURANCE INDUSTRY

Evolution of Risk Management by Mike Mangini underwriting officer talks about, an event that really started to open people's eye was Hurricane Gloria in 1995. It was categorized as "Storm of the Century. It did raise a lot of questions about how bad it could have been. It was not easy to answer those questions.

### 2.7.1. The development of Geographic Information System (GIS)

The major changes that enable the group to get a better handle on what was going on, was the introduction of a desktop PC that had some database management capability. All that changed with the development of GIS which enabled insurance to marry location information about policies with that of hazard layers. One of the common uses of a GIS system is to access risk concentration. For instance a thematic map can be use, color it according to exposure ranges, analyze risk concentration and determine risk management in a particular area.

GIS is also used as a location check device, matching locations to a street.

The next level of GIS is elevation. Within a brush hazard area, for instance, we can differentiate between higher and lower risk based on the fact that fire is going to travel uphill. Through this process of just looking at four layers of geographical information, an underwriter with absolutely no knowledge of the territory would be provided with the information necessary to make an informed decision about the better risk to choose.

### 2.7.2. The value of information

There are incentives for firms to invest in information to acquire information, and to develop information. In order for them to want to incur these costs, firms need to reap the economic value of this information and hence want property rights to it. At the same time those property rights can raise the cost of entry of other firms into the market place.

Depending on what type of information is controlled and how it can be accessed, this can potentially diminish competition. There is a trade off between encouraging innovation and acquisition of information, while at the same time making sure that there is sufficient public and broad access to information to encourage competition. This is especially true in the insurance industry where information is critical to many insurance functions.

## 3.0 FINDING AND ANALYSIS OF DATA

### 3.1 ANALYSIS OF PERSONAL DATA FROM RESPONDENT

Table 1. GENDER/SEX COMPOSITION OF RESPONDENTS

Gender	Frequency	Percentage (%)	Cumulative Percentage
Sex Male	38	63%	63
Female	22	37%	100
Total	60	100	

Source: Field work (April 2007)

This section deals with the personal information that was gathered from the respondents.

The table exhibits the gender composition of the respondents. As shown 63% of the respondents were males whilst 37% of them were females. This means that the workforce is being controlled by the male population implying that the gender composition of the respondent is not proportional.

**Table 2. NUMBER OF YEARS RESPONDENTS HAVE WORKED**

Number of Years	Frequency	Percentages
<b>Below 1 year</b>	<b>4</b>	<b>7</b>
<b>1 – 5 years</b>	<b>11</b>	<b>18</b>
<b>6 – 10 years</b>	<b>12</b>	<b>20</b>
<b>11 – 15 years</b>	<b>21</b>	<b>35</b>
<b>16 – 20 years</b>	<b>7</b>	<b>12</b>
<b>Above 20 years</b>	<b>5</b>	<b>8</b>

The table above shows the number of years respondents have worked in State Insurance Company Limited, Kumasi. Majority representing 35% falls between 11 – 15 years with 7% below 1 year, followed by 6 – 10 years, 1- 5 years, 16 - 20 years and above 20 years representing 25% , 18% ,12% and 8% respectively. This means that the workforce is highly resourced with rich and competent personnel who know the pros and cons of using information technology.

**Table 3. SEX COMPOSITION AND POSITION/STATUS OF RESPONDENTS**

Sex Composition	Top Management	Head of Sector	Senior Staff	Junior Staff	Total
<b>Male</b>	<b>1</b>	<b>10</b>	<b>18</b>	<b>10</b>	<b>38</b>
<b>Female</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>8</b>	<b>22</b>
<b>Total</b>	<b>2</b>	<b>10</b>	<b>30</b>	<b>18</b>	<b>60</b>

Table 3 above indicates that only the top management shows gender balance, the remaining positions were not fairly distributed. Most of the positions were headed by the male workers. For instance, in the course of the data collection, it was found out that with the exception of the Deputy Area head which was headed by a female and was considered part of the Top Management, Claims, IT, Accounts were headed by males. Out of the total respondents interviewed, ten (10) were heads of various section, Thirty (30) were senior staff with eighteen being males and twelve (12) being females whilst eighteen were junior staff out of which ten (10) were males and eight (8) females.

### 3.2. ANALYSIS OF RESPONDENTS ON THE APPLICATION OF INFORMATION TECHNOLOGY IN THE STATE INSURANCE COMPANY

**Table 4. NUMBER OF RESPONDENTS WHO DEMANDS INFORMATION TECHNOLOGY AND ITS APPLICATION**

Those who require IT	Underwriting insurance	Life	Duties that demand IT	Claims	Data Entry	Others	Total
			Gathering information				
<b>Yes</b>	<b>18</b>		<b>8</b>	<b>7</b>	<b>16</b>	<b>11</b>	<b>60</b>
<b>No</b>	-		-	-	-	-	-
<b>Total</b>	<b>18</b>		<b>8</b>	<b>7</b>	<b>16</b>	<b>11</b>	<b>60</b>

Table 4 manifests the number of respondents whose duties demand the use of modern technology. In all, the total sample size indicated that they all need information technology in their various assigned jobs. At the State Insurance Company Limited, it was found out that the use of CIBAS – software designed purposely for underwriting operations was predominately used. The underwriting departments use it in underwriting all forms of insurance, the accounts also uses Orion software in preparing statement of accounts, endorsement and other reports. The data entry section also uses IT in creating new businesses, extracting personal data and writing reports, whilst the claims also use it in processing claims. Other respondents such as those in IT, marketing, senior management position also need IT in their daily operations.



### 3.3. NEW INFORMATION TECHNOLOGY THAT MANAGERS SHOULD PURSUE AND WHAT THEY SHOULD KNOW.

**Table 5. NEW INFORMATION TECHNOLOGY THAT MANAGERS SHOULD PURSUE AND WHAT THEY SHOULD KNOW**

		WHAT THE MANAGER SHOULD KNOW			
New IT	Application	Decision Making Software	Database Management	Strategic Systems	Total
Computer assisted design	0	16	13	9	6
Mainframe Computers	-	-	-	-	-
Internet	-	-	-	-	-
Facsimile	-	-	-	-	-
Others	-	-	-	-	-
<b>Total</b>	-	<b>16</b>	<b>13</b>	<b>9</b>	<b>6</b>

The table above explains those new technologies that managers should pursue and what they need to know about it. Forty-four (44) of the respondents said what managers should pursue is computer assisted design. Out of this sixteen (16) said managers should have knowledge on decision making software, thirteen (13) of them suggested database management system whilst nine of them said managers should be well versed in strategic database systems and other software applications respectively. The study confirms Micheal Carest, Exstream Software, Incorporated assertion that insurance is a content business since policy, applications, claims forms, employee files, procedure manuals are types of content. All these functions are engulfed in CIBAS – the software that is used by the State Insurance Company Limited.

**Comments:**

It was observed from the data gathered that a great number of the respondents ticked the need for managers to pursue computer assisted design, even though a few choose other options. Their reason was that the other IT mentioned notably the internet, facsimile, photocopier, scanners form part of the operational tools used in very successful insurance companies. However, to reduce risk and improve quality customer delivery, there is the need to pursue or install computer assisted design as the CIBAS is used in State Insurance Company. This is also consistent with the *Ahonen* (2002) view that electronic business is ready on every line of business.

**Table 6. PROGRAMMES MOST USED BY RESPONDENTS**

Responses	Frequency	Percentage	Cumulative Percentage
Word Processor	6	10	10
Design & Program	2	3	13
Database(Access)	15	25	38
Internet	3	5	43
All	34	57	100
<b>Total</b>	<b>60</b>	<b>100</b>	

The table 6 above, indicate those programmes that management use in getting information on time. Fifty-seven (57%) said, all the under listed programmes are needed in taking various decisions and also serves as a strategic framework that allow staff to handle efficiently the massive information associated with insurance operations. Fifteen (15%) of the respondents representing twenty-five (25%) said database (Access) programme is the one mostly used by them. Whilst those who use word processor, designing programmes and the internet represent 10% , 3% and 5% respectively.

**Comments:**

Respondents' comments on the benefits of IT, these question respondents had the opportunity to air their views on how information technology has benefited them as compared to the manual or traditional equipments. Most of the responses were that the introduction of the new IT helps the organization to store all business content in one central repository and makes information available quickly for processing, review and other corporate uses. Again, the responses indicated that the new IT system makes the information faster, reliable and effective and flow of information through networking and reduces the workload of staff.

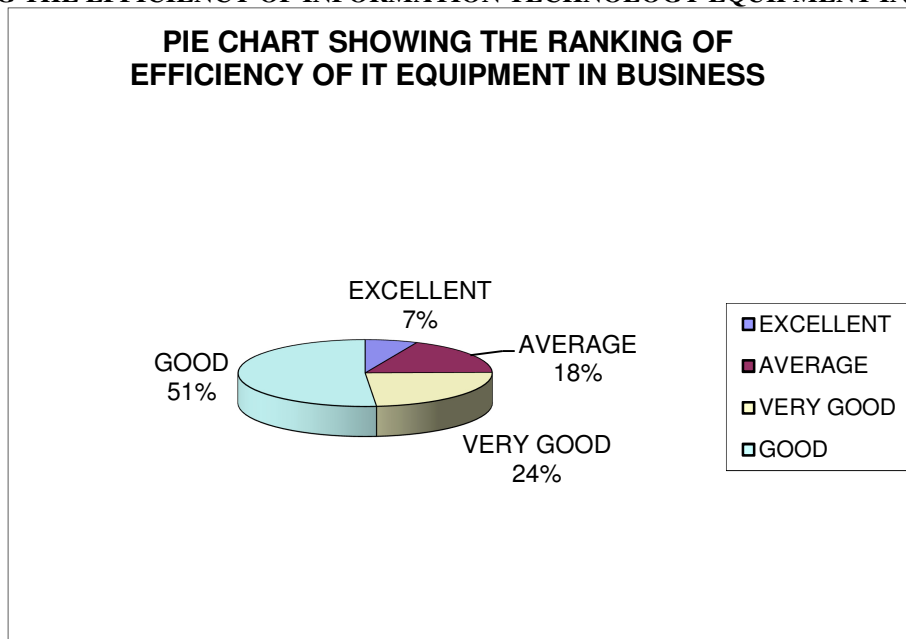
**Table 7. RATING THE PRINTING QUALITY**

Responses	Frequency	Percentage	Cumulative Percentage
Excellent	9	15%	15
Very good	17	28%	43
Good	34	57%	100
Poor	0	0	
Total	60	100	

Table 7: How Respondents Rated the Printing Quality in State Insurance Company. The greater percentage (57%), of the respondents rated the printing quality of State Insurance Company as good, followed by 28% who said the printing quality is Very good. Only 15% rated it as excellent but none said it is poor.

**CHART 1.**

**RANKING THE EFFICIENCY OF INFORMATION TECHNOLOGY EQUIPMENT IN BUSINESS**



**CHART 1.**

7% of the respondent rated IT equipment as excellent, 18% say is average, 24% say is very good, and 51% say is good.

**CHART 2. HISTOGRAM ON THE OVERHEAD COST OF OPERATING INFORMATION TECHNOLOGY EQUIPMENT**

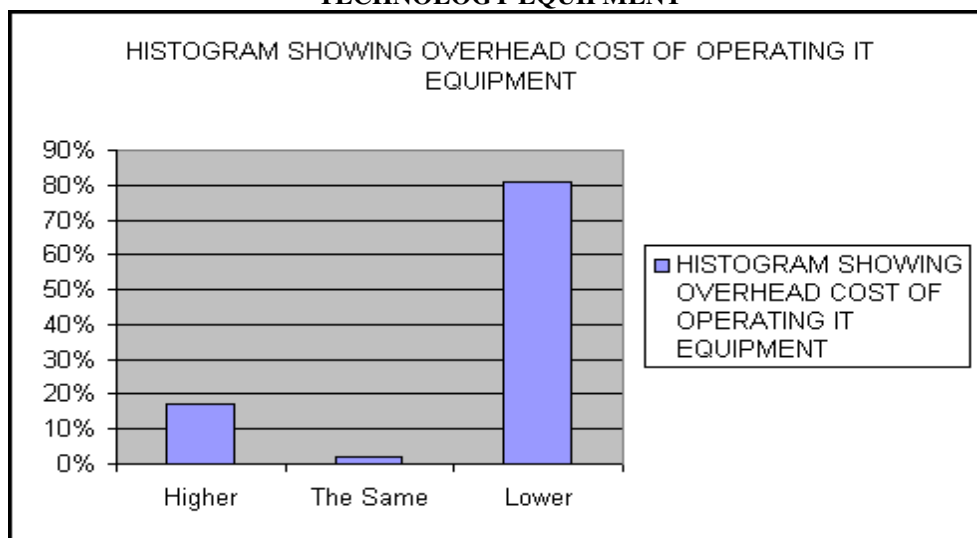


Chart 2. Histogram on overhead cost of operating IT equipment.

The chart 2 above shows that eighty one percent (81%) of the respondents rated overhead cost of operating IT equipment as very low, as compared to the manual or the traditional way. Some of them backed their argument by the fact that some years back, the company was highly over staffed with its associated cost relative to their productivity. However, with the introduction of the new IT system nationwide, it has been able to reduce its labour force and shifted to more capital intensive system which is customer driven oriented. However, seventeen (17%) of the respondents rated it as very high due to high maintenance cost and frequent breakdown of machines, whilst two percent (2%) said the change from the manual or traditional equipment to the use of modern IT system remained the same. They said, sometimes break down in networking and frequent maintenance bring businesses to a stand still.

**Table 8. RESPONDENTS BACKGROUND ON THE USE OF IT**

Responses	Frequency	Percentage
Yes	33	55%
No	27	45%
<b>Total</b>	<b>60</b>	<b>100</b>

The table 8 shows respondents level of education on the use of information technology equipment. Out of the sixty (60) respondents who answered the questionnaires, thirty three (33%) of them forming fifty-five (55%) said they have had some level of IT training whilst the remaining 45% said they had no background on the use of IT systems.

### 3.4 ANALYSIS ON THE USE OF IT ON RISK MANAGEMENT

**Table 9. RESPONDENTS ASSESSMENT OF HOW IT HAS IMPROVED RISK MANAGEMENT**

Responses	Frequency	Percentage
Greatly improved	37	62
Improved	14	23
Fairly improved	3	5
Other	6	10
<b>Total</b>	<b>60</b>	<b>100</b>

The table 9 exhibits the answers given on the question of how the application of IT has improved risk management. Most of the respondents rated the use of IT on risk management as greatly improved. This is seen by the fact that sixty-two (62%) of them choose the greatly improved option, followed by improved which represents twenty-three (23%) of the total valid responses collected. Only three (3%) said it has fairly improved risk management whilst ten (10%) gave other answers such as adverse effect among others. The study confirms Karen Clark, President of Applied Insurance research study that IT modeling takes into account information from lots of different disciplines; it doesn't just look at historical loss data but at meteorological data, seismological data and engineering data.

**Table 4.5. RESPONDENTS RATING ON THE STRATEGIC USE OF IT IN INSURANCE COMPANIES**

Responses	Frequency	Percentages
Excellent	9	15
Very good	14	23
Good	28	47
Satisfaction	6	10
Others	3	5
<b>Total</b>	<b>60</b>	<b>100</b>

The table 4.5 shows that twenty-eight (28%) of the respondents rated the strategic application of IT in the insurance companies as good. They form forty-seven (47%) of the respondents. This is followed by fourteen (14%) of the respondents forming twenty-three (23%) who rate it as being strategically used in insurance. Only three (3%) which constitutes five (5%) responded no. This means that using information resources can influence competitive forces by providing management with a classic view of the major forces that shape the competitive environment of an industry with each force being interrelated with information system perspective as found in Michael Porter's competitive strategy (1988)

**Table 4.6.**  
**3.5 RESPONDENTS ASSESSMENT ON THE IMPACT OF COMPUTING ON RISK MANAGEMENT**

Responses	Frequency	Percentages	Cumulative Percentages
Excellent	29	48	48
Very good	17	28	76
Good	7	12	88
Satisfaction	4	7	95
Others	3	5	100
<b>Total</b>	<b>60</b>	<b>100</b>	

From the table 4.6 above, twenty-nine (29%) of the respondents made an excellent assessment on the impact of computing on risk management which constituted forty-eight (48%) of the responses, seventeen (17%) of them forming twenty-eight (28%) also gave very good assessment on the impact of computing on risk management whilst twelve (12%) said it is good. Those who responded satisfactory and other assessment forms 71% and 51% respectively.

## 4.0 FINDINGS, CONCLUSION AND RECOMMENDATIONS

### 4.1. SUMMARY OF FINDINGS

Generally, the objectives of the study were to look at the strategic use of information technology in the State Insurance Company using their area office in Kumasi at Bompata near Prempeh Assembly hall as the case study. Due to explosion in population, commerce and globalization, people need to know more about distances, time, date and many other details. Information technology is today the commonest method of recording, processing and storing information through devices such as computers, internet, facsimile etc. with the intention of making humans perform tasks at high speed. Due to the diversification in technology and the rate at which it is growing, all organizations are adopting to the changing trends in information processes. The State Insurance Company as a corporate organization is no exception to these developments considering the large volume of documents processed daily.

The purpose of the study therefore is to look at the following areas:

1. Emphasize on the strategic use of IT in the State Insurance Company, in order to improve on management decisions, and processing of policies.
2. Emphasize on the types of Management Information Systems used in the State Insurance Company to speed up processing to reduce cost.
3. Come out with the challenges in dealing with risks and the impact of computing on risk management.
4. Find out how IT has changed risk management in the insurance industry
5. Emphasize how to increase the understanding of how risk assessment can be enhanced.

The use of purposive and quota sampling were employed to generate the sample for the study. Questionnaires were administered to sixty (60) respondents out of which two (2) went to Area Manager and The Deputy whilst Head of Departments, Senior Staff and Junior Staff were assigned ten (10), thirty (30) and eighteen (18) questionnaires respectively. Some of the Heads of departments interviewed includes claims, underwriting and the IT, were purposively interviewed in order to get an insight into the application of IT and how it has facilitated work in the insurance sector and its impact on risk management in the industry.

### 4.2. CONCLUSION

In summary, an advance in information technology is transforming business processes on a broader scale, with insurance being one of the leading industries in the utilization of information technology. In addition to routine administrative support, insurance firms rely on information technology for product development, new business processing, product distribution, and quality client servicing. The intention being to reduce the workload of the workforce and manage risk. It was observed that the use of computer assisted design, internet and word processing were among the most widely used IT systems in State Insurance Company whilst all the sixty (60) respondents demand the use of IT as an essential tool in all sectors of insurance. However, some of the staff had little training on IT which is creating the overhead cost of operating new IT hardware. IT has become a competitive necessity in Ghanaian insurance industry.

### 4.3. RECOMMENDATIONS

In order to ensure that information technology is applied efficiently and then meet the demands of the company, the following suggestions could be made.

1. The company should add knowledge information technology as a prerequisite for recruiting staff. This will help management reduce the operating cost in IT, that the whole idea underlying the introduction of

- new IT method in place of the traditional method will not be defeated.
2. The company should find means of allowing their valued clients buy certain insurance services such as travel insurance, life policies via internet and then make it possible for clients to update their insurance cover, seek claim compensation and getting other information through the same means. This will enable them beat competitors and make high profit.
  3. The introduction of information technology has not handled the problem of risk management fully. There is therefore the need for them to implement a comprehensive risk management program which will help them understand and be prepared for the risks they face before losses occur.
  4. The company should improve the number of IT systems in the various departments since inadequate number of them can bring pressure on the few ones, and hinder the progress in business and as well increase the overhead cost of using it.
  5. Due to the high technical nature of the study, it is suggested that, if the questionnaire method of data collection is used, it should be backed by an interview so that respondents can clarify issues of technical nature.

#### **4.4. AREAS FOR FURTHER RESEARCH**

In order to improve the utilization of information technology and reduce the cost of using IT and manage risk properly in the insurance sector, there is the need for further research to be carried out in the areas mentioned below.

1. Comparative analysis on the utilization of IT system and the manual system in facilitating insurance operations.
2. The challenges in the application of IT in insurance and the way forward.
3. Techniques of assessing the impact of IT in insurance.
4. Due to the high technical nature of the study, it is suggested that, if the questionnaire method of data collection is used, it should be backed by an interview so that respondents can clarify issues of technical nature.

For the promotion of effective study of the topic in future, it is hoped that these suggestions made would be looked into.

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