ADDIS ABABA UNIVERSITY

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GRADUATE STUDIES

AN ASSESSMENT ON ICT PROJECT IMPLEMENTATION IN ETHIO TELECOM: THE CASE OF e-CAF PROJECT

By: Eyuel Hassen

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Addis Ababa, Ethiopia

AN ASSESSMENT ON ICT PROJECT IMPLEMENTATION IN ETHIO TELECOM: THE CASE OF e-CAF PROJECT

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A Research Project Submitted to the Department of Business Administration and Information System in Partial fulfillment of the Requirement for Master of Arts in Project Management (MAPM)

ADVISOR: Wubeshet Bekalu (PhD)

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MASTER OF ARTS IN PROJECT MANAGEMENT

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CERTIFICATE

This is to certify that Eyuel Hassen's project work, "An ASSESSMENT ON ICT PROJECT IMPLEMENTATION IN ETHIO TELECOM; THE CASE OF THE e-CAF PROJECT," completed in partial fulfillment of the award of a Master's degree in Project Management at Addis Ababa University graduate school, is an original work and has not been submitted previously for any degree at this University or any other University.

_____

ADVISOR: WUBESHET BEKALU (PhD)

DECLARATION

I declare that the research project work titled "An ASSESSMENT ON ICT PROJECT IMPLEMENTATION IN ETHIO TELECOM; THE CASE OF THE e-CAF PROJECT" is my original work, and that I have cited and credited all sources used in the study.

_____ _____

Eyuel Hassen Date

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ACRONYMS & ABBREVIATIONS

PTO	Public Telecommunications Operator
ETA	Ethiopian Telecommunications Authority
ETC	Ethiopian Telecommunications Corporation
DRMAS	Digital radio multi access system
VSAT	Very Small Aperture Terminal
UHF	Ultra-High Frequency
VHF	Very High Frequency
HF	long line and high frequency
ADLS	Asymmetric digital subscriber line
FWA	Fixed wireless access
ICT	Information and communication technology
IT	Information technology
UK	United kingdom
e-CAF	Electronic customer acquisition form
CAF	Customer acquisition form
ECM	Enterprise content management
VAS	Value Added Service
SIM	Subscriber Identity Module
CCD	Capture Customer Document
ICCID	Integrated circuit card identifier
RSD	Residential Sales Division
END	Enterprise Division
CSD	Customer Service Division
ZTE	Zhong Xing Telecommunication Equipment
NAT	Network Address Translation
SSL	Secure Socket Layer
TOE	Technology-Organization-Environment
TAM	Technology Acceptance Model

TPB	Theory of Planned Behavior
IDT	Innovation Diffusion Theory
TRA	Theory of Reasoned Action
PU	Perceived Usefulness
PEOU	perceived ease of use
IDT	Innovation Diffusion Theory

Abstract

This research aimed at assessing the impact of electronic customer acquisition form (e-CAF) system on organization performance at Ethio-telecom and to recommend possible solutions for the gap. As result, the researcher has tested the impact of the systems and other related concepts. The data was collected using questionnaires from a sample population. This research has a descriptive nature which elaborates the existing phenomenon as it exists. The data was collected using questionnaires from a sample population. Consequently, result shows that the implemented e-CAF system indeed have significance impact on performance of Ethio-telecom in respect with improve quality of customer profile efficiency and documents management. As a result, lack of strong fraud management system the deployed e-CAF system can't control fraud. In general, e-CAF system are positively impacted the performance of organization. Hence, the researcher has recommended that the company should give emphasis for control of fraud and should re-consider the reporting format so that any users can understand it easily.

Key words: e-CAF, ICT, System, Organization performance, Fraud

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

Strategic information systems were planned to provide competitive advantage for organizations and it is developed in response to corporate business initiative. (THE UNIVERSITY OF SCRANTON'S ONLINE RESOURCE CENTER, 2007) In 21 first century almost, all organizations use Information and Communication Technologies to efficiently manage their operations, to help managers make better decisions and to accomplish competitive advantage, and to facilitate seamless internal and external communications with their employees, customers, partners, and other stakeholders (THE UNIVERSITY OF SCRANTON'S ONLINE RESOURCE CENTER , 2007). An information system is software that helps you organize and analyze data. This makes it possible to answer questions and solve problems relevant to the mission of an organization (2003). Information technology support is required to deliver better telecom service. Outsourcing software development is a growing area it growths the software success ratio because of deployment of highly expert team on the project (Afande & Maina, 2015). This study will focus on the impact of e-CAF system on Ethio-Telecom performance. To deliver better service the company works in improving its infrastructure and internal operation. Several systems found in Ethio-Telecom are developed through outsourcing. Currently Ethio-telecom contract out with four vendors namely Huawei, ZTE, Axon and Ericson. Most of the software development process is performed by Huawei team. The motivation of the study is Ethio-telecom implements electronic customer acquisition form (e-CAF) before 5 years. I was a member of e-CAF project and I motivate to assess the impact of those system on Ethio-telecom performance. The objective of the study is to assess the impact of e-CAF system on Ethiotelecom performance. The study will be conducted in Addis Ababa grand shops. To answer the research questions qualitative approach will be used. The target population will be employee of the company.

1.2 Background of the study

Information and communication technology are the automation of processes, controls, and information production using computers, telecommunications, software and other devices that ensure smooth and efficient running of activities. Business environment is very dynamic and powerful as a result of technological improvement and introduction of information and communication technology as a competitive advantage of any organization. (Agbolade, 2011)

In the previous few periods, application of information technology become at the very heart of the competitive process in business strategies. As economy moves from lower to higher stages of development, the business processes are shifting from simpler to modern and complex techniques of production. In this regard information technology has played a great role in changing input/output relationship of production activities. (Agbolade, 2011)

Growth of unprecedented ICT is driven by computer hardware and software systems have influenced all faces of organizations computing applications. In a highly competitive global business environment, firms seek to improve or maintain their competitiveness by using information systems to improve customer service, shorten cycle times, and reduce cost.

Like other business organizations, Telecom companies are deploying innovative products and services to guarantee their future existence and meet the changing expectation and satisfaction of their customers. In this intense globally competitive market, Telecom companies should struggle to satisfy the needs of their customers through providing quality customer service and improve their customer relation management.

On the above mentioned and the complex nature of some functional units needs more and more inter-functional data flow for decision making, timely, efficient and effective management of customer profile. In this contextual, management of organizations needs efficient and effective information system tool to improve profile management.

As one part of information system tools, e-CAF as a customer profile system comprises integrated sets of comprehensive software, which can be used, when successfully implemented, to manage all customer profile management within an organization.

1.3 Background of the organization

Ethio-telecom previously known as Ethiopian Telecommunication Corporation (ETC) is integrated service provider in Ethiopia which provide internet and telephone service. According to the company's profile booklet (2013), the first Ethiopian pioneer of telephone was Ras Mekonnen who came back with telephone apparatus in 1889 after his visit to Italy. The introduction of telecommunications services in Ethiopia dates back to 1894, seventeen years after the invention of telephone technology in the world. It was Minilik II, the King of Ethiopia, who imported telephone technology to the Country around 1894, with the installation of 477 km long

telephone and telegram lines from Harar to Addis Ababa.. Progressively, the technological scheme was proved to contribute to the integration of the Ethiopian society when the extensive open wire line system was laid out linking the Ethiopian capital city with all the important administrative towns of the country. The company was placed under government control at the beginning of the twentieth century and was later brought to operate under the supports of the Ministry of Post and Communications. Telecommunications services were detached from the postal administration and organized under the Ministry of Transport and Communications in 1952. (ethiotelecom profile booklet , 2013)

Ethiopian government has decided to transform the telecommunication infrastructure and services to world class standard, considering the company as a key leverage in the development of Ethiopia in 2010. (ethiotelecom profile booklet , 2013)

Thus, Ethio Telecom was born on November 29th, 2010 with the ambition of supporting the steady growth of the country. After 4 year introduction of the Ethio Telecom, a best suited IT solution named e-CAF integrate with CRM system was introduced having an objective of creating an automated work environment focusing on the registration of customer profile with the objective of avoiding the manual working process.

1.4 Statement of the Problem

Customer service, residential sales and enterprise divisions are established with the objective of delivering quality telecom service to achieve this all internal operations must be well developed. A well-designed, developed, and implemented system is a prerequisite to develop organizational benefits.

Well known systems which are used by enterprise, residential sales and customer service division specifically back office customer profile management section are e-CAF and CRM it's developed by Axon and Huawei Company respectively. e-CAF system is a full-fledged for customer profile registration (Photo, ID, sales and customer signature) and send to CRM that includes register new and existing customers, checking the quality of registered customer information, supervisor Agent, and Reporting capabilities. Those actions are performed manually on paper before launched e-CAF system., The system is integrated with customer relation management system (CRM) which is used for registering the text information like name, ID, Age……. of the customer.

Customer relationship management (CRM) with electronic acquisition form (e-CAF) strategy are hardly questioned, the implementation challenges appear to be enormous, as evidenced by commercial market research studies. Since the system launched however, there are different complaints are raised from user's side on the performance of e-CAF system. User's states that on doing their activity they face different challenges this are the response time for taking customer information is slow, systems display different error pages, sometimes the display is changed and it's difficult to register customer information and sale products.

Based on my review on papers few studies are done on the impact of e-CAF system on organization performance. Hence, more studies are still required to understand the relevance e-CAF system on organization performance and to give a better insight for other organization.

This study seeks to examine the impact of e-CAF system on Ethio-telecom performance. The following research questions will be answered in this study: -

1.5 Research Question

Accordingly, this research attempts to answer the following main research questions.

1. What is the benefit of e-CAF system on Ethio-telecom performance?
2. Does the information system has an impact on tasks in Ethio telecom?
3. Does e-CAF system implementation help to prevent fraud in Ethio telecom?

1.6 Research objective

1.6.1 General objective

- The general objective of this research paper is to assess practices of implementing e-CAF project in ethio telecom.

1.6.2 Specific objectives

1. To discover benefits gained by the ethio telecom within the selection of e-CAF project to complement its benefit delivery.
2. To investigate the impact of e-CAF system on Ethio-Telecom performance.
3. Examine the finding and provide recommendation based on the finding to enhance the impact of e-CAF system on Ethio-Telecom performance.

1.7 Significance of the study

This study will assess and analyze the impact of e-CAF system on the company performance and provide recommendation based on the finding. Therefore, this study will to explore the impact of e-CAF system on the selected cases and used as good input for the company to identify what aspects are to keep as good practice and manage challenges that needs to be mitigated. In general, the study helps other companies in Ethiopia as input to realize the impact of e-CAF system on organization performance. Moreover, the result of the study will provide additional research insight into how e-CAF system affect the performance of organization and inspires other researchers to conduct more researches in the area.

1.8 Scope of the study

The scope of the study would be constrained to assess the e-CAF project benefits and fraud prevention in post execution stage at ethio telecom selected zones.

1.9 Organization of the Study

This paper consists of five chapters with different sections and sub-sections. The first chapter includes background of the study, statement of the problem, basic research questions, objectives of the study, significance of the study, and scope of the study. The second chapter has the literature review followed by the third chapter method of the study describing type and design of the research. The fourth chapter shows the result or finding of the study and discussions of findings. And the last chapter presents the summery, conclusion and recommendation part of the study.

CHAPTER TWO: REVIW OF LITERATURE REVIEW

2.1 Introduction

The main purpose of this chapter is to go over the relevant literature on the influence of information systems tools on business performance. This chapter's review of literature is separated into three main sections. The chapter begins by providing an overview of information systems. Following that, the chapter reviews research on information system tools and organizational performance. The impact of information systems tools on organizational performance is discussed in the third section.

2.2 Information systems Background

An information system is a work system whose main functions are limited to processing information by execution six types of operations: capturing, transmitting, storing, retrieving, manipulating, and displaying information. (Alter, 1999). A work system is a system in which human participants and/or machines execute a business process by using information, technology, and other resources to produce products (and/or services) for internal or external customers. Work systems may exist and produce their outputs over stretched time spans or may be created as temporary systems designed to provide a particular output and then dissolve. (Alter, 1999) Most work systems can be subdivided into a set of minor work units. For example, one might consider individual steps of a value chain as separate work systems or might consider an entire value chain as a work system. The choice of how to explain the work system under consideration depends on the problem and the analyst. (Alter, 1999). The integration between an information system and a work system can take on many different forms. The information system may serve as an external source of information; it may be an integral component of the work system; it may be an interactive tool; the information system and work system may overlay so much that they are virtually indistinguishable. (Alter, 1999).

An information system is a particular type of work system. It is a work system that processes information by performing various combinations of six types of operations as discussed on the above: capturing, transmitting, storing, retrieving, manipulating, and displaying information. For example, an information system cannot move or produce physical objects even though it may support or automate aspects of a work system that moves or produces physical objects. Similarly, an information system cannot think, learn, interpret information, create ideas, or make decisions unless it contains computer programs that express these tasks in terms of the six basic information

processing operations (Alter, 1999). An information system is may serve other work systems through a diversity of roles to produce information and/or to support or automate the work done by other work systems. In relation to a single work system, an information system may provide information for control the work, decision making, or may automate some of the work. In relation to a group of related work systems, information may support information sharing, may manage the work, and may integrate the work. (Alter, 1999)

2.3 e-CAF and Electronic document management system

2.3.1 Electronic document management system

Electronic documents or images of scanned documents are tracked and stored using an electronic document management system. A document management module, a document entry module, and a real-time digital certificate generator for electronic signatures are all part of an electronic document management system. It is usually also capable of keeping track of the different versions created by different users that mean history of tracking. The term has some overlay with the concepts of content management systems. In the preferred embodiment, the system further includes a document repository module for storing documents and for accessing documents (Kurokawa & Takeshi, 2001). It is often observed as a component of enterprise content management (ECM) systems and related to digital asset management, workflow systems, document imaging and records management systems. (Kevin, 2011) A method for storing, organizing and providing remote electronic access to documents. A cover sheet including a standard set of identification data characterizing each document is developed and stored. A digital version of each document is created and stored by scanning each contract. Each digital version includes a scanned image and a searchable text file, where the text is overlapped with the image. An index of bookmarks identifying sections of the digital version of each document is generated. Certain fields of information are captured from the digital version of the document. The documents are organized and cross-referenced in a database that includes the captured information and additional information related to each document. Designated parties are notified of critical dates associated with each document. Remote electronic access to the documents is provided over the internet. (Jeffery, Scott R, & et al, 2005).

The electronic document management system may deliver automatic documents archiving and retrieval without the necessity to navigate through a directory structure or require a filename. Document comparison is facilitated by automatic retrieval of a previous version of a document. A digital copier alerts a user when a document to be copies already exists electronically within a database. (John, Mark Peairs, & Cullen, 1999) As long as an electronic document management system which sorts out and stores electronic documents automatically. The electronic document management system shows the management names on a console panel of an image' scanner, which are related with document management information and pre-stored in an electronic document management server. When a user chooses a given management name, an electronic document is processed in accordance with the management method associated with the designated management name. This allows electronic documents to be sorted out and stored automatically in accordance with the management method desired by a user, without the need of using any identification document. (Shigeru, 2007)

2.3.2 Electronic Customer Acquisition Form System (e-CAF)

e-CAF is Documentation management system, the process of handling documents in such a way that information can be created, shared, organized and stored efficiently and appropriately, securely and easily retrieves a specific document when it is required. Capturing and uploading Customer information, signature and finger print, photo, and ID copy or other documents electronically, remotely and instantly. (ethiotelecom, 2014).

e-CAF system is an electronic way of customer information and documents management system. It consists of three main modules, CCD, mobile application and Web portal. The Main objective for CCD and mobile application is to collect customer information and web GUI is dedicated to performing back office work. (ethiotelecom, 2014).

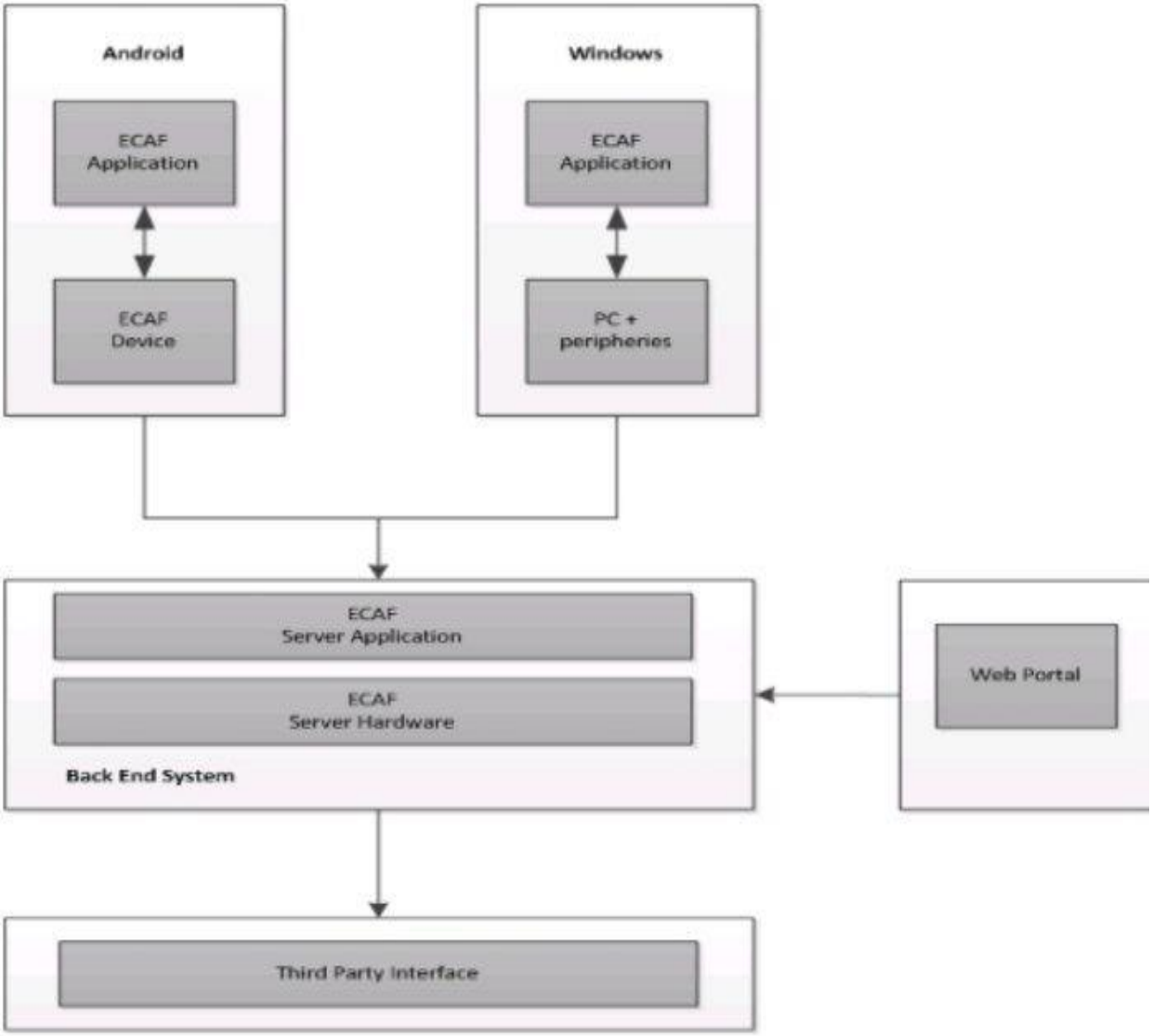


Figure 2.3.2 1High level view

e-CAF is Documentation management system, the process of handling documents in such a way that information can be created, shared, organized and stored efficiently and appropriately, securely and easily retrieves a specific document when it is required. Capturing and uploading Customer information, signature and finger print, photo, and ID copy or other documents electronically, remotely and instantly. (ethiotelecom, 2014).

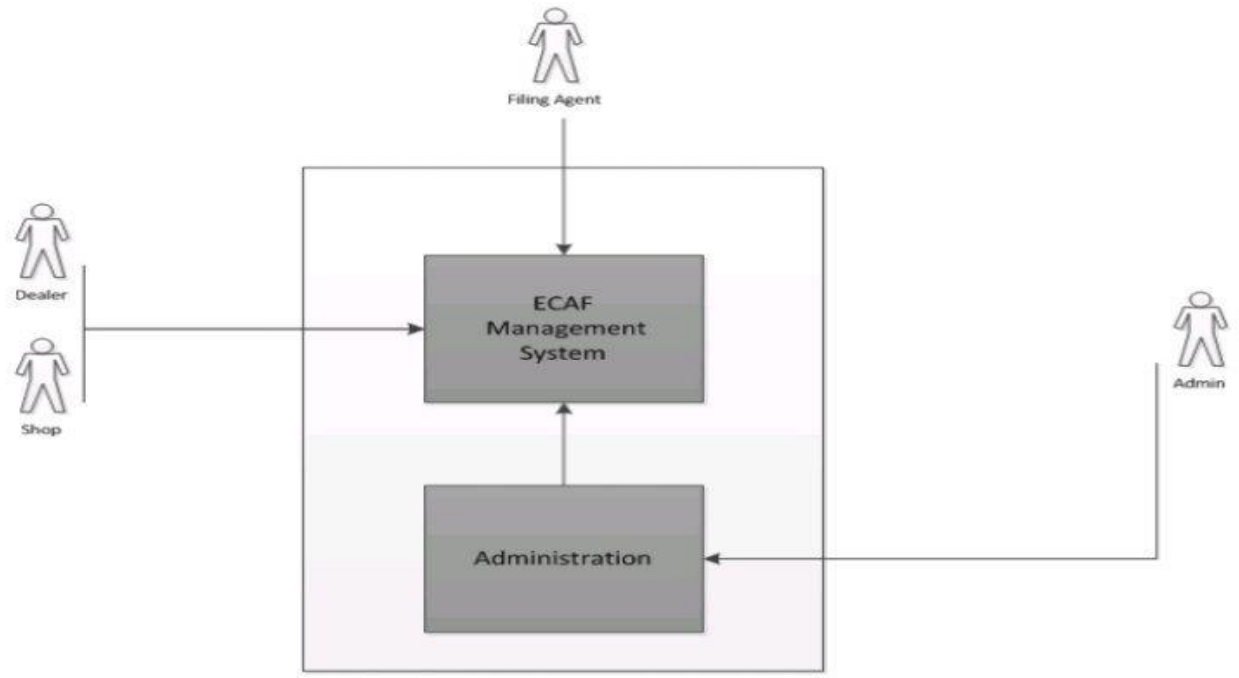


Figure 2.3.2 2 e-CAF Product Description

Business Rule of e-CAF system on Ethiotelecom context

- All saved and submissions e-CAF are stored in the system
- Every e-CAF will be approved by a Filling Agent and Only approved changes will be applied to the customer's ECAF profile and pushed to third party systems
- All rejected e-CAF will be removed from the system after 3 months and it is Configurable to optimize space usage.
- An e-CAF can be linked to many account numbers, Service Numbers, Product Types
- A Service Number can be liked to many VAS Services
- An Account Number can only be linked to one e-CAF
- A Service Number can only be linked to one account
- An ICCID match is done on the last 4 digits. This must match the backend system for the ICCID linked to this Service Number
- e-CAF system is not responsible for SIM swap, and when a SIM swap is done e-CAF knows
- The system can store all historical e-CAF changes for a customer

2.3.2.2 Benefit of e-CAF system on Ethio-telecom context

e-CAF enhance efficient and easy to use customer profile capturing solution, improve customer experience providing detailed insights of customers base, improve operational performance when CAF is required; Easy access for all concerned departments (RSD, END, CSD, Legal, official security departments…), Improve security measures and reduce fraud, Detailed reporting of sales channels performance and Adopting green environment operations by eliminating paperwork. (ethiotelecom, 2014).

2.3.2.3 e- CAF System Features on ethiotelecom context

- Existing customers: will be consolidated with customer current account
- CAF Commissions will be calculated automatically
- All activities of Retailers will be Managed
- A list of all the Mobile device can be Managed
- Mobile should contain details
  - ✓ Last Used Time,
  - ✓ Last Agent,
  - ✓ Last Known Location
- A history of who used the device can be viewed
- Devices can be searched for by IMEI, Username, and Date Ranges
- The Device can be blocked, unblocked, deleted.
- Devices can be provisioned (added)

2.4 Organizational Performance

Performance evaluation is generally carried out by comparison with subjective or quantitative standards. Indicators of the results of processes are termed lag indicators, while measures of process execution are termed lead indicators. Traditional accounting emphasizes quantitative financial measures, which are often lag indicators. Note that this limits the rapidity with which feedback can be obtained and speculate that under the pressures of a rapidly changing business environment, non-financial indicators will become more important, especially comparative benchmarks for service quality and customer satisfaction. (Francis, July 2007)

2.4.1 Impact of an information system tools on organization performance

Impacts on organization performance involve many factors because different performance variables apply to each of the six elements of a work system. For example, customer satisfaction is related to a combination of product function and product performance variables perceived by the work system's customers, such as cost, quality, responsiveness, reliability, and product conformance. An information system's direct impact on organization performance is determined primarily by how well it performs its role in the work systems it supports. The extent to which an information system is an enabler or inhibitor of change is determined primarily by the quality and adaptability of both its content and its plumbing. (Alter, 1999) Impacts on organization performance involve many factors because different performance variables apply to each of the six elements of a work system. For example, customer satisfaction is related to a combination of product function and product performance variables perceived by the work system's customers, such as cost, quality, responsiveness, reliability, and product conformance. These variables are directly or indirectly related to internal business process performance variables such as rate of output, consistency, productivity, and cycle time. In turn, these variables are affected by performance variables related to participants, information, and technology. With so many performance variables interacting, it is often difficult to link any improvement in work system performance to a specific group of information system features or capabilities. (Alter, 1999).

2.5 Challenges of e-CAF

According to Harrison (2012), it is hypothesized that many of the factors affecting the successful adoption of new technologies such as e-commerce is generic in nature and that the successful adoption of internet technologies in part depends on how these are used in conjunction with the other technologies and management practices that form a technology cluster.

Common challenges include; enabling factors (availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and re-organization); security and trust factors (security and reliability of ecommerce systems, uncertainty of payment methods, legal frameworks and intellectual property right); and challenges in areas of management skills, technological capability, productivity and competiveness. Lack of reliable trust and redress systems and cross country legal and regulatory differences was also impeding e-commerce adoption (OECD, 2004). It is however important to note that challenge to e-commerce adoption work

differently according to organizational type and culture. Areas of training and people development need to be addressed Harrison (2012).

However, the most critical challenges can be ascribed to the very limited information and communication infrastructure available in most developing countries. Reasons vary widely among sectors and countries and are most commonly related to lack of applicability to the business, preferences for established business models, (OECD, 2004). Common challenges include; enabling factors (availability of ICT skills, qualified personnel, network infrastructure); cost factors (ICT equipment and networks, software and re-organization); security and trust factors (security and reliability of ecommerce systems, uncertainty of payment methods, legal frameworks and intellectual property right); and challenges in areas of management skills, technological capability, productivity and competiveness. Lack of reliable trust and redress systems and cross country legal and regulatory differences was also impeding e-commerce adoption (OECD, 2004). It is however important to note that challenge to e-commerce adoption work differently according to organizational type and culture. Areas of training and people development need to be addressed Harrison (2012).

2.6 Technologies Applicable to Control System Networks keep safe

According to Juniper (2010), the following are among the major typical security technologies applicable to control System Networks:

A. Network Access Control: To acquire access, this could entail verifying that those users and their laptops or other devices fulfill a minimum security standard. These policies can be based on a variety of factors, including the user's identification, the device's identity, the device's health, and the device's and/or network's location. It is included in a solution to ensure that both the user and the device connect to the appropriate network. It also guarantees that all authentication and security policies are followed by users and their devices. Because network access control affects both users and devices, it can be a viable way for preventing rogue devices on wireless and wired networks.

B. Intrusion Detection and Protection: The appliance adds an extra degree of security. This type of protection (also known as an intrusion prevention system) can be used to assist prevent attacks or just detect them using intrusion detection systems. Information is delivered over the network in packets, which are short data blocks. It goes further than a firewall by analyzing each packet in terms of network protocols, communication context, and session tracking (the time the user spends communicating on the network). It has a big bank of signatures, similar to antivirus software on a

desktop, which helps to identify prospective attacks by matching attempts to exploit known problems.

C. Authentication/Authorization Systems: Authentication and authorization systems secure applications by confirming user identity, granting access to devices depending on that user's position and privilege level, and logging all access attempts so that any infringement or misuse of vital plant functions may be investigated. Even though using passwords alone is insecure, it is nevertheless common to find devices in the field that use the manufacturer's default password. Most security requirements demand two-factor authentication, which entails using a password and a certificate as well as other ways of identity.

D. Firewalls: A firewall is a software or hardware device that filters information entering a private network or computer system via an Internet connection. The filters will not allow an incoming packet of data through if it has been flagged by them. A firewall restricts the network access of a control system to defined ports and protocols from specific networks. Network Address Translation (NAT), which allows several sections of a private network to access the Internet using a single public IP address, and Virtual Private Networks) can also be used to create distinct security zones. The firewall's primary function is to govern traffic across network segments with varying levels of trust—for example, between the Internet and the internal control network, which is a zone with high trust.

E. Encryption of Critical Data: Encryption is the process of changing information, such as a document or crucial communication, into an unreadable form for anyone who does not have access to the cipher's key. It's a common approach of safeguarding very sensitive information. However, because extensively encrypted messages can impair network performance if not properly handled, its use is typically limited to non-real-time messaging and data.

F. Monitoring for Administration and the Audit Trail: The capacity to monitor and administer the entire network to keep it at peak performance, uncover holes, maintain consistent security standards, trace a continuous history of activity, and ensure the complete protection of information is becoming increasingly crucial in today's security systems.

G. Secure Remote Access: Contractors, engineers, and managers can connect remotely using remote access virtual networks provided by secure socket layer (SSL) based security protocols, on

top of these security features. SSL, which is available in all standard web browsers, enables a more secure, efficient, and effective means to access control networks from outside the enterprise. This set of protocols enables secure Internet communications for collecting sensor data, delivering instructions to field devices, performing remote maintenance, and transferring administrative data.

H. Configuration Management: A last part of security is assisting in the maintenance of good network performance in order to avoid issues with availability, access, and service. Configuration management and control, a methodology that focuses on building and maintaining knowledge of the system and network configuration, including security, is supported by a good security solution. Operations people can manage security features and assurances by controlling changes to hardware, software, firmware, testing, and documentation over the lifecycle of the systems Juniper using this technique (2010).

I. Web application security: The system protects against hijacking and manipulation of sessions. With each request, the session ID is double-checked. As a result, a false user can't utilize another user's session id to log in. To prevent the source from being viewed, right clicks are not permitted on the web page.

2.7 Empirical Review

Mufleh Jarrah (2015) has discussed today's increasingly strong, competitive environment and rapidly changing business economies of the world, the electronic customer knowledge is becoming a key factor within organizations as it places considerable emphasis and excessive attention to improve their electronic customer acquisition. As a result, electronic customer knowledge and electronic customer attraction are widely used in the banks to effectively support electronic customer acquisition.

Furthermore, (Romano & Fjermestad, 2003) described the aim of electronic customer acquisition form (eCAF) system is to develop customer service, to retain valuable customers, and to support in providing analytical capabilities. Additionally, from the organizational management perspective, eCAF is all about increasing profitability and enabled businesses to keep customers under control and making the customer feel they are actually a part of the business progress (Shoniregun et al., 2004).

e-CAF enhance efficient and easy to use customer profile capturing solution, improve customer experience providing detailed insights of customers base, improve operational performance when CAF is required; Easy access for all concerned departments (RSD, END, CSD, Legal, official security departments…), Improve security measures and reduce fraud, Detailed reporting of sales channels performance and Adopting green environment operations by eliminating paperwork. (ethiotelecom, 2014).

(Kevin, 2011) A method for storing, organizing and providing remote electronic access to documents. A cover sheet including a standard set of identification data characterizing each document is developed and stored. A digital version of each document is created and stored by scanning each contract. Each digital version includes a scanned image and a searchable text file, where the text is overlapped with the image. An index of bookmarks identifying sections of the digital version of each document is generated. Certain fields of information are captured from the digital version of the document. The documents are organized and cross-referenced in a database that includes the captured information and additional information related to each document. Designated parties are notified of critical dates associated with each document.

2.8 Conceptual Framework

A conceptual framework illustrates what you expect to find through your research. It defines the relevant variables for your study and maps out how might relate to each other. You should construct a conceptual framework before you begin collecting data. It is often represented in a visual format. Bas Swaen (2022)

The conceptual frameworks serves as a tool in analyzing the state of things (variables or concepts) and their interactions for a comprehensive understanding of a phenomenon. The purpose of the conceptual framework is to guide your thinking when the data comes in. Patrick (2020)

The aim of this section is to sum up the idea the researcher obtained from other literatures and bring out the contributions for this study area. Thus, purpose of this study is to assess the customer profile capturing solution, improve customer experience providing detailed insights of customers base, improve operational performance when CAF is required; Easy access for all concerned departments (RSD, END, CSD, Legal, official security departments…), Improve security measures and reduce fraud, Detailed reporting of sales channels performance.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents more concisely the research methods. It deals specifically on the research design, sampling procedure, data collection methods, procedures of data collection and method of data analysis in order to develop methodology to address research questions

3.2 Research Design

Descriptive research design is adopted under this study. Descriptive research may be an extension of a piece of exploratory research or a forerunner to a piece of explanatory research. It is necessary to have a clear picture of the phenomenon on which you wish to collect data prior to the collection of the data. A survey research strategy will be followed since it provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population that includes a cross-sectional survey i.e. where the data will be collected at one point in time using questionnaires for data collection with the intent of generalizing from a sample to a population (Fowler, 2008). Hence, the research design of the study is descriptive as the study is concerned with narration of facts and characteristics regarding group of employees of ethio telecom.

3.3 Data Collection

Primary and secondary data are the two categories of data that are commonly used in studies. Primary data does not exist until it is developed as part of the research process as part of a consulting, dissertation, or project. Experimentation, interviewing, observation, and surveys are all common methods for gathering information. Secondary data is information that already exists in some form or another but was not obtained primarily, at least initially, for the purpose of the consulting project at hand. In fact, secondary data is often the start point for data collection in as much as it is the first type of data to be collected. (Geoff, 2005) This study used primary and secondary source of data. The researcher delivered structured questionnaires to relevant people in order to collect primary data. As secondary data, the researcher looked at many publications, academic journals, relevant academic books, and firm reports in order to strengthen the study's results and findings.

3.4 Target population

Target populations of the study were selected Ethio-telecom staffs. The researcher deliberately selected employees who have worked on e-CAF system. These groups are targeted because the

research believes that they are appropriate people to provide appropriate information and answer of the research questions.

3.5 Instruments of Data Collection

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer the stated research questions, test hypotheses, and evaluate out comes. Both qualitative and quantitative data has been collected. The qualitative data has obtained from a review of relevant literature (secondary sources), whereas the study plans to use a self-administered paper-based structured survey questionnaire (Rating questions) which was designed according to the aims of the research is employed to obtain quantitative data. The questionnaire is used a five-point Likert scale and yes or no to measure the variables. Scales to measure each variable developed based on prior studies with some measurements being modified to adapt to this study.

3.6 Sampling Design

The ideal sampling frame as in many research methodology literatures is based on the notion of its accessibility to the researcher. And so, in the case of this research, since there is no readily available sampling list (frame) for the target population a non-probability sampling method in the form of convenience sampling will be used to select the departments, employees and managers since non-probability sampling method is less costly and saves time Moreover, it is also the only feasible alternative sampling method as a result that the total population may not be available for this study. Similarly, probability sampling method in the form of simple random sampling and stratified random sampling will be used to approach respondents from the population. The sampling design for this population will simple random sampling.

In random sampling each individual in the population has an equal probability of being selected which is important for the external validity of the study (Creswell, 2009). Since the aim of the study is to make theoretical inferences from the results of the study that are suitable for further empirical investigation in any other context, random sampling is the most appropriate method

Accordingly, the total sample size was determined by using the following sample size determination formula developed by Taro Yamane (1967).

n=N/ (1+Ne2) n= corrected sample size, N = population size, and e = Margin of error (MoE), e = 0.05 based on the research condition.

n=100/ (1+100*(0.05)2 =80

3.7 Data analysis and presentation

Tables and charts are used to clearly present the collected data, which are provided in the form of frequency and percentage. Then, to change the organized data, a descriptive analysis technique was used. Meanwhile, esurveypro was employed as the primary tool for manipulating data and determining respondent attitude and perception using the Likert scale.

3.8 Validity

The most important criterion is validity, which reveals how well an instrument measures what it claims to measure. Validity can also be thought of as utility (Kothari, 2004). In other words, validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested. As stated above, questionnaire was used to collect the primary data (see Appendix). Meanwhile, the questionnaire was adopted from Beadles, Lowery, & Johns, (2005), Batool, Sajid, & Raza (2012), and Shiri (2012) scientific Standardize questionnaires. Therefore, to assure validity of the instrument the researcher has given a chance for professionals on the area to review the questionnaire and it was finally validated by advisor.

3.9 Reliability

Another significant test of sound measurement is the data dependability test. If a measuring instrument produces consistent results, it is considered dependable (Kothari, 2004). Furthermore, a dependable measuring equipment contributes to validity. As a result, in order to show the instrument's reliability, the researcher distributed some questionnaires as a pilot test and subsequently made revisions as needed.

3.10 Ethical Consideration

In order to keep the confidentiality of the data given by respondents, the respondents did not require to write their name and assured that their responses were treated in strict confidentiality. The purposes of the study were disclosed in the introductory part of the questionnaire. Furthermore, the researcher has tried to avoid misleading or deceptive statements in the questionnaire. Lastly, the questionnaires were distributed only to voluntary participants.

Chapter four: Data Analysis and Interpretation

4.1 Introduction

This chapter covers the presentation, analysis and interpretation of data collected from primary sources. The chapter covered two sections. The first part presents respondents profile including their work experience in the organization, division and position. The second section presents analysis of the study variables by using charts, tables and consisting of percentages and frequency. And it has also contained the discussion of results and overall responses.

A total of 80 questionnaires were distributed to selected Ethio telecom employees by using esurveyPro tools to collect data about the impact of e-CAF system on Ethio telecom performance. As shown in table 4.1.1 out of the questionnaires distributed to 80 replies 65 questionnaires.

Table 4.1. 1 Questionnaire Distribution and Response Rate

Position within the organization	Questionnaires given	Questionnaires filled	Response rate (%)
Enterprise sales representative	10	7	70%
Residential sales representative	20	15	75%
Approval Agents	20	16	80%
Supervisor	12	11	92%
Profile Administrator	6	4	67%
POS coordinator	6	6	100%
Filling agent	6	6	100%
Total	80	65	82%

Source: Survey result, 2022

4.2 Demographic Data Presentation

Employees participated in the survey questionnaires have different work experience and position.

Table 4.2. 1 Presents the Demographic Data of Participants

Serial NO.	Demographic Information	Classification	Frequency	percentage
1.	Division	Customer service	25	38.46%
		Residential	30	46.16%
		Enterprise	10	15.38%
2.	Position	Enterprise sales representative	7	10.76%
		Residential sales representative	15	23.07%
		Approval Agents	16	24.61%
		Supervisor	11	16.92%
		Profile Administrator	4	6.15%
		POS coordinator	6	9.23%
		Filling agent	6	9.23%
3.	Work Experience in organization	Less than 4 years	1	1.53%
		3-5 years	27	41.53%
		6 and above years	37	56.92

4.	Work Experience on current position	Less than 3 years	30	46.15%
		3-5 years	26	40%
		6 and above years	9	13.84%

Source; survey result 2022

The researcher has focused on three divisions considering the research design and technique, as previously stated e-CAF system implementation. Accordingly, 38.46 percent of the 80 employees who responded to the survey are from the Customer service division, 46.16 percent are from the Residential sales division, and the remaining 15.38 percent are from the Enterprise division.

Table 4.2.1 shows that 16.92 percent of the respondents working as supervisor. Enterprise sales representatives make up 10.76 percent of the respondents, Residential sales representatives make up 23.07 percent, approval agents make up 24.61% of the respondents, Profile Administrators make up 6.15 percent of the respondents, POS coordinators make up 9.23 percent of the total population, and filling agents make up the remaining 9.23 percent.

In terms of work experience in the organization, 56.92 percent of respondents have worked for the company for 6 years or more, while 41.53% have worked for the company for 3 to 5 years. Furthermore, 1.53 percent of the responders have fewer than three years of experience.

In terms of current job experience, 46.15 % of respondents have less than three years of experience, while 40 % have worked their current job for three to five years. Furthermore, 13.84 % of the respondents had worked in their current post for six years or more.

4.3 Descriptive Analysis of Data Collected

4.3.1 Impact of ICT on employee and organization performance

The next section aims to provide and analyze the replies to the first study question's questionnaire items, which is about the impact of ICT on employee and organizational performance.

Table 4.3.1. 1 Information and Communication Technology helps employees to achieve a larger number of tasks

	Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor dis-agree (4)	Somewhat disagree (5)	Disa-gree(6)	Strongly disagree (7)	Total
Fre-quency	52	12	0	0	1	0	0	65
percent	80%	18.46%	0.00%	0.00%	1.53%	0.00%	0.00%	100%

Source; survey result 2022

As seen in the **Table 4.3.1.1**, 98.46% of respondents felt that information and communication technology assists employees in accomplishing a greater number of tasks. This claim was somewhat disagreed with by 1.53 percent of the respondents. By this, we can state that Information and Communication Technology assists the handling of large amount of work.

Table 4.3.1. 2 Information System tools helps employees to deliver output timely

	Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor dis-agree (4)	Somewhat disagree (5)	Disa-gree(6)	Strongly disagree (7)	Total
Frequency	51	12	2	0	0	0	0	65
percent	78.46%	18.46%	3.07%	0.00%	0.00%	0.00%	0.00%	100%

Source; survey result 2022

As seen in the **Table 4.3.1.2**, the majority of respondents (96.93%) agreed that information system tools assist employees in delivering output on time. Two respondents, representing for 3.07 %

responses, agreed slightly. From this fact, we can understand that employees can provide output on time by using information system tools.

Table 4.3.1. 3 Information system tools helps employees to improve work continuously

	Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree(6)	Strongly disagree (7)	Total
Frequency	50	14	0	0	1	0	0	65
percent	76.92%	21.53%	0.00%	0.00%	1.53%	0.00%	0.00%	100%

Source; survey result 2022

From the **Table 4.3.1.3**, it can be determined that 64 of the respondents, or 98.47 percent, believed that information system tools assist employees in continuously improving their work. Only one responder expressed some disagreement, accounting for 1.53 percent of the total 65 responses. From this fact, we can realize that employees enhance their continuous work by using information system tools.

Table 4.3.1. 4 Information system tools helps employees to deliver consistent output even in high work pressure

	Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree(6)	Strongly disagree (7)	Total
Frequency	48	14	1	0	1	1	0	65
percent	73.84%	21.53%	1.53%	0.00%	1.53%	1.53%	0.00%	100%

Source; survey result 2022

Out of the total respondents in table 4.3.1.4 , 63 employees representing 96.9% agreed and only one of the respondents somewhat agreed that Information system tools helps employees to deliver

consistent output even in high work pressure respectively, whereas one of the respondents representing 1.53% of the total responses somewhat disagree. 1 of the respondents were disagree which represent 1.53% of the total. By this, we can say that employees deliver consistence output by using information system tools.

Table 4.3.1. 5 Information system tools has impact on organization performance

	Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree(6)	Strongly disagree (7)	Total
Frequency	50	13	2	0	0	0	0	65
percent	76.93%	20%	3.07%	0.00%	0.00%	0.00%	0.00%	100%

Source; survey result 2022

As shown in the table 4.3.1.5, 65 employees, or 100% of all respondents, agreed that information system tools have an impact on organizational performance. The result shows that Information system tools has impact on organization performance.

4.3.2 User Friendliness and performance of the Systems

This section presents, analyzes, and interprets data related to the easiness and performance of the systems, with a focus on the general user interface, easiness, and responsiveness of the systems.

Table 4.3.2. 1 User Friendliness and performance of the e-CAF System

Items	Category	Rating							
		Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor	Somewhat disagree (5)	Disagree(6)	Strongly disagree (7)	Total

					disa-gree (4)				
The screen design is user friendly	Fre-quency	6	35	19	1	2	2	0	65
	Per-cent	9.23	53.86 %	29.24 %	1.53 %	3.07%	3.07%	0.00%	100.00 %
e-CAF system is re-sponsive in terms of speed	Fre-quency	1	30	23	2	4	5	0	65
	Per-cent	1.53%	46.17 %	35.38 %	3.07 %	6.16%	7.69%	0.00%	100.00 %
e-CAF system is very im-portant to your busi-ness	Fre-quency	27	30	7	0	1	0	0	65
	Per-cent	41.54 %	46.17 %	10.76 %	0.00 %	1.53%	0.00%	0.00%	100.00 %
Are you satis-fied	Fre-quency	1	30	21	2	4	7	0	65

with overall perfor-mance of e-CAF system	Per-cent	1.53%	46.17 %	32.32 %	3.07 %	6.15%	10.76 %	0.00%	100.0 0 %
Users can work on the system without any chal-lenge	Fre-quenc y	2	26	21	1	2	12	1	65
	Per-cent	3.07%	40.00 %	32.32 %	1.53 %	3.07%	18.48 %	1.53%	100.0 0 %
The report-ing formats are easily under-standa-ble by exter-nal users and	Fre-quenc y	9	31	10	9	2	4	0	65
	Per-cent	13.84 %	47.72 %	15.38 %	13.8 4 %	3.07%	6.15%	0.00%	100.0 0 %

deci-sion makers									

Source; survey result 2022

According to the table **4.3.2.2**, 60 employees agreed that the e-CAF system screen design is user pleasant, out of a total of 65 respondents. Only one employee was neutral, while the other four were opposed. All of these numbers show that the system's user interface is simple to learn and operate.

From the table **4.3.2.2,** 83.08 % believed that the e-CAF system is effective in terms of speed. 13.85% employees disagreed with the statement, while only 3.07% employees were undecided. We can conclude from this that the e-CAF system is quick to respond, allowing employees to complete their tasks quickly.

According to the table **4.3.2.2**, 64 employees, or 98.75 % of the total population, agreed that the e-CAF System is highly vital to our organization. Only one employee, though, expressed some disagreement with the statement. We might conclude from this that the e-CAF system is critical to the Ethiopian telecom industry.

80.02 % responses, agreed that the overall performance of the e-CAF system is satisfactory, whereas 11 employees disagreed. Only two employees, or 3.07 % of the total responses, were neither agree nor disagree. We can conclude from this that the majority of respondents are satisfied with the overall performance of the e-CAF system.

The table **4.3.2.2**, also revealed that out of 65 peoples 75.39% of the total respondents believed that users can work on the e-CAF system without difficulty. Only one employee neutral with this comment, while 19 others were disagree. With this knowledge, system users are able to work on the system without difficulty.

Furthermore table **4.3.2.2** shows that, it can be determined that 50 employees, or 76.94 % staff, agreed that the reporting formats are simple to understand for external users and decision-makers. Only six employees, or 9.22 %, disagreed with the statement, while nine employees, or 13.84 %, were neutral. We can conclude from this that the reporting formats are simple to comprehend, but that there is still work to be done on the system's reporting formats.

4.3.3 Impact of e-CAF system on daily activities

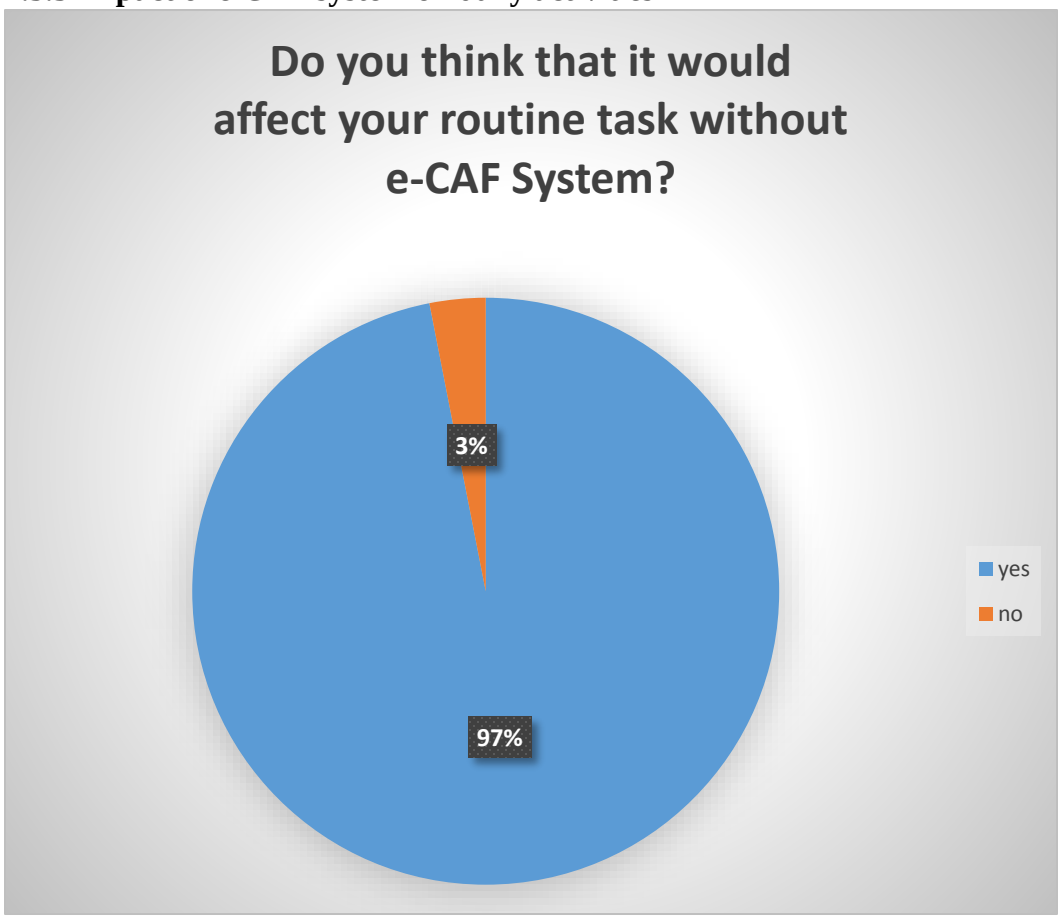


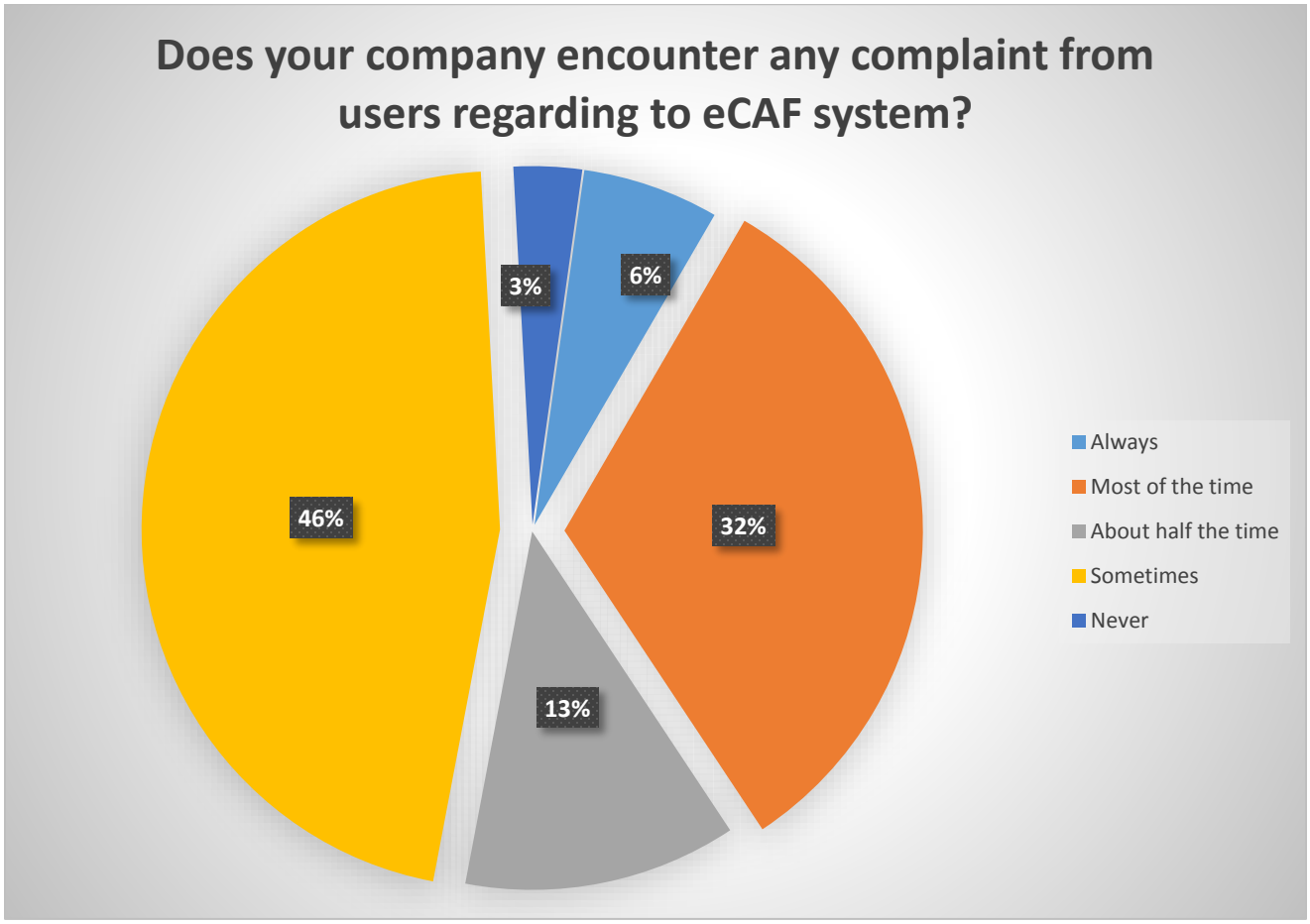
Chart 4.3.3. 1 Effect of e-CAF system on routine tasks

Source; survey result 2022

As depicted on chart 4.3.3.1, 63 employees representing 97% believed our routine task is affected without e-CAF system. On the contrary, 3% of the respondents asserted our routine task is not affected without e-CAF system. By this, we can say that e-CAF system is very essential for company routine task regarding to customer profile management.

4.3.4 System Failures

This part covers the data presentation and analysis complaints from users due to system failures.



Source; survey result 2022

Chart 4.3.3. 2 complaints from users due to e—CAF system failures

In terms of user complaints about the e-CAF system, 4 employees, or 6 %, and 21 employees, or 32 %, respectively, respond that there are always and most of the time complaints from users. 8 employees respond to customer complaints half of the time, while 30 staff respond to occurrences on the e-CAF system on occasionally. On the other hand, 2 employees (or 3%) said there have been no user complaints about the e-CAF system.

4.3.5 Deployment of e-CAF System in Achieving the Business Operation Requirement of the Company

This section includes a data presentation and analysis of how well the installed e-CAF system fits the company's objectives for attaining the goal of making business operations more efficient.

Table 4.3.5. 1 Deployment of e-CAF System in Achieving the Business Operation Requirement of the Company

		Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree(6)	Strongly disagree (7)	Total
Does the eCAF system completely accommodate your company business operation as need	frequency	8	30	23	1	1	2	0	65
	percent	12.3%	46.17 %	35.4%	1.53%	1.53%	3.07%	0	100%

Source; survey result 2022

In response to the question of whether the e-CAF system fully accommodates your company's business operations as needed, the majority of respondents (61 employees, or 93.87 %) agreed, while 3 employees, or 6.13 %, disagreed, and only one employee is neutral. This suggests that the e-CAF system can handle the majority of Ethio-telecom operations.

4.3.6 Implementation of e-CAF system

This part covers the presentation and analysis of overall perceptions of employees about the Impact of e-CAF system on Ethio-telecom performance.

Table 4.3.6. 1 Implementation of e-CAF system

		Strongly agree (1)	Agree(2)	Somewhat agree (3)	Neither agree nor disagree (4)	Somewhat disagree (5)	Disagree(6)	Strongly disagree (7)	Total
Do you think implementing of e-CAF system has big impact instead of hard copy work	frequency	23	28	10	2	0	1	1	65
	percent	35.38 %	43.1 %	15.39 %	3.07%	0	1.53%	1.53%	100 %
Do you think implementing of e-CAF system can control fraud	frequency	9	14	13	0	5	12	12	65
	percent	13.84 %	21.53 %	20%	0	7.69%	18.47%	18.47%	100 %

Source; survey result 2022

It is possible to learn that the majority of employees (93.87 %) think that using the e-CAF system instead of paper work has a significant influence, while 3.07 % disagree and 3.07 % are neutral. This demonstrates that the adopted e-CAF system has a significant impact on Ethiopian telecom performance.

On the other hand, nearly half of employees (44.63 %) disagree that establishing an e-CAF system can help prevent fraud, while the majority (55.37 percent) agree. This explains that, due to the fraud management system's efficiency and profile control mechanism, the implemented e CAF system is unable to properly control fraud.

Chapter five; Summary of Findings, Conclusions and Recommendations

5.1 Introduction

In this chapter, major findings are summarized, and conclusions based upon the findings are drawn. The chapter also includes recommendations forwarded based on the assumption that they could be solution for problems investigated in the study.

5.2 Summery of findings

- Above 80% of respondents are happy with the performance of the implemented e-CAF solutions.
- Nearly 75% proportion of the respondents believed that the implemented e-CAF system make the working method fully automated.
- Concerning the benefits grasped by the company, majority of the respondents stated that e-CAF system is providing the expected benefits for the company
- Larger proportion of the respondents replied that e-CAF system helps them by enhancing their efficiencies.
- In terms of user friendliness, the majority of respondents stated that the system's interface, navigation panels, and reporting formats are simple and easy to use.
- When it comes to system customization, the majority of respondents believe that the systems should be entirely adapted to the company's processes, policies, and procedures.
- The deployed e-CAF system, according to all employees, have a significant impact on the company's performance.

5.3 Conclusion

The results of the study were obtained through close ended questionnaires distributed for 80 employees of Ethio-telecom. The researcher tried to examine the impact of e-CAF system on Ethio-telecom performance measurement criteria: The following conclusions are drawn based on the findings of the study:

Based on the finding, all employees respond that the implemented e-CAF system have positive impact on company performance. In general, it can be concluded that e-CAF system have positive impact on organization performance. it can also be concluded that the impact of the system on improve quality of customer profile efficiency, provide all sales channels will be able to capture customer information, picture & signature electronically and automated workflow and documents

management. The finding revealed as majority of the respondents believed the impact of the system on Ethio-telecom performance is from 80% up to 90%. Hence, we can conclude Ethio-telecom performance extremely impacted by e-CAF system.

5.4 Recommendations

This study raised a number of research questions; the purpose of the study was to be assessing the impact of e-CAF system on organization performance at Ethio-telecom. Based on the conclusions drawn above the following recommendations are forwarded for the concerned bodies:

- Based on the findings of the study and above conclusions the impact of e-CAF on the performance of Ethio-telecom is significant. Therefore, Ethiotelecom should effectively grasp the role of e-CAF CRM system in their operational performance.
- From the automation point of view, Ethio-telecom has to exert all its effort to makes the working process hundred percent fully automated, otherwise some operational activities will be handled through system interface and the other will require manual intervention and this will lead to inefficiency.
- To get all the benefits expected from the system, Ethio-telecom has to apply all its exertion to utilize all the features of the system.
- From customization point of view, the company has to work on system customization has been done hundred percent by considering the long-term strategic objective of the company.
- And finally, Ethio-telecom need to revisit the implementation of both systems regarding to control fraud, this is mainly because the company loss a lots of revenue due to fraudster.

5.5 Recommendation for future research

This research provides draws valuable lessons about the impact of e-CAF system on organization performance, however there are some limitations which are open for future research.

- This study focuses on assessing impact of e-CAF system on organization performance only. For the future study assessing the implementation of e-CAF system can be studied.
- This study is a single case and specific to the telecom sector, future research conducted in other different environments would verify the findings of this study and may yield additional insights.

- Conducting future study on e-CAF and system on organization performance with multiple case study with different environment can be done or a comparison between public sectors/telecom with other organization can be done.

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Annex; Questionnaire Distributed For Respondents

Dear respondents, I would like to thank you for your time in responding to the research questions provided below. I am a graduating student of Project Management at Addis Ababa University, School of Commerce. The aim of this questionnaire is to gather relevant data for my project work titled "An ASSESSMENT ON ICT PROJECT IMPLEMENTATION IMPACT IN ETHIO TELECOM; THE CASE OF e-CAF PROJECT". Therefore, I kindly request you to consider your participation in responding to the questionnaire is of high importance to give the research a great deal of clarity about the issue. Any information you provide will be used only for academic purpose and will be treated with strict confidentiality.

Impact of e-CAF system on Ethio-telecom performance

Part I: Demographical Information –

Q1 Number of Years with Organization (Ethio-telecom)

Q2 Number of Years in Current position

_____

Q3 which division are you working in?

O Customer service

O Enterprise

O Residential sales

Q4 Position within the organization (Ethio-telecom)

O Enterprise sales representative

O Residential sales representative

O Approval Agents

O supervisor

O Profile administrator

O Other _____

Part II: Issues Related with the study area

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
Information and Communication Technology helps employees to achieve a larger number of tasks. (1)					
An information system tool helps employees to deliver output timely. (2)					
An information system tool helps employees to improve					

work continuously. (3)					
Information system tools helps em-ployees to deliver con-sistent output even in high work pres-sure (4)					
Information system tools has impact on organization performance (5)					

Do you think the currently deployed e-CAF system meets the business requirements of the company in achieving the goal of making the working process automated?

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
E- CAF and implementation makes the working process of ethio telecom fully automated (1)					
The organization is obtaining the benefits expected from e-CAF implementation (2)					
e-CAF improves your efficiency in the organization (3)					
E-CAF implementation in the company					

is the best solution in satisfying the customer demand (4)					

Items about customization of the system in line with companies/countries regulatory activities

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
The company's business requirement is fully considered and integrated (1)					
System customization has been done considering the long term strategic ob-jective of the company (2)					

Additional features obtained from the system beyond the pre-defined requirements (3)					

Please rate e-CAF system usage

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
The screen design was user friendly (1)					
e-CAF system was responsive in terms of speed (2)					
e-CAF system is very important to your business (3)					
Are you satisfied with overall performance of e-CAF system (4)					

Users can work on the system without any challenge (5)					
The reporting formats are easily understandable by external users and decision makers (6)					

Do you think that it would affect your routine task without e-CAF system?

	Yes	No
Do you think that it would affect your routine task without e-CAF System? (1)		

Does your company encounter any complaint from users regarding to e-CAF system?

	Always (1)	Most of the time (2)	About half the time (3)	Sometimes (4)	Never (5)
Does your company encounter					

any complaint from users regarding to eCAF system? (1)					

Dose e-CAF system completely accommodate your company business operation as need?

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
Does the e-CAF system completely accommodate your company business operation as need? (1)					

Dose e-CAF has an impact on Ethio-telecom performance?

	Positive Impact (1)	Negative impact
Dose e-CAF has an impact		

on Ethio-telecom performance? (1)		

Assess implementing e-CAF

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
Do you think implementing of e-CAF system has big impact instead of hard copy work (1)					
Do you think implementing of e-CAF system can control fraud (2)					

Is there anything else you would like to share about implementation of e-CAF system?

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