



# ICT SURVEY 2010

## INTERVIEWER'S MANUAL

KENYA NATIONAL BUREAU OF STATISTICS  
AND  
COMMUNICATIONS COMMISSION OF KENYA

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## Table of Contents

	Pg No.
1.0 INTRODUCTION .....	1
2.0 OBJECTIVES .....	1
3.0 SURVEY ORGANIZATION.....	2
4.0 SURVEY QUESTIONNAIRES .....	2
5.0 KEY CONCEPTS AND DEFINITIONS .....	2
6.0 THE ROLE OF RESEARCH ASSISTANTS.....	6
7.0 HOW TO HANDLE INTERVIEWS.....	6
8.0 INTERVIEWING TECHNIQUES .....	7
9.0 FIELD PROCEDURES.....	8
10.0 HOUSEHOLD QUESTIONNAIRE.....	11
<b>PART A: DEMOGRAPHIC AND OTHER INDICATORS.....</b>	<b>11</b>
<b>PART B: ACCESS AND USAGE OF ICT INFRASTRUCTURE BY HOUSEHOLD MEMBERS... 16</b>	<b>16</b>
<b>PART C: USAGE AND FREQUENCY BY HOUSEHOLD INDIVIDUALS..... 21</b>	<b>21</b>
<b>PART D: USAGE AND FREQUENCY POSTAL SERVICES BY HOUSEHOLD INDIVIDUALS. 22</b>	<b>22</b>
<b>PART E: ICT INFRASTRUCTURE - ICT IN EDUCATION..... 23</b>	<b>23</b>
<b>PART F: ICT INFRASTRUCTURE - OWNERSHIP AND FREQUENCY OF USAGE BY HOUSEHOLDS..... 26</b>	<b>26</b>
<b>PART G: ACCESS AND USAGE BY BUSINESS .....</b>	<b>27</b>
11.0 INSTITUTIONAL QUESTIONNAIRE .....	33
Annex 1: Kenya National Occupational Classification Standard (KNOCS) .....	36
<b>Annex 2: ISIC CLASSIFICATION..... 43</b>	<b>43</b>
<b>Annex 2: ISIC CLASSIFICATION..... 43</b>	<b>43</b>
<b>Annex 3: Provincial Codes .....</b>	<b>47</b>

## 1.0 INTRODUCTION

Utilization of Information Communication Technology (ICT) has given rise to powerful knowledge based economies that have generated new opportunities for employment and wealth creation, productivity, efficiencies and enhanced economic growth and development. Over the past decade, ICT has created a broad range of economic and social benefits to the country through forward and backward linkages. Countries that have successfully maintained high economic growth and development have given attention to the role of ICT as both an economic and social enabler.

The Government of Kenya has recognized the importance of ICT in economic development and has initiated major steps to promote its use. Indeed, the ICT sector has been identified to contribute significantly to the economic pillar in the Kenya Vision 2030, the country's current long term development blue print. One of the major initiatives that the government is pursuing is to improve ICT infrastructure to bridge the digital divide and lower the cost of communication. The government is also leveling the ground through development and implementation of policies and regulations aimed at attracting investment in the sector. The Government recognizes information as a resource which must be collected, collated, organized, leveraged, secured and preserved for national prosperity. In this regard the Kenya National Bureau of Statistics (KNBS) in collaboration with Communications Commission of Kenya (CCK) intends to undertake a comprehensive national survey on ICT usage and access in the country. The findings of the study will inform formulation of progressive ICT access policies and programmes.

## 2.0 OBJECTIVES

The main objective of the study is to collect, collate and analyse data relating to ICT access and usage in the country Kenya. The survey will capture data and information on critical ICT indicators as defined by international bodies such as the International Telecommunications Union (ITU). These indicators will focus on households, individuals, institutions and businesses.

The specific objectives of the study will be to;

- (i) Obtain socio-economic information relating to usage patterns of ICT services;
- (ii) Determine the ICT access gaps and identify barriers to ICT access in Kenya
- (iii) Recommend strategies to overcome these barriers;
- (iv) Evaluate the factors that will have the greatest impact not only in ensuring access to ICTs but also maximizing the positive impact in these technologies; and
- (v) Develop a database on access and usage of ICT in Kenya.

### 3.0 SURVEY ORGANIZATION

The Kenya National Bureau of Statistics is charged with the responsibility of conducting this survey on behalf of Communication Commission of Kenya. In implementing the survey, KNBS is collaborating with other agencies and stakeholders.

Several field teams will be constituted based on the various regions of the country. A team will on average consist of between 2-6 research assistants, one supervisor and a driver. These teams will be assigned in areas where their local languages are spoken. Each field supervisor will be responsible for at least one team. The teams will be answerable to the Survey coordinators through the regional coordinators.

### 4.0 SURVEY QUESTIONNAIRES

Two types of questionnaires will be used in the ICT Survey: Household questionnaire and Institutional questionnaire.

**Household questionnaire:** This will be used to collect background information pertaining to the members of the household and businesses operated by household members. It will collect information about each person in the household such as name, sex, age, education, and relationship to household head etcetera. This information is vital for calculating certain socio-demographic characteristics of the household. The **Business module** in the household questionnaire will be used to collect information pertaining to usage of ICT in businesses identified in the household. To estimate the magnitude, levels and distribution of ICT usage in the country, all the selected respondents 15 years and above will be subjected to business questionnaire.

**Institutional Questionnaire:** This will collect information pertaining to institutions providing ICT related programmes in the country. This information will be analyzed to identify gaps and other issues of concern, which need to be addressed in the promotion ICT provision in the country.

### 5.0 KEY CONCEPTS AND DEFINITIONS

#### 5.1 Household

A household is as a person or a group of persons (generally bound by ties of kinship) who normally reside together in the same compound under one roof or several roofs, are answerable to the same head and share a common source of food.

There are three important criteria of identifying a household.

- Do the persons reside in the same compound? (i.e. the persons in the household reside under same roof or compound)
- Are they answerable to the same head? (i.e. persons in a household are answerable to the same head)
- Do they have a common source of food? (i.e. Members of a household pool and share their resources for common provisions such as food)

If the answer to each of the three questions is "YES", then you have adequately identified a household. If the answer to one or more of the questions is "NO", then there are more than one household. Please note that domestic servants, relatives and other workers living and eating in the household are to be included as household members.

One should make a distinction between family and a household. The first reflects **social relationships**, blood descent and marriage while the second is used in this survey to identify an **economic unit**. You must be conscious and use the criteria provided on household membership to determine which individuals make a particular household.

In the case of polygamous unions and extended family systems, household members may be distributed over two or more dwellings. If these dwelling units are in the same compound or nearby (but necessarily within the same cluster) and they have a common housekeeping arrangement with a common household budget, the residents of these separate dwelling units should be treated as one household.

## 5.2 HOUSEHOLD HEAD

A household head is a usual resident member of the household who is the key decision maker and whose authority is acknowledged by all the members of the household.

## 5.3 RESPONDENT

The respondent is the person who provides answers to survey questions. This is usually the head of the household, but may be any other responsible member of the household. It is important for the Research Assistant to know who he/she is supposed to administer the different questionnaires that will be used in the survey. The Household Questionnaire will be administered to the head of the household or in his/her absence, to any person in the household who can provide most of the information pertaining to the household members. The households will be selected at random and you as an enumerator will be given the list of all selected households in the cluster where the interviews will be conducted.

The Business module will be administered to all household members aged 15 years and above who report to be operating a business. In some cases, you may not find an eligible respondent in some households. In this case you only need to administer section 'A' of the questionnaire.

Eligible respondents are members of the household aged 15 years and above.

The Institutional Questionnaire will be administered to the head of the institution visited or in his/ her absence, to any other responsible person who is capable of answering questions about the particular institution. You will be given the list of the institutions that will have been selected at random for administering the questionnaires.

## 5.4 CALLBACKS

It is important that you complete interviewing your respondent during your first visit to the household. However, you may at times need to make further visits, especially if both the head of the household and their spouses are either absent or are busy such that you cannot conduct the interview during that visit. In that case you need to make an appointment for a suitable time to interview the respondent. This appointment is called callback. You should never try to compel the respondent to attend to you at a time that would inconvenience him/her. Try to be punctual for callback appointments in order not to inconvenience the respondents.

## 5.5 LANGUAGE OF INTERVIEW

The interviewer will be required to interview the respondent in the language in which he/she is most comfortable. If the respondent can only speak a language you do not understand, then you must raise the issue with your supervisor.

## 5.6 STRUCTURE

A structure is a free - standing building that can have one or more rooms in which people live. It may be a block of flats, a house, or thatched hut. Structures were given unique numbers during listing. These numbers appear on the cluster maps for identification purposes.

## 5.7 DWELLING UNIT

Dwelling units are structures where people live. Within a structure, there may be one or more dwellings (or housing) units. A dwelling unit is a room or group of rooms occupied by one or more households. Within a dwelling unit, there may be one or more households.

## 5.8 HOUSEHOLD LISTING

Household listing is a list with a unique **number (household number)** for **all households** in a cluster. It contains the name of the household head. Note that the number of household is only indicated in the listing form and is never written on the structures. What appears on the structures are the structure numbers only. The supervisor will be given the list of households to be interviewed in each cluster. The household list will indicate the household number and the name of the household head.

## 5.9 CLUSTER

This is a scientifically selected area for the purposes of carrying out sample surveys, which are household-based. Several clusters form the sampling frame (i.e. a complete collection of units of the target population) which is normally used for household surveys. Clusters are established in order to avoid creating a frame every time a survey is conducted.

## 6.0 THE ROLE OF RESEARCH ASSISTANTS

Research Assistants will play a central role in the ICT survey and the ultimate outcome of the survey depends on how they will conduct the interviews. It is, therefore, important for the interviewer to be consistent in the way he/she puts the questions to the respondent. In case a response is not clear, the Research Assistant should probe further. This section of the manual gives a summary of the important points to be observed by the Research Assistants when conducting interviews for the ICT survey.

In general, the responsibilities of the Research Assistants will include:

- a) Locating the structure and households in the sample that are assigned to them
- b) Identifying eligible respondents in the households assigned to them.
- c) Administering the questionnaire on the eligible respondents
- d) Checking completed questionnaires to be sure that all questions were asked and those responses are neatly and legibly recorded.
- e) Making callbacks to interview respondents who could not be interviewed during the first or second visit due to various reasons.
- f) Ensuring that the information given is correct by keeping the respondent focused to the questions.
- g) Preparing debriefing notes for the supervisor on the problems encountered,
- h) Forwarding to the supervisor all completed questionnaires and relevant notes
- i) Liaising with the supervisor to correct any mistakes in the questionnaires.

## 7.0 HOW TO HANDLE INTERVIEWS

The interviewer and the respondents are most likely strangers to each other and therefore one of the main tasks of the interviewer is to establish rapport with the respondent. The respondent's first impression of you will influence her/his willingness to co-operate in the survey. Make sure that your appearance is neat and you also appear friendly as you introduce yourself.

On meeting the respondent, the first thing you do is to introduce yourself, stating your name, organization you are working for, the objectives of the survey, and what you want the respondent to do for you. The Interviewer is advised to avoid long discussions on issues which are not related to the survey and which may consume a lot of his/her time.

After building rapport with the respondent, ask questions slowly to ensure the respondent understands what he/she is being asked. After you have asked a question, pause and give the respondent time to think. If the respondent feels hurried or is not allowed to form his/her opinion, he/she may respond with "I don't know" or give an inaccurate answer. If you feel the respondent is answering without thinking, just to speed up the interview, try to regain the respondent's attention and interest in the survey questions. If you establish that this time is not

suitable for the interview, you may agree with the respondent to complete the interview at a mutually agreeable time.

Specifically, the following guidelines will guide you on how to handle interviews:

- Ensure that you understand the exact purpose of the survey and each question. This will help you to know if the responses you are receiving are adequate.
- Ask the questions exactly as they are written. Small changes in wording can alter the meaning of a question.
- Ask the questions in the same order as they are given in the questionnaires. Do not change the sequence of the questions.
- Ask all the questions, even if the respondent answers two questions at once.
- Help your respondents to feel comfortable, but make sure you do not suggest answers to them.
- Remain neutral throughout the interview. Do not show any surprise, approval or excitement to any response given
- Do not hurry the interview.
- Do not leave a question unanswered unless you have been instructed to skip it.
- Record answers immediately the respondent gives you the responses. Never write answers in a notebook for transfer to the questionnaire later.
- Check the whole questionnaire before you leave the household to be sure it is completed correctly.
- Thank the respondent for his/her co-operation and giving you time to interview him/her. Leave the way open to future interviews. Avoid over- staying in the respondent's household even if he/she is very friendly and welcoming.

## 8.0 INTERVIEWING TECHNIQUES

### a. Make a Good First

When you first approach the respondent, do your best to make her/him feel at ease. With a few well- chosen words, you can put the respondent in the right frame of mind for the interview. Open the interview with a smile and greetings and then proceed with your introduction.

A typical introduction may run like this: My name is..... I am working for the Kenya National Bureau of Statistics. We are conducting a survey about ICT, and we are interviewing persons aged 15 years and above throughout the country in selected households. I would like to talk to you and ask you a few questions.

### b. Always have a positive approach

Never adopt an apologetic manner, and do not use words such as "Are you too busy?'. Such questions will obviously invite refusal before you start. Rather, tell the respondent "I would like

to ask you a few questions".

**c. Stress Confidentiality of Information Collected**

Always stress confidentiality of the information you obtain from the respondent. Explain to the respondent that the information you collect will remain confidential and that no individual names will be used for any purposes, and that all information will be grouped together when writing the report. Never mention other interviews or show a completed questionnaire to other interviewers or supervisor in front of a respondent or any other person. This will automatically erode the confidence the respondent has in you.

**d. Probing**

The Research Assistant should phrase questions as they are in the questionnaire. If he/she realizes that an answer is not complete or is inconsistent with other responses, then he should seek clarification through asking indirect questions or some additional questions so as to obtain a complete answer to the original question. This process is called probing. Probing questions should be worded so that they are neutral and do not lead the respondent in a particular direction. Ensure the meaning of the original question is not changed.

**e. Answering Questions From Respondent**

The respondent may ask you some questions about the survey or how he/she was selected to be interviewed or how the survey is going to help her/him, before agreeing to be interviewed. Be direct and pleasant when you answer. The respondent may also be concerned about the length of the interview. Please be frank to tell him/her how long you are likely to take to administer the questionnaire.

The presence of a third person during the interview can prevent you from getting frank and honest answers from the respondent. It is, therefore, very important that the interviews are conducted privately and that all the questions are answered by the respondent only. Only the household questionnaire can be conducted in the presence of other household members. If other people are present, explain to the respondent that some of the questions are private and request to talk to him/her while alone.

**f. Handling Hesitant Respondents**

There may be situations where the respondent simply says, "I don't know," or gives an irrelevant response or acts in a manner suggesting he/she is bored or contradicts earlier answers. In such cases, try your best to make him/her get interested in the question. Spend a few moments talking about things unrelated to the interview, e.g. his/her town or village, the weather, his/her daily activities etc.

## **9.0 FIELD PROCEDURES**

Field work for the ICT survey will proceed according to a set time schedule. The survey will therefore be successful only if each member of the interviewing team understands and follows

correct field procedures, which are reviewed in the following section:

**(a) Preparatory Activities**

Every morning, your supervisor will brief you about the expected day's work and explain how to locate the households assigned to you. When you are assigned households, write the identification information on the interviewer's assignment sheet. Such information will include the household number, household head, date of assignment and other particulars required. The assignment sheet will serve as a summary of the results of your work in the field for each day. At the end of the day, you will be responsible for recording the final outcome for all households visited and the individual interviews you have conducted. Ensure that you have enough questionnaires before you set off to the field.

**(b) Locating Sampled Households**

You will be given maps indicating the location of the cluster and the structures of the households you are assigned. These structures have numbers written on the door frame or any other easily identifiable position. You will also be given household lists which contain particulars of the household heads and structure numbers. You will use the structure numbers and the names of the household heads to locate the households. The District Statistical Officers will assign KNBS enumerators to assist in the identification of the households.

**(c) Problems in Contacting Households**

In some cases, you may have problems in locating the households that were selected due to various reasons as indicated below:

- (i) The selected household moved away and the dwelling unit is vacant. If a household has moved out of the dwelling unit where it was listed and no one is living in the dwelling unit, you should consider the unit as vacant and record it as such.
- (ii) The household has moved away and a new one is now living in the same dwelling. In this case, interview the new household.
- (iii) The structure number and the name of the household head of the selected household do not match with the one you find in the field. In this case, interview the household found there.
- (iv) The household selected does not live in the structure that was listed. In this case, there is a discrepancy between the structure number and the name of the household head. You will interview whoever is living in the structure assigned to you.
- (v) The listing shows only one household in the dwelling, but there are two households living in there. In this case, interview both households and make note on the cover page of the household that was not included in the listing. If the listing shows two households and only one was selected, and you find three households there, only interview the one which had been selected and ignore the other two. Inform your supervisor about the changes.
- (vi) The head of the household has changed. In some cases, the person listed as the head of the household has moved away, or died. In this case, interview the household that is living there.

- (vii) The house is closed and you learn from neighbours that occupants are on the farm or away visiting and that they will be back after several weeks. Enter code.... (Entire household absent for extended period). Revisit the household at least two more times to make sure the members have not returned before eventually treating it as vacant.
- (viii) The house is closed and neighbours say that no one lives there; the household has moved away permanently. Enter: Code..... (Dwelling vacant/ address not a dwelling).
- (ix) A household is supposed to live in a structure that when visited is found to be a shop and no one lives there. Enter: Code.,..... (Dwelling is vacant/address not a dwelling).
- (x) A selected structure is not found in the cluster, and residents tell you it was destroyed, e.g. in a recent fire. Enter: Code..... (Dwelling destroyed).
- (xi) No one is home and neighbours tell you the family has gone to the market. This is a callback, hence you will have to return to the household later in the day or the next day.

## 10.0 HOUSEHOLD QUESTIONNAIRE

### Cover Page

The cover page provides geographical information of the household, the names of the supervisor and interviewer, household number in addition to the number of visits and the date and time. Each questionnaire will have a unique serial number. You will indicate the final interview status for each household visited by ticking in the appropriate box.

### Red Tape Information

It is critical that you fill in all information in the spaces provided on the cover page, starting with the province. Codes for all the geographical areas, the cluster number and name and the household number and name and household head will be provided before the start of the survey. It should be clear that all survey households within a cluster will have the same cluster code.

The household questionnaire will be used for one household and has provision for 10 members. In rare cases you will require to complete more than one questionnaire per household. Households with more than 10 members continue on another questionnaire and write the same identification particulars as on the first questionnaire. You **MUST** however indicate on the top of the second questionnaire "CONTINUATION".

### PART A: DEMOGRAPHIC AND OTHER INDICATORS

This section deals with general individual details of all household members. The serial numbers for each household member **MUST** be written in the first column **HL1** and for all household members use two digits e.g. 01, 02, 03, ..., 12. All potential household members are listed in **HL2**.

In listing household members, list the names of all members of the household with the first member in the first row being the head of the household. If the respondent to the questionnaire is not the head of the household, the head of the household will still be listed in the first row (not the respondent). If the head of the household is absent at the time of the interview he/she will still be listed in the first row. In writing the names of the household members, be sure that you uniquely identify the individuals. If two individuals in the household have the same name, ask about any nicknames or other ways in which the two persons can easily be distinguished from each other.

The process of listing household members should be done carefully to ensure that no one is missed. List the names of all members of the immediate or nuclear family (head of household, spouses/spouse and their children). List the name of the household head on the first line. Next, list all other persons related to the head of the household or other household members. Then list all non relative persons in the household who normally reside and are part of the have common

eating arrangements such as live-in servants, friends. Finally list any other person who slept here last night. To ensure complete coverage, the interviewer should explicitly ask about three types of persons, who are commonly overlooked by survey respondents namely:-

- Persons who are temporarily absent
- Persons who have come to stay in the household permanently are usual members even if they have just moved in.
- Servants/visitors; it is possible that these individuals are members of a separate household that have been included during the listing exercise. If, this is the case, they should not be included as members of the household being interviewed.
- Finally, the interviewer should ask whether there are any infants or small children who have not been listed, as very young children are often overlooked in counting household members.
- As many as 10 persons can be listed; if there are more than 12 household members the interviewer will need to use an extra questionnaire.

**HL3: RELATIONSHIP TO HEAD** - Ask the relationship of (Name) to the head of the household and use the codes provided. Only one person should be designated as the head. If the relationship to the head is "child", ascertain whether he/she is a biological son or daughter.

**HL4: SEX** - You must ask about the sex of each individual in HL2. Do not use the name to assume the sex of the individual. However, some caution in asking this is important not to offend the respondent. Ascertain the sex of the infants and the children.

**HL5: AGE** - Age is one of the most important demographic information sought from the respondents. You must try as much as possible to record the correct age of the respondent. Record the age of each household member in completed years. Do not round off the ages of respondents. A respondent who reports his/her age as 29 years and 11 months should be recorded as 29 years without rounding off the eleven months. All efforts must be made to have at least an estimate of the respondent's age, [for those who don't know their ages]. All household members whose age is reported to be above 97 years, code 97 e.g. a household member whose age is reported to be 101 years at the time of the survey, you should code as 97 in HL5.

**HL6: SCHOOL ATTENDANCE** - Asks about school attendance of the respondent (Formal and Non-formal). For young children code "3". Has (name) ever attended formal/non-formal schooling? Those currently at school, code 1, and those who report to have attended code 1. Household members who are reported to have "never attended school" or\* "never attended", code 2 in the appropriate column.

**Formal educational** - includes Early Childhood Development (ECD), primary, secondary & tertiary education curriculums.

**Non-formal education** – offers flexible learning for adults and school going children who are

not able to join the formal system of education

**HL7: EDUCATIONAL ATTAINMENT** - The question relates to highest school grade that name has completed for both formal and non-formal education. Code the highest educational attainment for each respondent. Note that Madrassas are neither formal nor non formal.

**HL8: LITERACY** - Reading is a cognitive process of decoding letters/symbols for the intention of deriving meaning (reading comprehension) and/or constructing meaning.

## LABOUR MODULE

### Completing the labour Module (HL8-HL11)

Analysis of the labour module will be based on a labour force frame work where total population is categorised into currently economic active population (labour force) and population that is not currently economically active. Labour force or "current economically active population" consists of those members of the population who are working plus those who are not working, but are looking for work during a specified reference period. The inactive population covers those members of the population who are **NOT** available for work (economically inactive members. include the infirm, ailing, incapacitated and full-time students). The section targets those aged 5 years and above so as to capture the extent and intensity of child labour. Involvement of children in the labour market denies them access to education, exposes them to exploitation, and limits their opportunities for self-advancement.

**HL9: STATUS IN EMPLOYMNET** - Column HL8 seeks for the main type of work the respondent was engaged in. The status in employment refers to status of an economically active person with respect to his/her employment during a specific time-reference period. Two mutually exclusive employment statuses are paid employment and self-employment. Self-employment includes working employers, own-account workers and unpaid family workers. These terms are explained below:

- a) **Paid employees:** They are persons working for a public or private employer and receive remuneration in wages, salary, commission, tips, and piece-rates or pay in kind. This comprises of:
  - persons at work: those who, during the reference period performed some work (i.e. at least one hour) for wage or salary, in cash or in kind; and
  - persons with a job but not at work, persons who having already worked in their present job, were temporary not at work during the reference period and had a formal attachment to their job
- b) **Working Employers:** Are those persons who, operate their own businesses, agricultural farms, or engage in pastoralist activities or engage independently in a profession or trade, and hire one or more employees. They may operate as sole entrepreneurs or with partner(s) who may or may not be members of the same family or household.
- c) **Own account workers:** These are people who operate their own businesses, agricultural farms, or engage in pastoralist activities, or engage independently in a profession or trade and hire no employees. They may operate as sole entrepreneurs or with partner(s) who may or may not be members of the same family or household. This category covers a large proportion of self employed persons
- d) **Unpaid family worker (contributing family workers):** Persons who work without pay in an economic establishment operated by a related person.

- e) **Apprentice.** The class of apprentices is included in this survey due to its significance in the local labour market. These are a particular type of trainees. They may be directly engaged in producing goods and services or may simply be learning by observation without actually performing any significant productive tasks. They may be paid a wage or salary under written or oral contract. Others may be given meals or living quarters or special tuition, in compensation for the work done or as an allowance unrelated to the work performed. Still others may not be paid at all and, in some cases, may actually be paying a fee in return for the acquired skill or knowledge.
- f) The category "other" includes all those who cannot be included in any of the preceding categories.

**HL10: OCCUPATION** - The term occupation refers to the job held or the kind of work performed during the reference period (or kind of work done previously if unemployed) irrespective of the industry in which the individual works. Information on occupation provides a description of a person's job. Persons with two or more jobs are classified in the job at which they worked the greatest number of hours during the reference period. Occupational codes and descriptions are given in **Appendix 1** of the interviewer's manual. They were based on the latest publication on occupations "Kenya National Occupational Classification Standards (KNOCS)".

The interviewer is to provide a brief description of the occupation of the individual. The main employed occupation over the past 12 months is either their only occupation or the occupation that the respondent **worked the most hours**, if the respondent worked at more than one job. For individuals with two occupations with the same number of hours, the main employed occupation is the one that gives the **largest income**. If equal in number of hours and income, the one that the respondent considers as his or her main occupation should be noted. Examples: One can be a clerk in agricultural, building, transport, or any of a number of industries. Clerk is an occupation for that matter.

Do not write in generic names such as secretary, office worker, day worker, etc. Write in a brief description of the occupation such as mechanic in an auto repair shop, carpenter's assistant, plumber in construction, bilingual secretary, etc.

**HL11: INDUSTRY WORKED FOR** - Industry refers to the economic activity of the establishment in which an employed person worked during the survey reference period or last worked if unemployed. This activity is defined in terms the kinds of goods produced, or services offered by the economic unit or establishment in which the person works. The branch of economic activity of a person does not necessarily depend on ones' occupation. Therefore, if a driver reports working in a factory producing suitcases and handbags, the activity would be considered as Manufacturing. It should also be pointed out that the terms "Industry" and "Economic Activity" are interchangeably used to mean the same thing, Industrial codes and their descriptions are given in Appendix 2 of the interviewer's manual. They were based on the 1990 edition of the UN International Standard Industrial Classification of all economic

activities.

This question is to determine the economic sector in which the respondent works. Write a description of what the establishment specializes/manufactures where the respondent worked. Do not write the exact name of the company or institutions, except for those individuals who work for government ministries or official or public organizations. Also, do not write a generic description such as 'workshop', industry, 'factory', etc, as these do not provide enough descriptive information. Provide a description of the place where the individual works, such as auto repair workshop, factory that makes leather shoes, sale of life insurance, etc.

**HL12 – HL13: SALARIES AND WAGES** - The questions seeks to determine the amount people earned in terms of wages, Salaries, in-kind.

**HL14: BUSINESS OWNERSHIP** - This question is intended to filter all household members who own/operate a business. All whose response to this question is “yes” will answer to the business questions in part G.

## **PART B: ACCESS AND USAGE OF ICT INFRASTRUCTURE BY HOUSEHOLD MEMBERS**

The Household questionnaire collects information from the selected eligible respondent. All household members aged 3 years and above will qualify for this module.

**HL1: Serial Number** - This is the serial number of the eligible respondent selected. You **MUST** write the serial number of the selected respondent as it appears in the household listing.

**B1: Disability** - Disability is defined as: physical, sensory, mental, or other impairment, including a visual, hearing or physical disability which has a substantial long-term effect on a person’s ability to carry out day to day activities or limits a person’s ability to perform one or more basic life activities (activities of daily life) such as caring for self, performing manual tasks, walking, hearing, speaking, breathing, earning a living, or working and interacting with other persons. If the response is "Yes" code “1”, “No” code 2, otherwise code "3" for don’t know.

**B2: Kind of Disability** – This is intended to establish the kind of disability among member of the household. If the response is "Physical" code “1”, “Visual” code “2”, “Hearing” code “3” otherwise code “4”.

**B3 –B9: Accessibility of ICT Related Items** - The questions seek to establish whether the respondent is able to access the specified ICT related facilities in his/her homestead. The accessibility of ICT equipment depends to some extent on the availability of these equipments in a household. If the response is "Yes" code “1”, “No” code 2, otherwise code "3".

The facilities include:-

- **Radio:** A radio is a device capable of receiving broadcast radio signals, using popular frequencies, such as FM, AM, LW and SW. It includes a radio set integrated in a car or an alarm clock but excludes radios integrated with a mobile phone, a digital audio player (MP3 player) or in a computer. The equipment should be in working order or expected to be returned to working order soon.
- **TV:** A TV (television) is a stand-alone device capable of receiving broadcast television signals, using popular access means such as over-the-air, cable and satellite. It excludes TV functionality integrated with another device, such as a computer or a mobile phone. This question is asked of all in-scope households. The interviewer could check for the presence of a TV aerial or a TV set if the interview takes place at the household's residence.
- **Pay TV:** Also sometimes referred to **premium television**, or **premium channels** refers to subscription-based television services, usually provided by both analog and digital cable and satellite, but also increasingly by digital terrestrial methods. An example of a pay TV in Kenya is the DSTV.
- **Fixed line telephone:** A fixed telephone line refers to a telephone line connecting a customer's terminal equipment (e.g. telephone set, facsimile machine) to the public switched telephone network (PSTN) and which has a dedicated port on a telephone exchange. This term is synonymous with the terms main station or Direct Exchange Line (DEL) that are commonly used in telecommunication documents. It may not be the same as an access line or a subscriber. (Ask whether the line is a Fixed telephone, Fixed wireless, public pay phone/Booth or a community pay phone/Simu ya Jamii) This question is asked of all in-scope households. The equipment should be in working order or expected to be returned to working order soon. The interviewer could possibly check for the presence of a fixed line telephone if the respondent is not sure (if the interview takes place at the household's residence).
- **Mobile Phone:** This question is asked of all in-scope households. At home means that the mobile telephone can be used by members of the household, though it is not restricted to home use. A mobile cellular telephone refers to a portable telephone subscribing to a public mobile telephone service using cellular technology, which provides access to the PSTN. This includes analogue and digital cellular systems, as well as IMT-2000 (3G). Users of both post-paid subscriptions and pre-paid accounts are included. The equipment should be in working order or expected to be returned to working order soon.
- **Computer:** A computer refers to a desktop or a laptop computer. It does not include equipment with some embedded computing abilities such as mobile cellular phones, personal digital assistants (PDAs) or TV sets. A *computer* refers to a programmable electronic device that can store, retrieve and process data, as well as share information in a highly structured manner. It performs high-speed mathematical or logical operations

according to a set of instructions. A *computer* includes personal computers (PCs), laptops, notebooks, terminals connected to mainframes and mini-computers intended for shared use.

- **Internet:** The Internet is a world-wide public computer network. It provides access to a number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.). Access can be via a fixed or mobile network.

**B10 – B12: Accessibility of Fixed Telephone, Mobile phone and Internet** - The intention of the question is to establish the locality/place of the accessibility of these services by members of the household.

- **Own House** – Refers to the respondent’s place of residence, regardless of the ownership tenure.
- **A friends house** - The home of a friend, relative or neighbour.
- **Office/Work place** - Where a person’s workplace is located at his/her home, then he/she would answer yes to the home category only.
- **PayPhone/Booth** - A **pay phone** is a public telephone, with payment by inserting money (usually coins) or a credit card (a special telephone card or a multi-purpose card) or debit card before a call is made.
- **Cyber Café/ Commercial Internet access facility** - Internet use at publicly available commercial facilities such as Internet or cyber cafés, hotels, airports etc, where access is typically paid (i.e. not free of charge).
- **Community Internet access facility** - Internet use at community facilities such as public libraries, publicly provided Internet kiosks, non-commercial telecentres, digital community centres, post offices, other government agencies; access is typically free and is available to the general public.
- **Educational Centre** - For students. Teachers (and others who work at a place of education) would report ‘work’ as the place of Internet use. Where a place of education is also made available as a location for general community Internet use, such use should be reported in the Community Internet access facility category.
- **Mobile cellular telephone** - Use of the Internet at any location via a mobile cellular telephone (including handheld devices with mobile phone functionality).
- **Any place via other mobile access devices** - Use of the Internet at any location via other mobile access devices, e.g. a laptop computer or handheld device that uses wireless access (at a WiFi ‘hotspot’) or a laptop computer connected to a mobile phone network.

**B13: Usage of Computer** - The intent of the question is to find out the proportion of members of

the household who used a computer in the last 12 months.

**B14: Place of Computer usage** - The intent of the question is to find out where the members of the household used a computer during the reference period. **(Multiple responses are applicable here).**

**B15: Usage of Mobile Phone** - The intent of the question is to find out the proportion of members using mobile phones.

**B16: Engagement in mobile telephone** - The intent of this question is to establish how often members of the household used mobile phone in the last 7 days.

**B17: Time spent on mobile phone per week** - For respondents who used a mobile phone in the last 7 days, the question seeks to find out how much time (in minute) they cumulatively spent.

**B18: Amount spent on mobile** - For respondents who used a mobile phone within the last 7 days, the question seeks to find out how much they spent.

**B19: Engagement in internet activities** - The intent of this question is to establish which members of the household engaged in internet activities in the last 6 months.

**B20: Frequency of Internet Usage** - The level of engagement in internet activities depends on the cost rates of the ISP. The question is meant to assess the frequency of internet engagement.

**B21 – B28: Place of Internet Usage** - The intention of the question is to establish the locality/place where the members of the household used the internet in the last 12 months. **Remember multiple responses are applicable here.**

**B29 – B33: Purpose of internet usage** - purpose of this question is to find out the reasons for engaging in internet activities. **Remember multiple responses are applicable here**

**B34 – B47: Activities engaged** - The purpose of this question is to find out the activities that the household member engaged in over the internet. Note that these activities are restricted to private purposes and therefore exclude activities such as purchasing over the Internet undertaken as part of a person's job. Individuals should be asked about all Internet activities. Activities are not mutually exclusive. Access to the Internet is not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc.

- *Communicating* (Email/Internet phone): Involves transferring information from one person/entity to another
- **Getting information about goods or services:**
- *Getting information from government organisations, public authorities via websites*

*or email: General government organizations* should be consistent with the SNA93 (2008 revision) concept of general government. According to the SNA "... the principal functions of government are to assume responsibility for the provision of goods and services to the community or to individual households and to finance their provision out of taxation or other incomes; to redistribute income and wealth by means of transfers; and to engage in non-market production." (General) government organizations include central, state and local government units.

- *Reading/downloading electronic books, newspapers or magazines:* Includes accessing news websites, either paid or free of charge. Includes subscriptions to on-line news services.
- *Playing/downloading computer video/computer games:* Includes file sharing games and playing games on line, either paid or free of charge.
- Movies and TV watching
- *Getting information related to health or health services:* Includes information on injury, disease, nutrition and improving health generally.
- Other information on web browsing
- *Purchasing or ordering goods or services:* Refers to purchase orders placed via the Internet whether or not payment was made on line. Orders that were cancelled or not completed are excluded. Includes purchasing of products such as music, travel and accommodation via the Internet.
- **Internet banking:** Includes electronic transactions with a bank for payment, transfers, etc. or for looking up account information. Excludes electronic transactions via the Internet for other types of financial services such as share purchases, financial services and insurance.
- *Education or learning activities:* Refers to formal learning activities such as study associated with school or tertiary education courses as well as distance education involving on-line activities. (A more narrow interpretation is likely to be less meaningful as it could include a range of activities such as using the Internet to search for information.)
- **Research**
- Other Specify

**Remember multiple responses are applicable here.**

**B48- B52: Ownership of Equipments** - The purpose of the question is to assess the proportion of respondents among household members who own the following items:-

- Radio,

- TV,
- Mobile Phone,
- Computer
- Internet Connectivity

The definitions of the items in B3 – B9 applies

**B53: Type of Internet Connectivity** - The intention of the question is to establish the penetration of the various types of internet connections: fixed lines, Satellite (VSAT), Mobile phone and modem among others:

**Fixed lines:** This is normally a leased line service contract between a provider and a customer, whereby the provider agrees to deliver a telecommunications line connecting two locations in exchange for a monthly rent. Unlike dial-up connections, a leased internet line is always active.

**Satellite (VSAT):** A Very Small Aperture Terminal (VSAT), is a two-way satellite ground station or a stabilized maritime VSAT antenna with a dish antenna

**Mobile phone:** The definitions of the items in B3 – B9 applies

**Modem:** A modem, short for *modulator-demodulator*, is a device that enables a computer to transmit data over, for example, telephone or cable lines. Computer information is stored digitally, whereas information transmitted over telephone lines is transmitted in the form of analog waves. A modem converts between these two forms.

**B54: Amount spent on internet** - The intent of these questions is to estimate the monthly expenditure in KSh on internet services by the household member.

**B55: Number of mobile lines** - The intent of this question is to establish the number of mobile lines that each individuals within the household have.

**B56: Email address** - An e-mail address identifies an email box to which e-mail messages may be delivered.

## PART C: USAGE AND FREQUENCY BY HOUSEHOLD INDIVIDUALS

**Village/town:** The interviewer is expected to establish from the respondent the name of the village/town where the respondent mostly obtained the specified services (telephone, internet, television and postal services).

**Location:** The interviewer is expected to establish from the respondent the location of the village/town (relative to the location of the household of the respondent) where the respondent

mostly obtained the specified services (telephone, internet, television and postal services).

**Distance:** The interviewer is expected to establish from the respondent the distance in Kilometers (from the location of the household of the respondent) to the village/town where the respondent mostly obtained the specified services (telephone, internet, television and postal services).

**Distance in time:** The interviewer is expected to establish how much time it takes the respondent (from the location of the household of the respondent) to the village/town where the respondent mostly obtained the specified services (telephone, internet, television and postal services) by means of what he normally uses (mode of transportation).

**Transportation:** The interviewer is expected to establish the usual means by which the respondent reaches the village/town where the (s)he mostly obtained the specified services (telephone, internet, television and postal services).

**C1 - C8: Location to telephone facilities** - These questions are intended to measure the extent of accessibility/proximity in terms of distance and time where the respective members of the household mostly accessed telephone facilities in the last 12 months. **This applies to mobile phone services, fixed line services or both.**

**C9 - C16: Location to internet facilities** - These questions are intended to measure the extent of accessibility/proximity in terms of distance and time where the respective members of the household mostly accessed internet facilities in the last 12 months.

**C17 - C24: Location to television facilities** - These questions are intended to measure the extent of accessibility/proximity in terms of distance and time where the respective members of the household mostly accessed television in the last 12 months.

**C25 - C35: Location to postal services** - These questions are intended to measure the extent of accessibility/proximity in terms of distance and time where the respective members of the household mostly accessed postal services in the last 12 months

**Refer to PART D for definition of Postal services**

**C33 - C41: Transport costs** - These questions are intended to measure the transport cost to where the respective members of the household mostly accessed Radio, Television, Pay TV, Fixed Telephone, Computer, Internet and postal services.

## **PART D: USAGE AND FREQUENCY POSTAL SERVICES BY HOUSEHOLD INDIVIDUALS**

**D1 – D12. Postal services:** The purpose of these questions is to find out the proportion of the respondents who had access to a private letter box and the frequency of use in sending/receiving letters/parcels.

Postal services involve transmitting information and tangible objects, typically enclosed in envelopes and also small packages for delivery to destinations within the country or anywhere else around the world.

## **PART E: ICT INFRASTRUCTURE - ICT IN EDUCATION**

Evidence suggests that ICT can have a positive impact on the expansion of learning opportunities. ICTs are catalysts for improving the teaching/learning process by reforming conventional delivery systems, enhancing quality of learning, facilitating state-of-art skills formation, sustaining lifelong learning, and improving institutional management. It is important to understand that ICTs are supporting tools to conventional teaching and not substitutes for it. ICTs include older technologies that are still affordable and widely available in across the country (for example, radio and television) as well as newer technologies (such as computers and the Internet) that may be expensive to introduce, especially in rural areas of developing economies.

This section will be administered ONLY in respect of individuals who answered **“in school” in HL6. The definitions of the items in B3 – B9 of the household questionnaire applies.**

**HL1: Serial Number.** The serial number corresponds to household listing in HL1.

### **Interviewer instructions**

Where the interview occurs at the institution office, the presence of electricity may be directly observable by the interviewer, in which case the question does not need to be asked.

**E1: Electricity** - May be by a grid/mains connection, or from power generated locally (including at the dwelling). Local power includes electricity generated by a fuel-powered generator, or from renewable resources such as wind, water or solar. It **excludes** sole use of energy storage devices, such as batteries (though these may be used to store electricity from other sources).

### **E2: Telephone Communication Facility**

This measures the proportion of schools, with a telephone communication facility.

A *telephone communication facility* refers to fixed telephone lines, cable connections (i.e. cable telephony) or other sustainable communication technology that connects an educational institution’s terminal equipment (e.g. telephone set, facsimile machine) to the public switched telephone network (PSTN) and has a dedicated port on a telephone exchange. Access is defined by a subscription to services that allow the physical presence and use of the facilities in a given educational institution.

For the purposes of this indicator, telephone communication equipment and related services are in working condition.

The indicator refers to telephone facilities that are *directly owned by the school*. A mobile phone that is owned by an individual working or learning at the school does not constitute a school telephone communication facility.

### **E3: Internet Access by school**

This is intended to measure the proportion of learners entitled to use Internet laboratories at school as a pedagogical aid. It measures the accessibility to Internet use for educational purposes by learners. It does not account for the actual use of the Internet by learners.

The *Internet* refers to worldwide interconnected networks that enable users to share information in an interactive format — referred to as hypertext — through multiple wired or wireless receivers (personal computers, laptops, PDAs, Smartphones, etc.). For the purposes of this indicator, Internet connections are functional, that is, any equipment, software or services needed are in working condition.

### **E4: Radio**

This is intended to measure the proportion of schools offering radio-assisted instruction. It does not measure the intensity of use of radios for educational purposes.

*Unless they are intentionally used for educational purposes*, radio sets integrated into other devices (such as a Walkman, car radio, clock radio, audio cassette or CD players/recorders) are excluded.

### **E5: Pay TV**

For the purpose of this section, it will be included **only if its intended use is for educational purposes**.

### **E6: Television**

This indicator is intended to measure the proportion of schools, for ISCED levels 1 to 3, offering television-assisted instruction. It does not measure the intensity of use of televisions for educational purposes.

Television broadcast receivers integrated into other devices (such as a computer, PDA, Smartphone or mobile phone) are considered *only if their intended use is for educational purposes*.

Television-assisted instruction is similar to radio broadcast education, with the additional benefit of video. It helps to bring abstract concepts to life through clips, animations, simulations, visual effects and dramatization.

### **E7: Computer in schools**

The intension is to measure the average number of learners entitled to use school computers (as a pedagogical aid) per computer available for pedagogical use in schools that offer computer-assisted instruction (CAI), for ISCED levels 1 to 3. It indicates the potential for the use of computers in CAI schools to promote or expand computer-assisted instruction. It is not a measure of actual use of computers in schools.

### **E8: Internet at school**

This is intended to measure the proportion of learners entitled to use Internet laboratories at school as a pedagogical aid. It measures the accessibility to Internet use for educational purposes by learners. It does not account for the actual use of the Internet by learners.

**E9- E11: Usage of Radios, Televisions and Computers for education:** The intent of this question is to know whether the school which the household member attends has radio, TV or computers which are used for educational purposes.

### **E12 - E17: Enrollment in ICT-related Fields**

This measures the level of teaching of ICT-related courses in tertiary education institutions, Secondary and Primary Schools.

**Primary School:** is an institution in which children receive the first stage of compulsory education known as primary or elementary education

**Secondary School:** Is an educational institution where the final stage of compulsory schooling, takes place. It follows on from primary education.

**Tertiary colleges:** Also referred to as third stage, third level, and post-secondary education, is the educational level following the completion of a school providing a secondary education.

ICT-related fields include programmes covering any of the following four fields of education and training:

*Audiovisual techniques and media production* is the study of techniques and the acquisition of skills to produce books, newspapers, radio/television programmes, films/videos, recorded music and graphic reproduction with ICT.

*Computer science* is the study of the design and development of computer systems and computing environments. It includes the study of the design, maintenance and integration of software applications.

*Computer use* is the study of using computers, and computer software and applications for different purposes. These programmes are generally of short duration.

*Electronics and automation* (engineering and engineering trades) is the study of planning, designing, developing, maintaining and monitoring electronic equipment, machinery and systems. It includes designing computers and equipment for communication.

## **PART F: ICT INFRASTRUCTURE - OWNERSHIP AND FREQUENCY OF USAGE BY HOUSEHOLDS**

**F1- F7: Ownership of Equipments** - The purpose of the question is to assess the proportion of households which own the following items:-

- Radio,
- TV,
- Pay TV
- Telephone
- Mobile Phone,
- Computer
- Internet Connectivity

The definitions of the items in B3 – B9 applies

**Ownership** is the state of exclusive rights and control over the property/item. Ownership is self-propagating in that the owner of any property will also own the economic benefits of that property.

**F9 – F13: Type of Internet Connectivity** - The intention of the question is to establish the penetration of the various types of internet connections: fixed lines, Satellite (VSAT), Mobile phone and modem among others:

The definitions of the types of connectivity in B53 applies

**F14: Access to door/home mail delivery** - The purpose of this question is to find out if the household has access to door/home mail delivery

**F15– F32: Consumption of services** - The purpose of these questions is to estimate the consumption, frequency of purchase and cost of purchasing the services

**Health services:** Include all services dealing with the diagnosis and treatment of disease, or the promotion, maintenance and restoration of health. They include personal and non-personal health services.

**Education services:** Any service that has a formative/development effect on the mind, character or physical ability of an individual. It is generally the process by which society deliberately transmits its accumulated knowledge, skills and values from one generation to another.

**Entertainment services:** Entertainment consists of any activity which provides a diversion or permits people to amuse themselves in their leisure time. It is generally passive, such as watching a movie, drama, games or sports.

**Transportation services:** Transportation services involves the movement of people and goods from one location to another either through air, rail, road, water, pipeline, etc.

**Telecommunication services:** Refers to any service provided by a telecommunication provider or agent.

**F15- F20: Consumption of services** - The purpose of these questions is to find out the proportion of households who consumed the services.

**F21- F26: Frequency of purchase of services** - The purpose of these questions is to assess the regularity of consumption of the specified services by households within the last 12 months.

**F27- F32: Cost of Consumption of services** - The purpose of these questions is to estimate the expenditure on the specified services by.

**F33 - F35: Electricity access** - May be by a grid/mains connection, or from power generated locally (including at the dwelling). Local power includes electricity generated by a fuel-powered generator, or from renewable resources such as wind, water or solar. It excludes sole use of energy storage devices, such as batteries (though these may be used to store electricity from other sources).

The purpose of these questions is to find out the proportion of households which have access to electricity from the mains, solar or generator.

## **PART G: ACCESS AND USAGE BY BUSINESS**

This part tries to collect the some core indicators on use of ICT by businesses. Note that the concept of ICT access is not used for businesses as it is generally assumed that any ICT in place will be used by someone within the business. Statistics on business use of ICT are usually collected by NSOs using a stand-alone business ICT use survey or through a module of ICT use questions in another business survey. Most OECD and European Union countries have been collecting business ICT use statistics for a number of years and most have stand-alone surveys that are conducted annually. Other economies are starting to collect business ICT use indicators, using the core indicators and associated standards recommended by the *Partnership*.

Apart from OECD and European Union countries, data on use of ICT by businesses are not widely available. As with the household indicators, there are several specific comparability issues with respect to the core business ICT use indicators. They include variable industry and business size scope, variations in questions asked and lack of time series data.

The suggested reference period is 12 months, although a different reference period might be considered appropriate by the statistical agency.

**HL1: Serial Number.** The serial number corresponds to household listing in HL1

**G1: Type of Business.** The purpose of this question is to find the type of business operated by the household members by International Standard of Industrial Classification (ISIC).

**G2 - G8: Equipment ownership:** The purpose of these questions is to find out if the business(es) owned by household member uses the following equipments:-Computer, Website, Local area Network, Intranet, Extranet, Post box and Internet

**G2: Does the business have a computer?**

The intent of this question is to capture the proportion of businesses using computers. It refers to the use (not access to or ownership) of computers by in-scope businesses during the reference period. Use can be at the business's premises or elsewhere.

The definitions of computer in B3 – B9 applies

**G3 Does the business have a Website?**

The intent of this question is to know the proportion of businesses with a web presence. A *web presence* includes a website, homepage or presence on another entity's website (including a related business).

It excludes inclusion in an online directory and any other web pages where the business does not have control over the content of the page. The term 'web presence' is used rather than 'web site', based on the presumption that a presence on the WWW is more important than a web site *per se*.

**G4: Does the business have a local area network (LAN)**

The question tries to calculate the proportion of businesses with a local area network (LAN). It is intended to a measure the proportion of in-scope businesses with a local area network as at the reference date.

A *local area network (LAN)* refers to a network connecting computers within a localized area such as a single building, department or site; it may be wireless.

**G5: Does the business have an intranet?**

The intent of this question is to know the proportion of businesses with an intranet. It is intended to measure the proportion of in-scope businesses with an intranet as at the reference date.

An *intranet* refers to an internal communications network using Internet protocols and allowing communication within an organization (and to other authorized persons). It is typically set up behind a firewall to control access.

#### **G6: Does the business have an extranet?**

The question is asked of all in-scope businesses that used computers during the reference period. The intent of this question is to estimate the proportion of businesses with an extranet. It measures the proportion of in-scope businesses with an extranet as at the reference date.

An *extranet* is a closed network that uses Internet protocols to securely share a business's information with suppliers, vendors, customers or other businesses partners. It can take the form of a secure extension of an intranet that allows external users to access some parts of the business's intranet. It can also be a private part of the business's website, where business partners can navigate after being authenticated in a login page.

#### **G7: Post box**

A **post office box** (commonly referred to as a **P.O. Box**) is a uniquely-addressable lockable physical box located on the premises of a post office station. It refers to a private letter box for incoming mail.

The intention of the question is to establish the proportion of businesses with private letter boxes

#### **G8: Does the business have an internet?**

The definitions of internet in B3 – B9 applies

**G9: Type of Internet Connectivity** - The intention of the question is to establish the penetration of the various types of internet connections: fixed lines, Satellite (VSAT), Mobile phone and modem among others:

The definitions of the types of connectivity in B53 applies

#### **G10: How much do you pay for the ISP services per month?**

The intention of the question is to measure the **monthly** expenditure (in Kenya Shillings) on ISP services

An *Internet service provider (ISP)*, also sometimes referred to as an Internet access provider (IAP), is a company that offers its customers access to the Internet. The ISP connects to its customers using a data transmission technology appropriate for delivering Internet Protocol Paradigm, such as dial-up, DSL, cable modem, wireless or dedicated high-speed interconnects.

ISPs may provide Internet e-mail accounts to users which allow them to communicate with one another by sending and receiving electronic messages through their ISP's servers. ISPs may provide services such as remotely storing data files on behalf of their customers, as well as other services unique to each particular ISP.

**G11: Since when did the business acquire internet connectivity?**

The intention of the question is to establish for how long the business has been connected to the internet. The response should be recorded in **complete months**.

**G12: Does your business have a domain name?**

A domain name is an identification label that defines a realm of administrative autonomy, authority, or control on the Internet, based on the Domain Name System (DNS).

Domain names are used in various networking contexts and application-specific naming and addressing purposes. They are organized in subordinate levels (sub-domains) of the DNS root domain, which is nameless. The right to use a domain name is delegated by domain name registrars which are accredited by the Internet Corporation for Assigned Names and Numbers (ICANN), the organization charged with overseeing the name and number systems of the Internet. In addition to ICANN, each top-level domain (TLD) is maintained and serviced technically by an administrative organization operating a registry. A registry is responsible for maintaining the database of names registered within the TLD it administers. The registry receives registration information from each domain name registrar authorized to assign names in the corresponding TLD and publishes the information using a special service, the whois protocol.

**G13: Does your business have a dot KE domain name?**

The intent of this question is to know whether the business has a dot KE domain name.

**G14: What was the monthly sales before internet connectivity?**

The intention of the question is to assess business performance **before** internet connectivity. The sales should be recorded in KSh.

**G15: What was the monthly sales after internet connectivity?**

The intention of the question is to assess business performance **after** internet connectivity. The sales should be recorded in KSh.

**G16 – G23: Mobile/fixed telephone in the business**

The intent of these questions is to know whether the business have telephone facilities (by type), the number of lines in use for each type and the monthly expenditure in KSh on telephone, internet and postage services by the business. For the purpose of these questions, only the cost of airtime service should be captured (i.e. exclude cost of handsets, etc).

**G24 – 25: Number of employees in the business?**

The intent of this question is to know the number of employees (by gender) in the relevant business owned by household members.

**G26 – G27: Proportion of persons employed in business who routinely used a computer at work during the last 6 months?**

The intent of this question is to know the proportion of persons employed in the business who routinely used a computer.

**G28: Did your business use the Internet during the last 6 months?**

The question solicits information on the usage of internet in the last 6 months.

**G29 – G30: What proportion of persons employed in your business routinely used the Internet at work during the last 6 months?**

The intent of this question is to know the proportion of persons (by gender) working in the business who routinely use internet as a major mode of communication in the last six months preceding the survey.

**G31 – G39: For which of the following activities did your business use the Internet during the last 6 months?**

The purpose of this question is to calculate the proportion of businesses using the Internet by type of activity. It refers to Internet activities undertaken by in-scope businesses during the reference period. **Multiple responses are allowed.**

**Description of the internet-based activities in B34 – B47 applies**

**G40: Did your business use computer(s) during the last 6 months?**

The question solicits information on the usage of computers in the last 6 months.

**G41: If Yes, has the business embraced the use of ICT?**

The intent of this question is to get the proportion of businesses which have embraced the use of ICT in their daily routine running of the business.

**G42: If yes, indicate where is it being used**

The question tries to enquire on the major areas of the business where the use of modern technology and ICT have been deployed.

**G43-G47: How has the use of modern technology and ICT affected Employment, Production, Sales, Communication and Records Management?**

The intent of this question is to assess the effectiveness and in their production in the areas outlined above.

**G48 - G54: Methods of communication in day-to-day business dealings**

The intention of the question seeks to establish the proportion of businesses using a particular mode of communication (by frequency of use).

## 11.0 INSTITUTIONAL QUESTIONNAIRE

The institutional questionnaire will be administered to a sample of centres that offer ICT programmes. The manager or the senior most teacher of the institution will be responsible for providing information for each of the sampled institutions. The Supervisor and his or her team of Research Assistants will be responsible for administering the questionnaire in the districts they will be working.

### COVER PAGE

The cover page provides geographical information of the institution, the names of the supervisor and interviewer in addition to the number of visits and the date and time.

### RED TAPE INFORMATION

Part of the identification information will be completed prior to the interview, part of it will be completed as the interview begins, and the rest will be completed at the end of the interview.

**E1-E4: Ownership:** The question asks about ownership of several Equipments which are namely, Radio, Television, Computer and Internet connectivity by the institution.

**E5: Connectivity Type.** The intent of the question is to find out the different types of connectivity at the centre. This measures the proportion of institutions with access to the Internet.

#### **E6: Bandwidth of internet**

The intent of the question is to find out the bandwidths of the internet connectivity at the institution. Internet bandwidth refers to the transmission speed or throughput of connection to the Internet. Two different units: *kilobits* per second, abbreviated kbps or Kb/s, and *kilobytes* per second, abbreviated KB/s. The difference between the two units is the number of bits in a byte, which is 8. The small 'b' stands for bits, and the big 'B' stands for bytes. Transfer speeds are often shown in KB/s, and connect speeds are usually quoted in Kb/s. For instance, if a progress dialog for a modem shows you a download speed of 4.3 KB/s, it is the same as 34.4 Kb/s. If a progress dialog for a cable modem shows you a transfer speed of 100 KB/s, it is the same as 800 Kb/s.

**E7: Ownership of Computer Lab** - Availability of facilities for learning is an important input into the ICT learning programmes. This question asks about ownership a dedicated centre/lab for computer learning purposes.

**E8: Number of Computers** - The successful implementation of ICT programmes is dependent on

the availability of sufficient number of computers and qualified teachers. The intent of the question therefore is to assess the number of computers (in good working condition) at the ICT learning centres in the country.

**E9: Purpose** - The purpose of the question is to assess the purpose for which the computers are used

**E10- E12: Usage of Radios, Televisions and Computers** - The intent of this question is to know whether the institution has these facilities for educational purposes.

**E13: Network** - The purpose of the question is to assess whether the computers are networked.

**E14: Type of Network** - If the computers are networked the question seeks to know the type of network.

Refer to G5 and G6 for definition of intranet and extranet

**E15 - E22: For which of the following activities did your Institution use the Internet during the last 12 months?**

The purpose of this question is to find out the reasons for engaging in internet activities. The institution head should be asked about all Internet activities. Activities are not mutually exclusive. Access to the Internet is not assumed to be only via a computer – it may also be by mobile phone, PDA, games machine, digital TV etc. **Remember multiple responses are allowed**

Description of the internet-based activities in B34 – B47 applies

**E23 - E25: Does your Institution have a Website, Email Service and Domain Name?**

The intent of this question is to know whether the institution has these facilities which can provide all sorts of in-depth product information about the institution. It is a global, potentially low-cost communication and an (increasingly) transactional medium by which information and services can be made available at any time of day or night.

**E26 - E27: Does the School have Access to Internet/Telephone Facilities?**

The basic purpose of a Telephone is essentially Communication. It is a device that makes it possible for two people who are at geographically diverse locations to converse with each other by transmitting and receiving digital form of sound.

The intent of this question is to know the proportion of institutions which have these communication technologies.

**E28: What type of Telephone Facilities does Your Institution have?**

The intent of this question is to know the type of telephone facilities the institution has.

**E29: Does the institution offer ICT subjects/Courses?**

The intent of this question is to know the institution offers ICT related subjects/courses.

**E30-E31: Enrollment in ICT Courses**

The intent of these questions is to assess how many students in this institution/school attend ICT related courses by gender. This measures the proportion of learners disaggregated by gender attending ICT-related courses in tertiary education institutions, Secondary and Primary Schools.

*ICT-qualified teachers* are those who have trained specifically in pre-service or in-service schemes in ICT. The indicator only presents the skilled teaching force available to deliver ICT courses. This does not necessarily mean that the teachers recorded as qualified actually teach an ICT course, nor does it ensure that ICT course delivery is effective.

**E32-E33: ICT-qualified teachers**

This assesses the proportion of school teachers who have been trained to teach basic computer skills (or computing) in school.

ICT programmes in the country are faced with several barriers. For improvement to be realized in the delivery of the programmes, the barriers being experienced must therefore be addressed through various interventions. The intent of the two questions therefore is to take stock of qualified ICT teachers in the institution by gender.

ICT-qualified teachers are those who have trained specifically in pre-service or in-service schemes in ICT

**E34: Is ICT taken as an examinable subject in this institution?**

Monitoring and Evaluation are critical in assessing the performance of programmes. The intent of the two questions is to find out whether ICT is taken as an examinable subject.

# **Annex 1: Kenya National Occupational Classification Standard (KNOCS)**

## **Occupational codes**

### **MAJOR GROUP 1: LEGISLATORS, ADMINISTRATORS AND MANAGERS**

#### **11: Legislators and Constitutional Officials**

111: Legislative and Constitutional Officials

112: Local Authority Officials

#### **12: Administrators and Senior Officials of Special Interest Organizations**

121: Government Administrators

122: Senior Officials of Special Interest Organizations

#### **13: Corporate Managers**

131: Directors and Chief Executives

132: Specialized Departmental Managers

133 Other Departmental Managers

#### **14: Non-Departmental Managers**

141: Non-departmental Managers

#### **15: Other Administrators and Managers**

151: Other Administrators and Managers

### **MAJOR GROUP 2: PROFESSIONALS**

#### **21: Physical Science Professionals**

211: Physicists and Related Professionals

212: Chemists

#### **22: Mathematicians, Statisticians and Computing Professionals**

221: Mathematicians and Related Professionals

222: Statisticians

223: Computing Professionals

#### **23: Engineering Science Professionals**

231: Architects and Town Planners

232: Surveyors and Cartographers

233: Civil Engineers

234: Mechanical Engineers

235: Chemical Engineers and Technologists

236: Mining Engineers, Metallurgists and Related Technologists

237: Electrical, Electronics and Telecommunications Engineers

238: Production and Related Engineers

#### **24: Health and Life Science Professionals**

241: Health Professionals

242: Nursing and Mid-wifely Professionals

243: Life Science Professionals

244: Agriculturalists and Related Professionals

#### **25: Teaching Professionals**

- 251: University and Post-secondary Teachers/Lecturers
- 252: Secondary and Technical Institute Teachers and Instructors
- 253: Special Education Teaching Professionals
- 254: Education Methods Advisers and Assessors
- 259: Other Teaching Professionals

**26: Legal Professionals**

- 261: Lawyers
- 262: Jurists/Judges

**27: Social Science and Related Professionals**

- 271: Economists
- 272: Psychologists
- 273: Sociologists, Anthropologists and Related Professionals
- 274: Historians and Political Scientists
- 275: Philologists, Translators and Interpreters
- 279: Other Social Science and Related Professionals

**28: Business Professionals**

- 281: Accountants, Auditors and Tax Assessors
- 282: Personnel and Occupational Professionals
- 289: Other Business Professionals

**29: Other Professionals**

- 291: Archivists, Librarians, and Related Professionals
- 292: Religious Professionals
- 293: Authors, Journalists and Related Professionals
- 294: Sculptors, Painters and Related Professionals
- 295: Composers, Musicians and Singers
- 296: Choreographers

**MAJOR GROUP 3: TECHNICIANS AND ASSOCIATE PROFESSIONALS**

**31: Engineering Technicians**

- 311: Technical Draughts-men
- 312: Civil Engineering and Related Technicians
- 313: Mechanical Engineering and Related Technicians
- 314: Mining and Metallurgical Technicians
- 315: Electrical Engineering Technicians
- 316: Electronics and Telecommunications Engineering Technicians
- 317: Chemical Engineering Technicians
- 318: Photographers, Image and Sound Recording Equipment Controllers
- 319: Broadcasting and Telecommunications Equipment Controllers

**32: Medical and Health Science Associate Professionals**

- 321: Auxiliary Nurses
- 322: Medical/Clinical Officers
- 323: Sanitarians
- 324: Optometrists and Opticians
- 325: Dental Technicians
- 326: Physiotherapists and Related Associate Professionals
- 327: Veterinary Officers

328: Pharmaceutical Officers  
329: Other Associate Medical, Nursing and Nutrition Workers

**33: Physical and Life Science Technicians**

331: Physical Science Technicians  
332: Life Science Technicians  
333: Agronomy and Forestry Technicians  
334: Farming and Forestry Advisors

**34: Farming Advisors**

341: Ships Engineer  
342: Ships Deck Officers and Pilots  
343: Aircraft Pilots and Related Workers  
344: Air Traffic Controller

**35: Business and Social Services Associate Professionals**

351: Securities and Finance Dealers  
352: Insurance Brokers and Agents  
353: Real Estate Agents  
354: Business Service Agents  
355: Buyers, Appraisers Auctioneers

**36: Administration and Middle Level Personnel**

361: Police Inspectors, Detectives, Customs and Border Officials  
362: Government Tax and Excise Officials  
363: Welfare and Pension Officials  
364: Government Licensing Officials  
365: Business and Public Service Middle Level Personnel  
366: Statistical and Planning Officials  
367: Fisheries, Wildlife and Tourist Officials  
368: Lands, Agricultural and Livestock Officials  
369: Other Middle Level Personnel

**37: Primary and Pre-primary education and Other Teachers**

371: Primary Education Teachers  
372: Pre-primary Education Teachers  
373: Other Teachers and Instructors

**39 : Other Business, Social Services, Athletics, Sports and Related Workers**

391: Non-ordained Religion Assistants  
392: Social Advisers and Helpers  
393: Athletes, Sportsmen and Related workers  
394: Decorators and Other Commercial Workers  
395: Radio, Television and Other Announcers  
396: Street, Nightclub and Related Musicians  
397: Acrobats, Clowns, Magicians and Related Workers  
398: Safety, Health and Quality Inspector /Controllers  
399: Mechanical, Electrical, Building and Fire Inspectors

**MAJOR GROUP 4: SECRETARIAL, CLERICAL SERVICES AND RELATED WORKERS**

**41: Secretaries and Office Clerks**

411: Secretaries Stenographers and Typists

412: Office Machine Operators  
413: Numerical Clerks  
414: Material Recording and Transport Clerks  
415: Library, Mail and Related Clerks  
416: Coding, Proofreading and Related Clerks  
417: General Office Clerks  
**42: Client Oriented Clerks**  
411: Cashiers, Tellers and Related Clerks  
422: Information Clerks  
423: Other Client Oriented Clerks

## **MAJOR GROUP 5: SERVICE WORKERS, SHOP AND MARKET SALES WORKERS**

51: Models, Shop Assistants and Demonstrators  
511: Fashion and Other Models  
512: Shop Assistants and Demonstrators  
**52: Personal and Protective Service Workers**  
521: Hairdressers, Barbers, Beauticians and Related Workers  
522: Undertakers and Embalmers  
523: Fortune Tellers, Astrologers and Related Workers  
524: Protective Service Workers  
**53: House Stewards, Caterers, Waiters and Related Workers**  
531: House Stewards and Housekeepers  
532: Cooks and Other Catering Service Workers  
533: Waiters Bartenders  
**54: Travel Attendants and Guides**  
541: Ship and Flight Attendants and Travel Stewards  
542: Transport Conductors  
543: Travel Guides and Ground Attendants

## **MAJOR GROUP 6: SKILLED FARM, FISHERY, WILDLIFE AND RELATED WORKERS**

**61: Farm Workers (except fish)**  
611: Field Crop, Vegetable and Horticultural Farm Workers  
612: Poultry, Dairy and Livestock Producers  
613: Crop and Animal Producers  
**62: Fishery and Related Workers**  
621: Fishery Workers  
**63: Subsistence Agricultural and Fishery Workers**  
631: Subsistence Agricultural and Fishery Workers  
**64: Forestry and Related Workers**  
641: Forestry and Related Workers  
**65: Hunting and Wildlife Workers**  
651: Hunting and Wildlife Workers

## **MAJOR GROUP 7: CRAFT AND RELATED TRADES WORKERS**

**71: Extraction and Building Trades Workers**  
711: Mining, blasting, Stone Cutting and Related Workers

712: Building Trades Workers

**72: Metal, Machinery and Related Trades Workers**

721: Metal Molders, Welders, Structural-metal Preparers and Related Trades Workers

722: Blacksmiths, Toolmakers and Related Trades workers

723: Machinery Mechanics and Fitters

724: Electrical Equipment Fitters and Installers

725: Electrical Equipment Fitters and Services

726: Electrical Linesmen and Cable Jointers

727: Solar Equipment Fitters and Installers

**73: Precision and Handicraft Workers**

731: Precision Workers in Metal and Related Materials

732: Potters, Glassmakers and Related Trades Workers

733: Handicraft Workers

**74: Printing and Related Trades Workers**

741: Compositors and Typesetters

742: Stereotypers and Electrotypers

743: Printing Engravers and Etchers

744: Photographic and Related Workers

745: Bookbinders and Related Workers

746: Silk-screen, Block and Textile Printers

**75: Food Processing and Related Trades**

751: Butchers, Fishmongers and Related Food Preparers

752: Bakers, Pastry-cooks and Confectionery Makers

753: Dairy Products Makers

754: Fruit, Nut and Related Preservers

755: Tobacco Preparers and Tobacco Products Makers

756: Food and Beverage Tasters

757: Brewers, Distillers and Related Workers

758: Other Food Processing and Related Workers

**76: Woodworking Trades Workers**

761: Wood Treating, Cabinetmaking and Related Trades Workers

762: Woodworking-machine Setters and Setter-operators

**77: Textile, Garment and Related Trades**

771: Fibre Prepapers

772: Weavers, Knitters and Related Workers

773: Tailors, Dressmakers and Related Workers

**78: Upholsterers, Pelt, Leather and Shoemaking Trades Workers**

781: Upholsters

782: Fell mongers, Tanners and Pelt Dressers

783: Shoe-making and Related Trades Workers

**MAJOR GROUP 8: PLANT AND MACHINE OPERATORS AND ASSEMBLERS**

**81: Drilling and Mining Plant and Mineral Products Machine Operators**

811: Well Drillers and Borers

812: Mining Plant Operators

813: Stone, Clay, Cement and Other Mineral Products Machine Operators

**82: Metal Processing Plant and Metal Working Machine Operators**

821: Metal Smelting, Converting and Refining Furnace Operators

822: Metal Melters, Casters and Rolling Mill Operators

823: Metal Heat-treating Plant Operators, Metal Drawers and Extruders

824: Machine -Tool and Other Metal-Working Machine Operators

825: Metal Finishing, Plating and Coating Machine Operators

**83: Wood Processing Plant and Wood, Rubbers and Plastic Machine Operators**

831: Wood Processing and Paper Pulp Plant Operators

832: Wood Products Machine Operators

833: Printing and Binding Machine Operators

834: Paper Products Machine Operators

835: Rubber and Plastic Rubber Machine Operators

**84: Chemical-Processing Plant and Chemical Products Machine Operators**

841: Chemical Crushing, Grinding and Mixing Machine Operators

842: Chemical Heat-treating and Plant Operators

843: Filtering and Separation Equipment Operators

844: Chemical Still and Reactor Operators

845: Petroleum Refining Plant Operators

846: Pharmaceutical and Toiletry Products Machine Operators

849: Other Chemical Processing Plant and Machinery Operators

**85: Power Production Plant Operators**

851: Power Generating Plant Operators

852: Steam Turbine boiler and Engine Operators

**86: Food and Related Products Machine Operators**

861: Meat and Fish Processing Machine Operators

862: Dairy Products and Machine Operators

863: Grain and Spice-milling Machine Operators

864: Baked Goods, Cereal and Chocolate Products Machine Operators

865: Fruit, Vegetable and Nut Processing Machine Operators

866: Sugar Production Machine Operators

867: Tea, Coffee and Cocoa Processing Machine Operators

868: Brewers, Wine and Other Beverage Machine Operators

869: Tobacco Production Machine Operators

**87: Assemblers**

871: Mechanical Machinery Assemblers

872: Electrical and Electronic Machinery Assemblers

873: Metal Products Assemblers

874: Plastic and Rubber Products Assemblers

875: Wood, Paperboard and Related Products Assemblers

876: Textile and Leather Products Assemblers

**88: Drivers and Mobile Machinery Operators**

881: Railway Engine Drivers and Related Workers

882: Motor Vehicle Drivers

883: Agricultural and Materials-handling Machinery Operators

884: Ships' Deck Crews and Related Workers

**89: Other Plant and Machine Operators and Assemblers**

- 891: Glass and Ceramics Kiln and Related Plant Operators
- 892: Textile Preparing, Spinning and Winding Machine Operators
- 893: Weaving, Knitting and Sewing Machine Operators
- 894: Textile Bleaching, Dyeing and Cleaning Machine Operators
- 895: Fur and Leather Preparing Machine Operators
- 896: Shoemaking and Related Machine Operators
- 899: Plant and Machine Operators and Assemblers not Elsewhere Classified

**MAJOR GROUP 9: ELEMENTARY OCCUPATIONS**

**91: Sales and Services Elementary Occupations**

- 911: Street Vendors and Related Workers
- 912: Shoe Cleaning and Other Street Services Elementary Occupations
- 913: Cleaners, Launderers and Domestic Workers
- 914: Building Caretakers
- 915: Messengers, Porters, Watchmen and Related Workers
- 916: Other Sales and Service Labourers

**92: Agricultural, Fishery and Related Labourers**

- 921: Farm- hands and Related Labourers
- 922: Forestry Labourers
- 923: Fishery, Hunting and Trapping Labourers

**93: Labourers in Mining, Construction, Manufacturing and Transport**

- 931: Mining and Quarrying Labourers
- 932: Construction and Maintenance Labourers
- 933: Manufacturing Labourers
- 934: Transport Labourers and Freight Handlers

**MAJOR GROUP O: ARMED FORCES**

**01: Armed Forces**

- 011: Armed Forces

## **Annex 2: ISIC CLASSIFICATION**

### **AGRICULTURE, FORESTRY:**

#### **AGRICULTURE AND FORESTRY**

- 1111 Coffee plantations
- 1112 Tea plantations
- 1113 Sugar plantations
- 1114 Sisal plantations
- 1115 Mixed farming
- 1116 Ranches
- 1117 Other agricultural activities n.e.c.
- 1119 Processing co-operatives of small farms
- 1120 Agricultural services
- 1130 Hunting, trapping and game propagation
- 1211 Forestry
- 1212 Charcoal burning
- 1220 Logging
- 1301 Ocean and coastal fishing
- 1302 Inland water fishing

### **MINING, QUARRYING:**

#### **MINING AND QUARRYING**

- 2901 Stone quarrying, clay and sand pits
- 2902 Chemical and fertilizer mineral mining
- 2909 Mining and quarrying n.e.c.

### **MANUFACTURING:**

#### **MANUFACTURING**

- 3111 Slaughtering, preparing and preserving of meat
- 3112 Manufacture of dairy products
- 3113 Canning and preserving of fruits and vegetables
- 3114 Canning, preserving and processing of fish
- 3115 Manufacture of vegetable and animal oils and fats
- 3116 Grain mill products
- 3117 Manufacture of bakery products
- 3118 Sugar factories and refineries
- 3119 Manufacture of cocoa, chocolate and sugar confectionaries
- 3121 Manufacture of food products n.e.c.
- 3122 Manufacture of prepared animal feeds
- 3131 Spirits, beer and tobacco (Distilling, rectifying and blending spirits)
- 3134 Soft drinks and carbonated waters industries
- 3210 Cotton ginneries
- 3211 Spinning, weaving and finishing textiles
- 3212 Manufacture of made-up textile goods except wearing apparel
- 3213 Knitting mills
- 3215 Cordage, rope and twine industries
- 3219 Manufacture of textiles n.e.c.
- 3220 Manufacture of wearing apparel, except footwear
- 3231 Tanneries and leather finishing
- 3233 Manufacture of products of leather, except footwear and wearing apparel

- 3240 Manufacture of footwear, except plastic footwear
- 3311 Sawmills, planing and other woodmills
- 3312 Manufacture of wooden and cane containers
- 3319 Manufacture of wood and cork products n.e.c.
- 3320 Manufacture of furniture and fixtures, except primarily of metal or plastic
- 3411 Manufacture of pulp, paper and paperboard
- 3419 Manufacture of pulp, paper and paperboard articles n.e.c.
- 3420 Printing, publishing and allied industries
- 3511 Manufacture of basic industrial chemicals, except fertilizers
- 3512 Pyrethrum extraction
- 3521 Manufacture of paints, varnishes and lacquers
- 3522 Manufacture of drugs and medicines
- 3523 Manufacture of soap and cleaning preparations, perfumes, cosmetics other toilet preparations
- 3529 Manufacture of chemical products n.e.c.
- 3560 Manufacture of plastic products
- 3610 Manufacture of pottery, china and earthenware
- 3620 Manufacture of glass and glass products
- 3691 Manufacture of structural clay products
- 3692 Manufacture of cement, lime and plaster
- 3699 Manufacture of non-metallic mineral products n.e.c.
- 3700 Basic metal industries
- 3811 Manufacture of cutlery, hand tools and general hardware
- 3812 Manufacture of furniture and fixtures, primarily of metal
- 3813 Manufacture of structural metal products
- 3819 Manufacture of fabricated metal products, except machinery and equipment n.e.c.
- 3820 Manufacture of machinery except electrical
- 3830 Manufacture of electrical machinery and appliances
- 3841 Ship building and repairing
- 3842 Manufacture of railroad equipment
- 3843 Manufacture and assembly of motor vehicles
- 3844 Manufacture and assembly of motorcycles and bicycles
- 3845 Manufacture and repair of aircraft
- 3850 Manufacture of professional and scientific equipment photographic and optical goods
- 3900 Other manufacturing industries

**ELECTRICITY, WATER:**

**ELECTRICITY AND WATER**

- 4101 Electric light and power
- 4200 Water works and supply

**CONSTRUCTION:**

**CONSTRUCTION**

- 5101 Electrical contractors
- 5102 Plumbers
- 5103 Structural steel erectors
- 5104 Painters, roof-tilers and minor repairs
- 5105 Borehole drilling
- 5201 Construction of buildings
- 5202 All other construction

## **TRADE, RESTAURANTS, HOTELS:**

### **Joint wholesale and retail trade**

- 6001 Motor vehicles
- 6002 Non-electric machinery and appliances
- 6003 Electrical machinery and appliances
- 6110 Food, drink and tobacco
- 6111 Agricultural produce
- 6112 Oil and petrol
- 6113 Textiles, soft furnishings, clothing and shoes
- 6114 Building materials, hardware and timber
- 6115 Domestic hardware
- 6116 Photographic and pharmaceutical goods
- 6117 Engineering products, scrap, industrial and agricultural chemicals, seeds, e.t.c.
- 6118 General wholesale
- 6119 Wholesale n.e.c.
- 6211 Food, drink and tobacco
- 6212 Butcheries
- 6213 Oil and petrol
- 6214 Textiles, soft furnishings, clothing and shoes
- 6215 Building materials, timber, and domestic hardware
- 6216 Photographic and pharmaceutical goods
- 6217 General Retail Trade
- 6218 Retail n.e.c.
- 6310 Restaurants, cafes and other eating and drinking places
- 6320 Hotels, rooming houses, camps and other lodging places

## **TRANSPORT, COMMUNICATIONS:**

### **TRANSPORT AND COMMUNICATIONS**

- 7110 K.R. Central administration
- 7111 Railway transport
- 7112 Urban, sub-urban and inter-urban highway passenger transport
- 7113 Other passenger land transport
- 7114 Freight transport by road
- 7115 Pipeline transport
- 7116 Supporting services to land transport
- 7121 Ocean and coastal water transport
- 7122 Inland water transport
- 7123 Supporting services to water transport
- 7131 Air transport carriers including aircraft rental
- 7132 Supporting services to air transport
- 7191 Services incidental to transport n.e.c.
- 7192 Storage and warehousing
- 7200 Communications
- 7201 K.P. & T. services

## **FINANCE, INSURANCE, etc.**

### **Finance, Insurance, Real Estate and Business Services**

- 8101 Monetary institutions
- 8102 Other financial institutions, except holding companies
- 8103 Financial services

- 8104 Holding companies
- 8201 Insurance companies
- 8202 Other insurance
- 8311 Property companies
- 8312 House and estate agents
- 8321 Legal services
- 8322 Accounting, auditing and book-keeping services
- 8323 Data processing and tabulating services
- 8324 Engineering, architectural and technical services
- 8325 Advertising services
- 8329 Business services, except machinery and equipment rental and leasing n.e.c.
- 8330 Machinery and equipment rental and leasing

**COMMUNITY SERVICES:**

**COMMUNITY AND SOCIAL SERVICES**

- 9101 Government services . . . . .
- 9102 Law and order . . . . .
- 9103 Defence . . . . .
- 9104 Other public administration . . . . .
- 9310 Education services
- 9320 Research and scientific institutes
- 9331 Medical, dental and other health services
- 9332 Veterinary services
- 9340 Welfare institutions
- 9350 Business, professional and labour associations
- 9391 Religious organisations
- 9399 Social and related community services n.e.c.
- 9410 Motion pictures and other entertainment services
- 9420 Libraries, museums, botanical and zoological gardens and other cultural services n.e.c.
- 9490 Pleasure boat hire
- 9491 Other amusement and recreational services n.e.c.
- 9511 Repair of footwear and other leather goods
- 9512 Electrical repair shops
- 9513 Repair of motor vehicles and motorcycles
- 9514 Watch, clock and jewelry repair
- 9519 Other repair shops n.e.c.
- 9520 Laundries, laundry services and cleaning and dyeing plants
- 9530 Domestic services
- 9591 Barber and beauty shops
- 9592 Photographic studios including commercial photography
- 9593 Hunting and tourist guide services
- 9599 Personal services n.e.c.
- 9600 International and other extra-territorial bodies
- 0000 Activities not adequately defined

**Annex 3: Provincial Codes**

PROVINCE	DISTRICT
101	Nairobi
201	Kiambu
202	Kirinyaga
203	Muranga
204	Nyandarua
205	Nyeri
206	Thika
207	Maragua
<b>Central</b>	<b>Totals</b>
301	Kilifi
302	Kwale
303	Lamu
304	Mombasa
305	Taita Taveta
306	Tana River
307	Malindi
<b>COAST</b>	<b>Totals</b>
401	Embu
402	Isiolo
403	Kitui
404	Makueni
405	Machakos
406	Marsabit
407	Mbeere
408	Meru Central
409	Moyale
410	Mwingi
411	Nyambene
412	Tharaka
413	Meru South
<b>EASTERN</b>	<b>Totals</b>
501	Garissa
502	Mandera
503	Wajir

N/Eastern	Totals
601	Gucha
602	Homa Bay
603	Kisii
604	Kisumu
605	Kuria
606	Migori
607	Nyamira
608	Rachuonyo
609	Siaya
610	Suba
611	Bondo
612	Nyando
<b>NYANZA</b>	<b>Totals</b>
701	Baringo
702	Bomet
703	Keiyo
704	Kajiado
705	Kericho
706	Koibatek
707	Laikipia
708	Marakwet
709	Nakuru
710	Nandi
711	Narok
712	Samburu
713	Trans Mara
714	Trans Nzoia
715	Turkana
716	Uasin Gishu
717	West Pokot
718	Buret
<b>RIFT VALLEY</b>	<b>Totals</b>
801	Bungoma
802	Busia
803	Mt. Elgon
804	Kakamega
805	Lugari
806	Teso
807	Vihiga
808	Butere/Mumias