

# Rural Land Administration

## Level – III

**Based on March 2022, Version- II Occupational  
Standard**



**Module Title: Real property valuation**

**LG Code: AGR RLA 3 M14 LO (1-3) LG (47-49)**

**TTLM Code: AGR RLA 3 TTLM 0523v1**

**May, 2023**

**Addis Ababa, Ethiopia**

## Table of Contents

<b>Table of Contents .....</b>	<b>I</b>
<b>Introduction to the Module .....</b>	<b>1</b>
<b>LO #1-Public Information and Awareness strategy.....</b>	<b>2</b>
Instruction sheet-1 .....	2
Information Sheet 1 .....	3
Self-check 1 .....	14
Operation Sheet -1 .....	15
LAP TEST-1 .....	16
<b>LO #2- Collect Real Property data.....</b>	<b>17</b>
Instruction sheet 2 .....	17
Information Sheet 2 .....	19
Self-Check – 2.....	38
Operation Sheet -2 .....	40
LAP TEST-2 .....	41
<b>LO #3- Data Organizing and Reviewing.....</b>	<b>42</b>
Instruction sheet 3 .....	42
Information Sheet 3 .....	43
Self-check 3 .....	55
<b>Reference Materials .....</b>	<b>57</b>

### **Introduction to the Module**

This module covers the competence required for gathering, apply Public Information Awareness strategies, identify and Collect Real Property data and Organize and revise information suitable for decision making. It requires the ability to review information requirements and obtain information from a variety.

<b>Page 1 of 63</b>	<b>Ministry of Labor and Skills</b> <b>Author/Copyright</b>	<b>Rural land administration</b> <b>Level -III</b>	<b>Version 1</b>
			<b>Ja 2023</b>

<b>LG #43</b>	<b>LO #1-Public Information and Awareness strategy</b>
---------------	--

**Instruction sheet-1**

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Concepts and legal frame works of valuation
- Interpersonal skill
- Awareness creation and setting strategies
- Stakeholder and community participation
- Resource limitation and allocation

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Brief Concepts and legal frame works of valuation
- Develop interpersonal skill
- Develop awareness creation strategies
- Identify Stakeholder and community participation
- Identify Resource limitation and allocation

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the information Sheets
4. Accomplish the Self-checks
5. Perform Operation Sheets
6. Do the “LAP test”

## Information Sheet 1

### 1.1. Concepts and legal frame works of valuation

#### 1.1.1. Concept of Valuation

**Valuation** refers to the process of determining the economic value of an asset, investment, or business. The following are some concepts that are important in valuation:

- **Market Value:** Market value is the price that an asset or investment would fetch in an open and competitive market. This is often determined by supply and demand factors.
- **Fair Value:** Fair value is the price that would be paid in an arm's length transaction between two willing parties, where both parties are well-informed and not under any compulsion to buy or sell.
- **Present Value:** Present value is the current value of future cash flows, discounted at a rate that reflects the time value of money. This is an important concept in investment valuation.
- **Replacement Cost:** Replacement cost is the cost of replacing an asset with a similar asset, taking into account any depreciation or obsolescence.
- **Liquidation Value:** Liquidation value is the amount of money that could be realized if an asset or business were sold in a forced sale or liquidation scenario.
- **Intrinsic Value:** Intrinsic value is the underlying value of an investment or business, based on its assets, cash flows, and growth potential. This concept is often used in value investing.
- **Going Concern Value:** Going concern value is the value of a business as a continuing entity, taking into account its future earnings and potential for growth.
- **Synergy Value:** Synergy value is the additional value that can be created when two or more entities merge or form a partnership, due to the benefits of combining their resources, knowledge, and capabilities.
- **Brand Value:** Brand value is the value of a brand name, logo, or reputation, which can enhance the marketability and pricing power of a product or service.

- **Option Value:** Option value is the value of having the option to undertake a particular course of action in the future, such as developing a new product or expanding into a new market.

Overall, the concept of valuation is complex and involves a range of quantitative and qualitative factors. The appropriate valuation method depends on the type of asset or investment being valued, as well as the purpose and context of the valuation.

In property valuation, the concepts of value, cost, and price have specific meanings and applications. Here are the differences between these concepts in the context of property valuation:

- **Value:** In property valuation, value refers to the worth or usefulness of a property to potential buyers or users. It is often determined by the income that the property can generate or its potential for future development. Value can be influenced by factors such as location, size, condition, and market trends.
- **Cost:** Cost in property valuation refers to the expenses incurred in building or acquiring a property. It includes both direct costs, such as materials and labor, and indirect costs, such as financing and permits. Cost is used in property valuation to determine the replacement cost of a property or the cost of reproducing it with similar features.
- **Price:** Price in property valuation is the amount of money that a buyer pays to a seller in exchange for a property. It is determined by market forces of supply and demand and can be influenced by factors such as competition, marketing, and availability. Price is often used as a measure of value in property valuation, but it may not always reflect the true value of the property.

In summary, value in property valuation is the worth or usefulness of a property to potential buyers or users, while cost is the expenses incurred in building or acquiring the property. Price is the amount of money that a buyer pays to a seller in exchange for the property and is determined by market forces. While value and price may be related, they are not the same thing, as price can be influenced by factors beyond just value, such as supply and demand. Cost is used in property valuation to determine the replacement cost of a property or the cost of reproducing it with similar features. It is important to note that the value of a property may be different from its cost

or price, depending on the specific market conditions and the purpose of the valuation. For example, a property may have a high value due to its potential for future development, even if its cost or current price is relatively low. In property valuation, the appropriate method for determining value depends on the property type, its intended use, and the purpose of the valuation.

### **1.1.2. Legal frame works for property valuation**

In Ethiopia, the legal framework for property valuation is governed by various laws and regulations. Here are some of the key legal provisions related to property valuation in Ethiopia:

- **The Ethiopian Constitution:** The Ethiopian Constitution recognizes private property rights and provides for the protection of property owners from arbitrary deprivation of their property.

The Ethiopian Constitution recognizes private property rights and provides for the protection of property owners from arbitrary deprivation of their property. Article 40 of the Constitution states that "the right to own property is guaranteed. It may only be encroached upon in the public interest and in accordance with the law and without discrimination of any kind."

In addition, Article 44 of the Constitution provides for the protection of property from expropriation without compensation. The article states that "the right of ownership of rural and urban land, as well as of all natural resources, is exclusively vested in the State and in the peoples of Ethiopia. Land is a common property of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or other means of exchange."

The Constitution also provides for the establishment of a legal framework for property ownership and transfer. Article 34 of the Constitution states that "the freedom of economic enterprise is guaranteed. Everyone has the right to engage in private economic activity. The government may, however, regulate economic activity in the public interest."

Overall, the Ethiopian Constitution provides a comprehensive legal framework for property ownership and transfer, and recognizes the importance of protecting property rights and

valuations. It is important for property owners and investors to be aware of the relevant constitutional provisions when conducting property transactions or valuations in Ethiopia.

- **The Ethiopian Civil Code:** The Ethiopian Civil Code provides for the legal framework for property ownership and transfer. It sets out the rules for the sale, lease, and mortgage of property, as well as the rights and obligations of property owners.

The Ethiopian Civil Code provides for the legal framework for property ownership and transfer, including property valuations. Here are some of the key provisions related to property valuations in the Ethiopian Civil Code:

**Article 1664:** This article provides that the sale price of a property must be determined by the agreement of the parties, or by a court if the parties cannot agree. The price must be reasonable and not excessively high or low.

**Article 1873:** This article provides that the rental price for a property must be determined by the agreement of the parties, or by a court if the parties cannot agree. The price must be reasonable and not excessively high or low.

**Article 2134:** This article provides that the value of a property used as collateral for a loan must be determined by agreement of the parties, or by a court if the parties cannot agree.

**Article 2159:** This article provides that the value of a property used as security for a debt must be determined by agreement of the parties, or by a court if the parties cannot agree.

**Article 2164:** This article provides that the value of a property subject to a mortgage must be determined by agreement of the parties, or by a court if the parties cannot agree.

**Article 2181:** This article provides that the value of a property subject to a forced sale must be determined by agreement of the parties, or by a court if the parties cannot agree.

Overall, the Ethiopian Civil Code provides for the determination of property valuations through agreements between parties or court proceedings if the parties cannot agree. The Code emphasizes that the valuation must be reasonable and not excessively high or low. In addition, the Code provides for the determination of property valuations in various contexts, including for the sale, rental, collateral, security, mortgage, and forced sale of property. It is



important for property owners, investors, and other stakeholders to be aware of the relevant provisions of the Ethiopian Civil Code when conducting property transactions or valuations in Ethiopia.

- The Ethiopian Land Administration Proclamation: The Ethiopian Land Administration Proclamation provides for the establishment of a land administration system, which includes the registration and transfer of land ownership. The proclamation also provides for the establishment of a Land Valuation and Administration Agency, which is responsible for conducting property valuations for taxation and other purposes.
- The Ethiopian Tax Proclamation: The Ethiopian Tax Proclamation provides for the taxation of property, including land, buildings, and other assets. The proclamation sets out the rules for property valuation for tax purposes, including the use of market value and other methods of valuation.
- The Ethiopian Commercial Code: The Ethiopian Commercial Code provides for the legal framework for commercial transactions, including the sale and lease of real estate. The code sets out the rules for property valuation for commercial purposes, including the use of market value and other methods of valuation.
- The Ethiopian Federal Courts Proclamation: The Ethiopian Federal Courts Proclamation establishes the federal court system and provides for the jurisdiction of the courts in civil and commercial matters, including disputes related to property ownership and valuation.

Overall, the legal framework for property valuation in Ethiopia is governed by a range of laws and regulations that provide for the protection of property rights, the establishment of a land administration system, and the taxation of property.

## **1.2. Interpersonal techniques/skills**

Real property valuation involves a variety of interpersonal techniques and skills. Here are some that are important:

- Active listening: When collecting information about a property, it's important to listen carefully to what the property owner or other stakeholders are saying. Pay attention to

their concerns, needs, and priorities, and ask clarifying questions to ensure you understand their perspective.

- **Empathy:** Put yourself in the property owner's shoes and try to understand their emotional attachment to their property. Show empathy and understanding for their feelings and concerns.
- **Communication skills:** Effective communication is key when collecting information for property valuation. Use clear and concise language, and be able to explain complex concepts in simple terms. Be patient and responsive, and be willing to answer questions and provide information as needed.
- **Negotiation skills:** Real property valuation often involves negotiation, so it's important to be able to negotiate effectively. Know how to make persuasive arguments, understand the needs and interests of all parties involved, and be willing to compromise when necessary.
- **Observation skills:** When inspecting a property, it's important to observe carefully and note any details that might affect its value. Look for both positive and negative features, and be thorough in your assessment.
- **Technical knowledge:** Real property valuation requires a certain level of technical knowledge, including knowledge of real estate law, property appraisal methods, and market trends. Stay up-to-date on industry developments and seek out continuing education opportunities to stay current.
- **Professionalism:** Maintain professional demeanor at all times when collecting information for property valuation. Be respectful and courteous to property owners and other stakeholders, and maintain a high standard of ethics and integrity in your work. Remember that your actions and behavior reflect not only on yourself but also on the profession as a whole.

### **1.3.Awareness creation and setting strategies**

Property valuation is the process of determining the value of a real estate property. Awareness creation is an essential component of setting strategies for property valuation, as it helps to

<b>Page 8 of 63</b>	<b>Ministry of Labor and Skills</b> <b>Author/Copyright</b>	<b>Rural land administration</b> <b>Level -III</b>	<b>Version 1</b>
			<b>May 2023</b>

educate property owners, buyers, and other stakeholders about the importance of property valuation and the factors that affect property value.

Here are some strategies for creating awareness and setting strategies for property valuation:

- **Educate property owners:** Property owners should be educated on the importance of property valuation and the factors that affect property value. Property owners should be encouraged to obtain regular property valuations to ensure that their property is valued accurately.
- **Engage with buyers:** Property buyers should be educated on the importance of property valuation and the factors that affect property value. Buyers should be encouraged to obtain professional property valuations before making a purchase to ensure that they are getting a fair deal.
- **Utilize technology:** Technology can be used to create awareness and set strategies for property valuation. Online tools and resources can be used to educate property owners and buyers on the importance of property valuation and the factors that affect property value.
- **Collaborate with industry experts:** Collaboration with industry experts such as real estate agents, property appraisers, and property assessors can help to create awareness and set strategies for property valuation. Industry experts can provide valuable insights and share best practices for property valuation.
- **Provide resources:** Providing resources such as guides, articles, and educational materials can help to create awareness and set strategies for property valuation. These resources should be accessible and easy to understand, and should cover topics such as the different methods of property valuation, factors that affect property value, and how to obtain a property valuation.
- **Offer training and workshops:** Training and workshops can be organized to educate property owners, buyers, and other stakeholders on the importance of property valuation. These sessions can be conducted by industry experts and can cover topics such as property valuation methods, factors that affect property value, and how to obtain a property valuation.
- **Partner with relevant organizations:** Partnering with relevant organizations such as real estate associations, property management companies, and financial institutions

can help to create awareness and set strategies for property valuation. These organizations can provide support and resources to help educate property owners, buyers, and other stakeholders on the importance of property valuation.

- **Conduct outreach campaigns:** Outreach campaigns such as advertising, social media, and public relations can be used to create awareness and set strategies for property valuation. These campaigns can be targeted towards specific audiences, such as property owners or buyers, and can highlight the importance of property valuation and the benefits of obtaining a property valuation.

By implementing these strategies, it is possible to improve the accuracy of property valuations and ensure that property owners and buyers are making informed decisions. Educating property owners, buyers, and other stakeholders on the importance of property valuation can help to create a more transparent and efficient real estate market, benefiting all stakeholders involved.

In conclusion, creating awareness and setting strategies for property valuation is essential for ensuring that property owners, buyers, and other stakeholders understand the importance of property valuation and the factors that affect property value. By implementing these strategies, it is possible to improve the accuracy of property valuations and ensure that property owners and buyers are making informed decisions.

#### **1.4.Stakeholder and community participation**

Stakeholder and community participation in property valuation is an important aspect of ensuring that property valuations accurately reflect the value of a property. Stakeholders in property valuation include property owners, buyers, lenders, appraisers, assessors, and government agencies. Community participation in property valuation involves engaging with local communities to gather information about local market conditions, community dynamics, and other factors that may affect property values.

Here are some ways in which stakeholder and community participation can be incorporated into property valuation:

- **Engage with property owners:** Property owners should be engaged in the property valuation process to ensure that the valuation accurately reflects the value of the property. By involving property owners in the valuation process, appraisers and assessors can gain a better understanding of the property and any unique features that may impact its value.

- **Involve buyers:** Buyers can also provide valuable insights into the local real estate market and help to identify factors that may impact the value of a property. By involving buyers in the valuation process, appraisers and assessors can gain a better understanding of local market conditions and buyer preferences.
- **Collaborate with industry experts:** Collaboration with industry experts such as real estate agents, property appraisers, and property assessors can help to ensure that property valuations accurately reflect the value of a property. Industry experts can provide valuable insights into market conditions, property features, and other factors that may impact property value.
- **Gather community input:** Engaging with local communities can provide valuable insights into local market conditions, community dynamics, and other factors that may impact property values. This can be done through community outreach programs, surveys, and public input sessions. By incorporating community input into property valuations, appraisers and assessors can gain a better understanding of local market conditions and community dynamics that may impact property values.
- **Consider environmental factors:** Environmental factors such as air quality, water quality, and access to green spaces can impact property values. By considering these factors in the property valuation process, appraisers and assessors can ensure that property valuations accurately reflect the value of a property.
- **Use multiple valuation methods:** Using multiple valuation methods can help to ensure that property valuations accurately reflect the value of a property. By using a combination of valuation methods, appraisers and assessors can gain a more comprehensive understanding of the property and identify any unique features that may impact its value.
- **Provide transparency:** Providing transparency in the property valuation process can help to build trust among stakeholders and the community. This can be done by providing clear and concise information about the valuation process, the factors that were considered in the valuation, and the final valuation results.

Incorporating stakeholder and community participation in property valuation is important for ensuring that property valuations accurately reflect the value of a property. By involving stakeholders and the community in the valuation process, appraisers and assessors can gain a better understanding of local market conditions, community dynamics, and other factors that may

impact property values. This can help to build trust and confidence in the property valuation process, and ensure that property owners, buyers, lenders, and other stakeholders are making informed decisions based on accurate and reliable property valuations.

### **1.5.Resource limitation and allocation**

Resource limitation and allocation is an important aspect of property valuation, as it can impact the accuracy and reliability of property valuations. Resource limitation refers to the constraints that may limit the availability of resources, such as time, money, and personnel, for property valuation. Resource allocation refers to the process of distributing available resources to ensure that property valuations are conducted efficiently and effectively.

Here are some strategies for managing resource limitation and allocation for property valuation:

- **Prioritize property valuations:** Property valuations should be prioritized based on their importance and urgency. Properties that are being sold or refinanced, or that are involved in legal disputes, should be given priority over properties that are not currently being transacted.
- **Allocate resources based on property type:** Different types of properties may require different types and levels of resources for valuation. For example, commercial properties may require more resources for valuation than residential properties due to their complexity and size.
- **Use technology to streamline processes:** Technology can be used to automate and streamline some of the processes involved in property valuation, such as data collection and analysis. Automated valuation models (AVMs) can be used to quickly and efficiently value properties based on a range of data inputs.
- **Outsource services when necessary:** Property valuation services can be outsourced to external providers when internal resources are limited. This can help to ensure that valuations are conducted efficiently and effectively, while also freeing up internal resources for other priorities.
- **Utilize specialized expertise:** Specialized expertise can be utilized to help manage resource limitation and allocation for property valuation. For example,

property appraisers and assessors can provide expertise in property valuation methods and techniques, while data analysts can provide expertise in data collection and analysis.

- **Develop contingency plans:** Contingency plans should be developed to address resource limitations and unexpected events that may impact the property valuation process. These plans should identify alternative resources and processes that can be used to ensure that property valuations are conducted efficiently and effectively.
- **Communicate with stakeholders:** Communication with stakeholders, such as property owners, buyers, and lenders, is important for managing resource limitation and allocation for property valuation. Stakeholders should be informed about the resources that are available for property valuation and any constraints that may impact the valuation process.

By implementing these strategies, it is possible to manage resource limitation and allocation for property valuation in an efficient and effective manner. Prioritizing property valuations, allocating resources based on property type, using technology to streamline processes, outsourcing services when necessary, utilizing specialized expertise, developing contingency plans, and communicating with

<b>Self-check 1</b>	<b>Written test</b>
---------------------	---------------------

Name..... ID..... Date.....

**Directions:** Answer all the questions listed below.

**Test I: Choose the best answer** (4 point)

**1. Among the following which one is awareness creation and setting strategies**

**Property valuation**

- A. Educate property owners
- B. Engage with buyers
- C. Utilize technology:
- D. Collaborate with industry experts
- E. All

**2. Which one of the following important for Stakeholder and community participation**

- A. Engage with property owners
- B. Gather community input
- C. Use multiple valuation methods
- D. All
- E. None

**3. Among the following which one is Resource limitation and allocation strategy?**

- A. Outsource services when necessary
- B. Allocate resources based on property type:
- C. Use technology to streamline processes
- D. Prioritize property valuations:
- E. All

**Test II: Short Answer Questions**

1. Explain what is property valuation-----  
-----  
-----
2. What is property valuation in rural Ethiopia context-----  
-----



## Operation Sheet -1

### 1.1. Techniques/Procedures/Methods for Complementing Legal frame works requirements for valuation

#### A. Tools and equipment's

- I. Legal documents constitutions, Proclamations, Cods, Regulation, Directives and any manuals in the field.
- II. If the documents is digital Computer with PDF format.
- III. If the document is analogue pen, not book A4 paper.

#### B. Procedures/Steps/Techniques for fixing the scale side.

- **Set** all documents in single folder.
- **Put** the document in PDF form.
- **Label** the documents by its name
- **Open and search** for any legitimacy on the documents.
- **Pick up** the article.

<b>LAP TEST-1</b>	<b>Performance Test</b>
-------------------	-------------------------

Name.....

ID.....

Date.....

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

**Instructions:** Given necessary templates, tools and materials you are required to perform the following tasks within **30** minutes. The project is expected from each student to do it.

**Task-1** Find the legal ground for expropriation, composition and valuation

## LG #44

## LO #2- Collect Real Property data

### Instruction sheet 2

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Area identification at planning stage
- Real property data
- Sources of Real Property information
- Approach of real property Valuation
- Method of real property Valuation
- Real property data format
- Methods of collecting data
- Reliable methods of data collection
- Encode material breakdown data

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Carry out are identification at planning stage.
- Identify Real Property data
- Assess Real Property owners
- Conduct real property Valuation Approach
- Identify Method of real property Valuation
- Selecting Methods of collecting data
- Clarify Real property data format
- Perform encode material breakdown data

### Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the information Sheets
4. Accomplish the Self-checks
5. Perform Operation Sheets
6. Do the “LAP test”

## Information Sheet 2

### 2.1 Area identification at planning stage

Area identification is an important step in the planning stage for real property data, as it helps to define the geographic boundaries of the area being analyzed. Identifying the appropriate area for real property data is important for ensuring that the data is relevant, accurate, and reliable.

Here are some strategies for area identification at the planning stage for real property data:

1. **Define the purpose of the analysis:** The purpose of the analysis should be defined at the outset, as this will help to determine the appropriate area for analysis. For example, if the analysis is focused on a particular neighborhood or market segment, the area of analysis should be defined accordingly.
2. **Determine the scope of the analysis:** The scope of the analysis should be determined based on the purpose of the analysis. The scope may include a single property, a group of properties, or an entire geographic region.
3. **Consider relevant factors:** Relevant factors that may impact area identification include the type of property being analyzed, the geographic location, and the availability of data. For example, if the analysis is focused on residential properties, the area of analysis may be defined based on school district boundaries or proximity to public transportation.
4. **Use existing geographic boundaries:** Existing geographic boundaries, such as zip codes, census tracts, or political boundaries, can be used to define the area of analysis. This can help to ensure that the area is well-defined and easily understood.
5. **Conduct a spatial analysis:** A spatial analysis can be conducted to identify areas with similar characteristics, such as property values, demographics, or land use. This can help to define the area of analysis based on relevant data and trends.
6. **Consult with stakeholders:** Stakeholders, such as property owners, real estate agents, and local government officials, can provide valuable insights into the appropriate area for analysis. By consulting with stakeholders, it is possible to ensure that the area of analysis is relevant and appropriate for the intended purpose.

7. **Consider future growth and development:** Future growth and development should be considered when identifying the area of analysis. If the area is expected to experience significant growth or development in the future, this should be taken into account when defining the area of analysis.

By implementing these strategies, it is possible to identify the appropriate area for real property data at the planning stage. Defining the purpose of the analysis, determining the scope of the analysis, considering relevant factors, using existing geographic boundaries, conducting a spatial analysis, consulting with stakeholders, and considering future growth and development can all help to ensure that the area of analysis is relevant, accurate, and reliable.

## **2.2 Identify Real Property data**

Real property data refers to information related to real estate properties and their associated characteristics. Real property data can include a range of different types of information, such as:

1. **Property characteristics:** Real property data includes information about the physical characteristics of a property, such as its size, age, construction type, number of bedrooms and bathrooms, and any unique features or amenities.
2. **Ownership and transaction history:** Real property data includes information about the ownership history of a property, including the names of previous owners, dates of ownership, and any transfers of ownership. It also includes information about any previous sales or transactions involving the property.
3. **Market value and appraisals:** Real property data includes information about the market value of a property, as well as any previous appraisals or assessments of the property's value.
4. **Zoning and land use:** Real property data includes information about the zoning and land use regulations that apply to a property, as well as any other restrictions or regulations that may impact the property.
5. **Tax and assessment information:** Real property data includes information about the taxes and assessments that apply to a property, including property taxes, special assessments, and other fees.

6. **Environmental factors:** Real property data includes information about any environmental factors that may impact the property, such as flood zones, soil contamination, and other environmental hazards.
7. **Market trends and analysis:** Real property data includes information about market trends and analysis, including sales data, market reports, and other data-driven insights into local real estate markets.
8. **Neighborhood and community information:** Real property data includes information about the neighborhood and community surrounding a property, such as crime rates, school district boundaries, proximity to public transportation, and other relevant factors.
9. **Property photos and videos:** Real property data may include photos and videos of the property, which can provide valuable visual information about the property's features and condition.
10. **Building permits and construction data:** Real property data includes information about any building permits or construction projects associated with a property, as well as any other data related to the property's construction history.

## **2.3 Sources of Real Property information**

### **2.3.1 Relevant community**

The relevant community in real property valuation refers to the group of people who are most likely to be affected by the value of a particular property. This can include a wide range of stakeholders, such as property owners, potential buyers, real estate agents, lenders, local government officials, and members of the general public.

Real property data is collected from a variety of sources, including government agencies, real estate brokers, property owners, and third-party data providers. This data is used by a range of different stakeholders, including real estate agents, appraisers, lenders, investors, and other professionals involved in the real estate industry. By analyzing real property data, these stakeholders can gain insights into local real estate markets, make informed decisions about buying and selling properties, and assess the value and potential of real estate investments.

<b>Page 21 of 63</b>	<b>Ministry of Labor and Skills</b>	<b>Rural land administration</b> <b>Level -III</b>	<b>Version 1</b>
			<b>May 2023</b>

When conducting a real property valuation, it's important to consider the perspective of the relevant community and how they might view the property's value. For example, if the property is located in a neighborhood with a high demand for housing, this could significantly affect its value. Similarly, if the property is located near a popular tourist attraction or a major transportation hub, this could also impact its value.

In addition to understanding the perspective of the relevant community, it's also important to consider how changes in the community might affect the property's value over time. For example, if a new shopping center or office complex is planned for the area, this could increase the value of nearby properties. On the other hand, if the area is experiencing a decline in population or economic activity, this could have a negative impact on property values.

By taking into account the perspective of the relevant community and staying informed about changes in the local real estate market, real property valuation professionals can provide more accurate and reliable valuations that reflect the true value of a property.

### **2.3.2 Real property information in general**

Real property data is a valuable resource for a range of different stakeholders in the real estate industry. This data is used to inform decision-making processes, support market analysis, and provide insights into local real estate markets.

Real property data is typically collected and maintained by government agencies, such as local tax assessors, building departments, and zoning boards. These agencies collect data on a range of different property characteristics, including property size, age, construction type, and ownership history.

Real estate brokers and agents are also a key source of real property data. They collect data on local market conditions, property values, and other market trends through their day-to-day activities. This data is typically used to inform pricing decisions, marketing strategies, and other key business decisions.

In addition to government agencies and real estate professionals, there are also a number of third-party data providers that collect and analyze real property data. These providers use a range of



different data sources, including public records, satellite imagery, and proprietary databases, to provide comprehensive and detailed data on real estate properties.

The use of real property data is widespread in the real estate industry. Real estate agents and brokers use data to help clients buy and sell properties, while appraisers use data to assess the value of properties. Lenders use data to assess the risk associated with real estate loans, and investors use data to make informed decisions about real estate investments.

Real property data is also used by government agencies to inform policy decisions and manage local real estate markets. For example, local government officials may use real property data to inform land use planning and zoning decisions, while tax assessors may use data to determine property tax assessments.

Advances in technology and data analytics have made it easier to collect, analyze, and use real property data. Automated valuation models (AVMs) and other data analytics tools are increasingly being used to provide more accurate and reliable valuations of real estate properties. In addition, machine learning algorithms are being used to identify patterns and trends in real property data, which can help to inform decision-making processes in the real estate industry.

Overall, real property data is a valuable resource that is used by a wide range of stakeholders in the real estate industry. By providing insights into local real estate markets, property values, and other key factors, real property data helps to inform decision-making processes, support market analysis, and drive innovation in the real estate industry.

There are several sources of real property information that can provide valuable data and insights for property valuations, investment analysis, and other purposes. Here are some common sources of real property information:

- **Property records:** Property records are public documents that provide information about the ownership, history, and characteristics of a property. These records can be accessed through local government offices, such as the county recorder's office or the assessor's office. Property records may include information such as the property's legal

description, ownership history, sales history, property tax information, and zoning information.

- **Multiple Listing Service (MLS):** The MLS is a database of properties for sale, maintained by real estate brokers and agents. The MLS provides information about the listing price, features, and location of properties, as well as photos and other details. The MLS is a valuable source of information for property investors and buyers looking for properties in a specific area.
- **Real estate websites:** There are many online real estate websites that provide property listings, market data, and other information about real estate. Some popular real estate websites include Zillow, Redfin, and Realtor.com. These websites may also provide tools and calculators for property valuations and investment analysis.
- **Appraisal reports:** Appraisal reports are prepared by licensed appraisers and provide a professional opinion of the value of a property. Appraisal reports may include information such as the property's physical characteristics, comparable sales data, and market trends.
- **Local real-estate agents and brokers:** Local real estate agents and brokers can provide valuable insights into the local real estate market, including current market conditions, trends, and property values. They may also have access to off-market properties and other information that is not publicly available.
- **Public records:** Public records, such as tax records and building permits, can provide information about the ownership, history, and characteristics of a property. These records can be accessed through local government offices or online databases.
- **Property inspections:** Property inspections can provide valuable information about the physical condition and characteristics of a property, including any defects or issues that may affect its value. Inspections can be conducted by licensed inspectors or by the property owner or buyer.

Overall, there are many sources of real property information that can provide valuable data and insights for property valuations, investment analysis, and other purposes. It is important to use a

combination of these sources to obtain a comprehensive and accurate picture of a property's value and characteristics.

### **2.3.3 Real Property information in Ethiopia**

In Ethiopia, there are several sources of real property information that can provide valuable data and insights for property valuations, investment analysis, and other purposes. Here are some common sources of real property information in Ethiopia:

- **Ethiopian Land Valuation and Administration Agency:** The Ethiopian Land Valuation and Administration Agency is responsible for conducting property valuations for taxation and other purposes. The Agency can provide information about the market value of properties, based on sales data and other factors.
- **Ethiopian Investment Commission:** The Ethiopian Investment Commission is responsible for promoting and regulating investment in Ethiopia. The Commission can provide information about investment opportunities, real estate projects, and market trends in Ethiopia.
- **Ethiopian Real Estate Association:** The Ethiopian Real Estate Association is a professional association for real estate brokers, agents, and appraisers. The Association can provide information about real estate market trends, regulations, and professional standards.
- **Ethiopian Ministry of Urban Development and Construction:** The Ethiopian Ministry of Urban Development and Construction is responsible for urban planning and development in Ethiopia. The Ministry can provide information about zoning, land use regulations, and infrastructure development in different areas.
- **Ethiopian Property Listing Websites:** There are several online property listing websites in Ethiopia, such as Ethio Houses, Mekinaye, and Qefira. These websites provide information about properties for sale or rent, including photos, location, and price.
- **Ethiopian Property Owners and Developers:** Property owners and developers in Ethiopia can provide valuable insights into the local real estate market, including property values,

trends, and investment opportunities. They may also have access to off-market properties and other information that is not publicly available.

- **Local Government Offices:** Local government offices, such as the land administration office or the city planning office, can provide information about property ownership, zoning, building permits, and other regulations.

Overall, there are several sources of real property information in Ethiopia that can provide valuable data and insights for property valuations, investment analysis, and other purposes. It is important to use a combination of these sources to obtain a comprehensive and accurate picture of a property's value and characteristics.

## **2.4 Approach of real property Valuation**

Valuation approach and valuation methods are related concepts that are used in property valuation, but they are distinct from each other.

Valuation approach refers to the overall framework or methodology used to arrive at a valuation estimate for a property. There are three main valuation approaches used in property valuation: the sales comparison approach, the income approach, and the cost approach. Each approach involves a different set of valuation methods and assumptions, and each is typically used in different circumstances depending on the type of property being valued and the availability of market data.

Valuation methods, on the other hand, refer to the specific techniques used to arrive at a valuation estimate within a particular valuation approach. For example, within the sales comparison approach, common valuation methods include the direct comparison method, the paired sales analysis method, and the market extraction method. Within the income approach, common valuation methods include the capitalization of income method and the discounted cash flow method. Within the cost approach, common valuation methods include the reproduction cost method and the replacement cost method.

In other words, valuation approach is the overarching methodology used to arrive at a valuation estimate, while valuation methods are the specific techniques used within that methodology to arrive at an estimate. Both are important components of property valuation, and valuation

professionals must choose the appropriate approach and methods based on the specific circumstances of the property being valued and the data and information available.

Real property valuation is the process of determining the market value of a property. There are several approaches to real property valuation, each of which has its own strengths and weaknesses. **The three primary approaches** to real property valuation are the sales comparison approach, the cost approach, and the income approach.

- **Sales Comparison Approach:** The sales comparison approach is the most common approach to real property valuation. It involves comparing the subject property to similar properties that have recently sold in the same local market. The appraiser will look at factors such as the location, size, age, condition, and amenities of the subject property and compare them to similar properties in the area. The appraiser will then adjust the value of the subject property based on differences between the subject property and the comparable properties.
- **Cost Approach:** The cost approach is based on the principle of substitution, which assumes that a buyer will not pay more for a property than the cost of building a similar property. The cost approach involves estimating the cost of building a similar property and then subtracting depreciation based on the age and condition of the subject property. This approach is often used for new properties or properties that have unique features that make them difficult to value using the sales comparison approach.
- **Income Approach:** The income approach is based on the principle that the value of a property is determined by its ability to generate income. This approach is commonly used for commercial properties, such as apartment buildings or office buildings. The appraiser will estimate the income that the property could generate based on current market rents or lease rates, and then subtract expenses such as maintenance, management, and taxes. The resulting net operating income is then divided by a capitalization rate to determine the property's value.

Each of these approaches has its own strengths and weaknesses, and the approach used will depend on the specific property being valued and the purpose of the valuation. For example, the sales comparison approach is often used for residential properties, while the income approach is

commonly used for commercial properties. In some cases, a combination of approaches may be used to provide a more comprehensive and accurate valuation of the property.

Other factors that can impact the approach to real property valuation include the availability of data, the complexity of the property, and the specific requirements of the client or lender. For example, if data on comparable sales is limited, the cost approach or income approach may be used instead. Similarly, if the property has unique features or is located in a complex market, a more detailed valuation approach may be required.

Overall, the approach to real property valuation will depend on a range of factors, including the type of property, the availability of data, and the specific requirements of the client or lender. By using a comprehensive and systematic approach to valuation, appraisers can provide accurate and reliable valuations that are essential for supporting real estate transactions, investment decisions, and other key activities in the real estate industry.

## **2.5 Method of real property Valuation**

There are deferent types of property valuation approach as described above. Under each approach there are deferent methods. Presented as follow.

The sales comparison approach is the most common approach used in property valuation, and it involves comparing the subject property to similar properties that have recently sold in the same area. Here are the types or methods of sales comparison approaches:

There are several methods used in the sales comparison approach to real property valuation. Here are some of the most common methods:

- **Direct Comparison Method:** This method involves comparing the subject property to similar properties that have recently sold in the same area. The appraiser identifies comparable properties that have similar features, size, condition, and location, and adjusts for any differences to arrive at an estimate of the subject property's value. The appraiser may use a checklist or rating system to evaluate the comparable properties and make adjustments for differences.
- **Paired Sales Method:** This method involves analyzing the sales prices of similar properties that have recently sold in the same area and comparing their sale prices to

determine the value of the subject property. The appraiser identifies pairs of properties that are similar in size, location, and other characteristics, but differ in one or more features such as condition or age. The appraiser then calculates the difference in sale price between the two properties and applies the same adjustment to the subject property.

- **Group Comparison Method:** This method involves comparing the subject property to a group of similar properties that have recently sold in the same area. The appraiser identifies a group of properties that are similar in size, location, and other characteristics, and evaluates the sale prices to arrive at an estimate of the subject property's value. The appraiser may use statistical techniques to analyze the group of properties and make adjustments for differences.
- **Market Extraction Method:** This method involves analyzing the sales prices of comparable properties in a particular market area to determine the market value of the subject property. The appraiser identifies the sale prices of comparable properties and adjusts them for differences in size, location, condition, and other factors to arrive at an estimate of the subject property's value.
- **Trend Analysis Method:** This method involves analyzing the trends in the real estate market, such as changes in supply and demand, interest rates, and economic conditions, to determine the value of the subject property. The appraiser uses statistical techniques to analyze these trends and applies them to the subject property to arrive at an estimate of its value.
- **Residual Analysis Method:** This method involves analyzing the sales prices of properties that have recently sold in a particular market area and subtracting the value of the land from the total sale price to arrive at an estimate of the value of the improvements (buildings, structures, etc.). The appraiser then divides the value of the improvements by a factor such as the square footage or the number of units to arrive at a value per unit or per square foot, which is applied to the subject property.

There are several methods used in the cost approach to real property valuation. Here are some of the most common methods:

<b>Page 29 of 63</b>	<b>Ministry of Labor and Skills</b>	<b>Rural land administration</b>	<b>Version 1</b>
			<b>May 2023</b>
	<b>Author/Copyright</b>	<b>Level -III</b>	

- **Replacement Cost Method:** This method involves estimating the cost to replace the subject property with a similar property of equal utility. The appraiser estimates the cost of constructing the property, including materials, labor, and overhead, and adjusts for depreciation and obsolescence to arrive at an estimate of the property's value.
- **Reproduction Cost Method:** This method involves estimating the cost to reproduce an exact replica of the subject property, including any improvements or changes that have been made over time. The appraiser estimates the cost of constructing the property, including materials, labor, and overhead, and adjusts for depreciation and obsolescence to arrive at an estimate of the property's value.
- **Quantity Survey Method:** This method involves estimating the cost of constructing the subject property by quantifying the materials and labor required for each component of the property, such as the foundation, walls, roof, and finishes. The appraiser calculates the cost of each component and adds them together to arrive at an estimate of the property's value.
- **Unit-in-Place Method:** This method involves estimating the cost of constructing the subject property by breaking it down into individual components, such as walls, floors, and roofs, and estimating the cost of each component. The appraiser then adds up the costs of each component to arrive at an estimate of the property's value.
- **Trended Historical Cost Method:** This method involves estimating the original cost of constructing the subject property and adjusting it for inflation or changes in the cost of materials and labor over time. The appraiser estimates the original cost of construction and applies an index or other factors to adjust for changes in the cost of materials, labor, and other factors to arrive at an estimate of the property's value.

There are several methods used in the income approach to real property valuation. Here are some of the most common methods:

- **Direct Capitalization Method:** This method involves estimating the net operating income (NOI) of the subject property and dividing it by a capitalization rate to arrive at an estimate of the property's value. The capitalization rate is determined by analyzing



market data, such as sales of similar properties and prevailing interest rates, to arrive at a rate that reflects the risk and return associated with the subject property.

- **Discounted Cash Flow Method:** This method involves estimating the future net cash flows of the subject property, discounting them to present value using a discount rate that reflects the risk and return associated with the property, and adding the present value of the residual value of the property. The residual value is the estimated value of the property at the end of the holding period.
- **Gross Income Multiplier Method:** This method involves dividing the sale price of similar properties by their gross rental income to arrive at a gross income multiplier. The appraiser then applies the gross income multiplier to the gross rental income of the subject property to arrive at an estimate of the property's value.
- **Band of Investment Method:** This method is used for valuing income-producing properties that have multiple sources of financing, such as commercial buildings or apartment complexes. The method involves estimating the net operating income of the property and dividing it into two parts: one for the return on the equity investment, and one for the return on the financing. The appraiser calculates the rate of return required by the equity investors and the financing sources, and combines them to arrive at an overall capitalization rate. The capitalization rate is then used to estimate the value of the property.
- **Mortgage Equity Analysis Method:** This method is similar to the band of investment method, but is used to analyze the equity and debt components of a property's financing. The appraiser estimates the net operating income of the property and subtracts the annual debt service to arrive at the net income available to equity investors. The appraiser then calculates the rate of return required by the equity investors and compares it to the overall capitalization rate to arrive at an estimate of the property's value.

## **2.6 Real property data format**

Real property data is typically stored in a structured format that allows it to be easily searched, organized, and analyzed. There are several commonly used formats for real property data, including:

<b>Page 31 of 63</b>	<b>Ministry of Labor and Skills</b> <b>Author/Copyright</b>	<b>Rural land administration</b> <b>Level -III</b>	<b>Version 1</b>
			<b>May 2023</b>

- **Spreadsheet format:** Real property data can be stored in a spreadsheet format using software such as Microsoft Excel or Google Sheets. This format allows the data to be easily organized and analyzed using sorting, filtering, and other tools. Spreadsheets can also be used to create charts and graphs that make it easier to visualize trends and patterns in the data.
- **Database format:** Real property data can also be stored in a database format using software such as Microsoft Access or MySQL. This format allows the data to be easily searched and queried using SQL (Structured Query Language). Databases can also be used to create reports and queries that provide insights into the data.
- **XML format:** XML (Extensible Markup Language) is a format used for exchanging data between different systems. Real property data can be stored in an XML format, which allows it to be easily shared and integrated with other systems. XML is often used for data feeds and APIs (Application Programming Interfaces) that allow real-time access to real property data.
- **GIS format:** GIS (Geographic Information System) software is used to store and analyze spatial data, including real property data. GIS software allows real property data to be visualized on maps, which can help to identify patterns and trends in the data. GIS software can also be used to create custom maps and perform spatial analyses that provide insights into the data.
- **PDF format:** Real property data can also be stored in a PDF (Portable Document Format) format, which allows it to be easily shared and viewed. PDFs can be used to store reports, property listings, and other types of real estate documents. PDFs can also be used to store maps and other visualizations that provide insights into real property data.

Overall, the format used for real property data will depend on the specific needs of the user and the systems involved. However, regardless of the format used, real property data should be stored in a structured format that allows it to be easily searched, organized, and analyzed. By using a structured format, real estate professionals and other stakeholders can make better use of

real property data and gain insights into local real estate markets, property values, and other key factors that drive the real estate industry.

## **2.7 Methods of collecting data**

There are several methods of collecting data, depending on the type of data needed and the purpose for which it will be used. Here are some common methods of data collection:

- **Surveys:** Surveys are a popular method of data collection that involve asking a set of questions to a group of people. Surveys can be conducted in person, over the phone, or online, and can be used to gather a wide range of information, from opinions and preferences to demographic data and behavioral patterns.
- **Interviews:** Interviews involve asking questions to individuals or groups in a face-to-face setting. Interviews can be structured or unstructured and can be used to gather qualitative data on a variety of topics, including attitudes, beliefs, and behaviors.
- **Focus groups:** Focus groups involve bringing together a small group of people to discuss a particular topic or issue. Focus groups typically involve a moderator who asks questions and facilitates discussion among the group members. Focus groups can be used to gather qualitative data on a particular topic, such as consumer preferences or opinions on a new product or service.
- **Observations:** Observations involve watching and recording behavior in a particular setting. Observations can be structured or unstructured and can be used to gather qualitative data on a variety of topics, including social interactions, consumer behavior, and workplace productivity.
- **Experiments:** Experiments involve manipulating one or more variables to observe the effect on an outcome. Experiments can be used to gather quantitative data on a variety of topics, including scientific research, product testing, and marketing analysis.
- **Secondary data sources:** Secondary data sources involve gathering data that has already been collected by other sources, such as government agencies, academic institutions, or market research firms. This can include data from surveys, census reports, industry

reports, and other sources. Secondary data can be a valuable source of information for research and analysis, but it's important to evaluate the quality and relevance of the data before using it.

- **Data mining:** Data mining involves using statistical techniques and machine learning algorithms to analyze large data sets and identify patterns, trends, and insights. Data mining can be used to gather both quantitative and qualitative data on a wide range of topics, including consumer behavior, market trends, and scientific research.

By selecting the appropriate data collection method for a given research question or objective, researchers can gather a comprehensive and accurate set of data for analysis and interpretation. It's important to select a method that is appropriate for the type of data being collected and to ensure that the data is reliable, valid, and relevant to the research question or objective.

## **2.8 Reliable methods of data collection**

There are several reliable methods of data collection that are commonly used in the real estate industry. These methods include:

- **Direct observation:** This method involves physically visiting a property and collecting data on its physical characteristics, such as its size, age, condition, and amenities. This method is often used by appraisers and property inspectors to gather detailed information about a property.
- **Public records:** Public records such as property deeds, tax records, and building permits can provide valuable information about a property's ownership history, assessed value, and other key factors. Public records are often used by real estate professionals and researchers to gather information about a property and its market.
- **Online databases:** Online databases such as MLS (Multiple Listing Service) provide access to real estate listings, sales data, and other information about properties. These databases are often used by real estate agents, appraisers, and researchers to gather information about local real estate markets and property values.

- **Surveys:** Surveys can be used to collect data from property owners, buyers, and other stakeholders. Surveys can provide insights into factors such as buyer preferences, market trends, and the perceived value of a property.
- **Remote sensing:** Remote sensing technologies such as aerial photography and satellite imagery can provide valuable information about a property's location, topography, and other physical characteristics. These technologies are often used by appraisers, surveyors, and other professionals to gather data on large or remote properties.
- **Focus groups and interviews:** Focus groups and interviews can be used to gather qualitative data on buyer preferences, market trends, and other factors that can impact real estate values. These methods are often used by market researchers and real estate professionals to gather insights from buyers, sellers, and other stakeholders.
- **Automated Valuation Models (AVMs):** AVMs use statistical models and algorithms to estimate the value of a property based on data such as recent sales, property characteristics, and market trends. AVMs are often used by lenders, real estate websites, and other organizations to provide quick estimates of property values.
- **Sensor-based technologies:** Sensor-based technologies such as IoT (Internet of Things) devices can provide real-time data on factors such as energy usage, temperature, and occupancy. These technologies are often used in commercial properties to optimize energy efficiency and improve tenant comfort.

Each of these methods has its own strengths and weaknesses, and the method used will depend on the specific needs of the user and the type of property being evaluated. It is important to choose a reliable and appropriate method of data collection to ensure accurate and reliable data that can be used to support real estate transactions, investment decisions, and other key activities in the real estate industry.

## 2.9 Encode material breakdown data

Material breakdown data is an important factor in determining the value of a property, particularly for real properties. Material breakdown data refers to information about the types of materials used to construct a property, such as the roofing material, the type of siding, the

flooring material, and the type of windows. This information can be used to determine the quality of the construction and the durability of the property, which can impact its value.

To encode material breakdown data for property valuation, the following steps can be taken:

- **Collect the data:** The first step is to gather the material breakdown data for the property. This can be done by visiting the property and conducting a physical inspection, reviewing building permits and other records, or using other data sources such as online databases.
- **Categorize the data:** Once the material breakdown data has been collected, it should be categorized into different types of materials. For example, roofing materials may be categorized as asphalt shingles, metal, or tile, while flooring materials may be categorized as carpet, hardwood, or tile.
- **Assign values to the materials:** After the data has been categorized, values can be assigned to each type of material based on its quality and durability. For example, high-quality roofing materials such as tile or metal may be assigned a higher value than lower-quality materials such as asphalt shingles.
- **Calculate the total value:** Once values have been assigned to each type of material, the total value of the materials can be calculated. This can be done by multiplying the quantity of each type of material by its assigned value and then summing the values. For example, if a property has 1,500 square feet of hardwood flooring, and hardwood flooring is assigned a value of \$5 per square foot, the value of the flooring would be \$7,500 (1,500 x \$5).
- **Incorporate the data into the valuation:** The material breakdown data can then be incorporated into the valuation of the property. For example, if two properties are similar in size and location but one has higher-quality materials, the property with higher-quality materials may have a higher value.

It is important to note that the accuracy of the material breakdown data and the values assigned to each type of material can impact the accuracy of the property valuation. Therefore, it is important to gather reliable and accurate data and to use appropriate values for each type of material to ensure an accurate and reliable valuation.

In addition to the steps I outlined earlier, here are some additional considerations and best practices for encoding material breakdown data:

- **Use reliable sources:** When collecting material breakdown data, it is important to use reliable sources such as building permits, blueprints, or other official records. This can help ensure that the data is accurate and complete.
- **Consider age and condition:** When assigning values to each type of material, it is important to consider the age and condition of the materials. For example, a property with older, worn-out hardwood flooring may be assigned a lower value than a property with newer, well-maintained hardwood flooring.
- **Use market data:** When assigning values to each type of material, it can be helpful to use market data to determine appropriate values. For example, you could research recent sales of similar properties in the area to determine the value of certain types of materials.
- **Use a standardized format:** To ensure consistency and accuracy, it can be helpful to use a standardized format for encoding material breakdown data. This could include using a spreadsheet or database to organize and calculate the values of each type of material.
- **Consider the local market:** When incorporating the material breakdown data into the valuation of the property, it is important to consider the local market conditions. For example, properties in certain areas or neighborhoods may have higher or lower values based on the types of materials used in construction, as well as other factors such as location, amenities, and market demand.
- **Consult with a professional:** If you are unsure about how to properly encode material breakdown data for property valuation, it can be helpful to consult with a professional such as a real estate appraiser or agent. They can provide guidance and expertise to ensure that the data is accurate and the valuation is reliable.

Overall, encoding material breakdown data for property valuation is an important process that can help ensure accurate and reliable valuations. By following best practices and using reliable data sources, real estate professionals can provide their clients with the information they need to make informed decisions about buying, selling, or investing in real estate.

<b>Self-Check – 2</b>	<b>Written test</b>
-----------------------	---------------------

-Name..... ID..... Date.....

**Directions:** Answer all the questions listed below.

**Test I: Multiple choice**

- Among the following which strategies are important for identify the appropriate area for real property data at the planning stage.**
  - Consider future growth and development:
  - Consult with stakeholders:
  - Use existing geographic boundaries:
  - Conduct a spatial analysis:
  - All
- Among the following which one of the following is Real Property data includes.**
  - Property characteristics:
  - Ownership and transaction history:
  - Market value and appraisals:
  - Zoning and land use:
  - All
- Which one of the following valuation approach is best?**
  - Sales comparison approach,
  - Cost approach,
  - Income approach.
  - Reconciliation.
  - None

**Test II: Short Answer Questions**

- What is the deference between Valuation Approach and Valuation methods-----  
-----  
-----  
-----



2. What is real property data format?-----  
-----  
-----
3. Mention and list Reliable methods of data collection? -----  
-----  
-----
4. List the steps for material breakdown data for property valuation? -----  
-----  
-----

You can ask you teacher for the copy of the correct answers.

**Note: Satisfactory rating - 5 points**

**Unsatisfactory - below 5 points**

## Operation Sheet -2

### 1.2. Techniques/Procedures/Methods for Collecting Valuation data for expropriated land.

#### A. Tools and equipment's

- I. Official Letters permission for data collection
- II. Stationery
- III. HHGPS
- IV. Meter.

#### B. Procedures/Steps/Techniques for fixing the scale side.

**Prepare** an action plan for the specific tasks

**Prepare** forms for data collection.

**Provide** orientation for data collector, and for the community.

**Collect** non spatial Data from the concerned body

**Select and Collect** spatial Data from the selected place.

**Record** on the appropriate platforms.

<b>LAP TEST-2</b>	<b>Performance Test</b>
-------------------	-------------------------

Name.....

ID.....

Date.....

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

**Instructions:** Given necessary templates, tools and materials you are required to perform the following tasks within **1** minute. The project is expected from each student to do it.

**Task-1** Collect the data on the place in which the land is required for structural plan implementation.

## LG #45

## LO #3- Data Organizing and Reviewing

### Instruction sheet 3

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Data organizing technology
- Documentation and reports
- Update information in standard forms
- Information management
- Maintain database and modification

This guide will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Use data organizing technology.
- Approve and transfer data for encode
- Obtain documentation and reports
- Store and organize update information in standard forms
- Consult sufficiency of information.
- Identify gaps information and data collection
- Identify and incorporated documented in modifications
- Perform decision making and modifications

### Learning Instructions:

7. Read the specific objectives of this Learning Guide.
8. Follow the instructions described below.
9. Read the information written in the information Sheets
10. Accomplish the Self-checks
11. Perform Operation Sheets
12. Do the “LAP test”

### 3.1 Data organizing technology

For property valuation data, a common technology used for organizing data is a Relational Database Management System (RDBMS). RDBMS is well-suited for organizing structured data with a clear and consistent schema, such as property attributes and transaction data.

An RDBMS can be used to store property data in tables with rows representing individual properties and columns representing the different attributes of the property, such as location, size, number of bedrooms, and so on. RDBMS can also be used to store transaction data, such as sale price and date, and to link this data with the corresponding property.

In addition to RDBMS, other technologies such as data warehousing and data lakes could also be used to store and manage property valuation data. Data warehousing can be useful for consolidating data from multiple sources and generating reports, while data lakes can be useful for storing raw data that may not fit neatly into a relational database schema.

It is also worth noting that specialized software solutions exist for property valuation, such as property management software, real estate appraisal software, and real estate valuation software. These solutions may include data organizing technologies specifically designed for property valuation data, such as property tax software that can integrate with county property tax records.

Here's some more information on data organizing technologies for property valuation data:

- **Property Management Software:** Property management software is a type of software designed to help property managers and landlords manage their properties. This software often includes tools for managing rental properties, tracking maintenance requests, and generating financial reports. Some property management software solutions also include features for managing property valuation data, such as tracking property values over time and generating property valuation reports.
- **Real Estate Appraisal Software:** Real estate appraisal software is a type of software used by real estate appraisers to generate property valuations. This software often includes tools for collecting and organizing property data, analyzing market trends, and generating valuation reports. Real estate appraisal software can be used by both commercial and residential appraisers.
- **Real Estate Valuation Software:** Real estate valuation software is a type of software used by real estate professionals and investors to analyze property values and investment

opportunities. This software often includes tools for collecting and organizing property data, performing financial analysis, and generating reports. Real estate valuation software can be used to analyze both commercial and residential properties.

- **Property Tax Software:** Property tax software is a type of software used by property owners and managers to manage property tax payments and compliance. This software often includes tools for organizing property data, tracking assessments and tax bills, and generating tax reports. Property tax software can integrate with county property tax records to provide up-to-date and accurate property valuation data.
- **Geographic Information Systems (GIS):** GIS software is used to capture, store, manipulate, analyze, and present spatial or geographic data. GIS technology can be used to manage property valuation data by organizing it in a spatial context, allowing for analysis of property values based on location, proximity to amenities or infrastructure, and other geographic factors. GIS can be used to create maps that display property values, zoning information, land use data, and other relevant information.
- **Machine Learning and Artificial Intelligence (AI):** Machine learning and AI technologies can be used to analyze property valuation data and identify patterns and trends that may not be immediately apparent. These technologies can be used to build predictive models that can estimate property values based on a variety of factors, such as location, property size, number of bedrooms, and other relevant data. Machine learning and AI models can also be used to identify outliers or anomalies in property valuation data, which can help to improve the accuracy and reliability of valuation models.
- **Blockchain:** Blockchain technology can be used to create a secure and tamper-proof ledger of property valuation data. By using block chain technology, property valuation data can be stored in a decentralized manner, making it more difficult for data to be manipulated or altered. Block chain technology can also be used to create smart contracts that automate property transactions, such as property sales or rental agreements, based on pre-defined rules and conditions.

Overall, the choice of data organizing technology for property valuation data will depend on the specific needs and goals of the organization. Some organizations may find that a combination of different technologies, such as GIS, machine learning, and block chain, provides the best solution for managing and analyzing property valuation data. It's important to evaluate different

options and choose the technology that best fits the organization's requirements, taking into account factors such as data volume, complexity, and security. Additionally, it's important to ensure that the technology chosen is compatible with existing systems and can be easily integrated into the organization's workflows.

### **3.2 Documentation and reports**

Documentation and reports are important components of property valuation, as they provide a clear and concise summary of the property's value and the factors that have been considered in the valuation process. Here are some common types of documentation and reports used in property valuation:

- **Appraisal Reports:** An appraisal report provides an estimate of the value of a property based on an appraiser's evaluation. The report typically includes a description of the property, an analysis of market data and trends, and an explanation of the valuation methods used. Appraisal reports are often used in real estate transactions, such as buying or selling a property.
- **Comparative Market Analysis (CMA) Reports:** A CMA report provides an estimate of a property's value based on recent sales of similar properties in the same area. The report typically includes a list of comparable properties, their sale prices, and an analysis of how they compare to the subject property. CMA reports are often used by real estate agents to help clients determine a fair price for a property.
- **Property Inspection Reports:** A property inspection report provides an assessment of the condition of a property, including any defects or issues that may affect its value. The report typically includes a detailed inspection of the property's structure, systems, and components, as well as recommendations for repairs or improvements. Property inspection reports are often used by buyers and sellers during real estate transactions.
- **Tax Assessment Reports:** A tax assessment report provides an estimate of a property's value for the purpose of calculating property taxes. The report typically includes a description of the property, an analysis of market data and trends, and an explanation of the assessment methods used. Tax assessment reports are often used by local government agencies to determine the property taxes owed by property owners.
- **Feasibility Studies:** A feasibility study report provides an analysis of the financial and economic viability of a real estate project. The report typically includes an assessment of the

property's market demand, construction costs, potential revenue, and operating expenses. Feasibility studies are often used by real estate developers and investors to evaluate the potential profitability of a project.

- **Title Reports:** A title report provides a summary of the property's ownership history and any liens or encumbrances that may affect its value. The report typically includes a description of the property, a chain of title, and a list of any outstanding liens or encumbrances. Title reports are often used by buyers and sellers during real estate transactions.
- **Environmental Reports:** An environmental report provides an assessment of the potential environmental risks associated with a property. The report typically includes an analysis of the property's environmental history, potential contamination sources, and recommendations for remediation or mitigation. Environmental reports are often used by buyers and lenders to assess the potential environmental liabilities associated with a property.
- **Rent Rolls:** A rent roll report provides a summary of the rental income generated by a property. The report typically includes a list of all rental units, their current rental rates, and the dates of lease agreements. Rent rolls are often used by real estate investors and lenders to evaluate the income potential of a property.
- **Market Trend Reports:** A market trend report provides an analysis of market data and trends that may impact the value of a property. The report typically includes data on sales prices, rental rates, vacancy rates, and other market metrics. Market trend reports are often used by appraisers, real estate agents, and investors to evaluate the current state of the market and make informed decisions about property valuation.
- **Cost Approach Reports:** A cost approach report provides an estimate of the value of a property based on the cost of constructing a similar property. The report typically includes an analysis of construction costs, depreciation, and other factors that may impact the property's value. Cost approach reports are often used in conjunction with other valuation methods to provide a comprehensive estimate of a property's value.
- **Income Approach Reports:** An income approach report provides an estimate of the value of a property based on its potential income. The report typically includes an analysis of rental income, expenses, and market trends that may impact the property's income potential. Income approach reports are often used in conjunction with other valuation methods to provide a comprehensive estimate of a property's value.



- **Zoning Reports:** A zoning report provides an assessment of the property's zoning classification and any restrictions that may impact its value. The report typically includes a description of the property's current zoning classification, as well as an analysis of any zoning regulations or restrictions that may apply. Zoning reports are often used by buyers, sellers, and developers to evaluate the potential uses and value of a property.
- **Property Condition Reports:** A property condition report provides an assessment of the physical condition of a property, including any defects or issues that may impact its value. The report typically includes a detailed inspection of the property's structure, systems, and components, as well as recommendations for repairs or improvements. Property condition reports are often used by buyers and lenders during real estate transactions.
- **Risk Assessment Reports:** A risk assessment report provides an analysis of the potential risks associated with a property, such as environmental, regulatory, or legal risks. The report typically includes an assessment of the property's history, potential liabilities, and recommendations for mitigating any identified risks. Risk assessment reports are often used by buyers, lenders, and insurers to evaluate the potential risks associated with a property.

Overall, the choice of documentation and reports for property valuation will depend on the specific needs and goals of the organization. It is important to choose the appropriate documentation and report types based on the purpose of the valuation, the intended audience, and the requirements of any regulatory or legal frameworks that may apply. Additionally, it is important to ensure that the documentation and reports are accurate, complete, and compliant with applicable standards and best practices. Communication is also an important aspect of documentation and reports, as it is important to clearly explain the valuation methods used, the assumptions made, and the conclusions reached. A well-documented property valuation report can provide valuable insights and help stakeholders make informed decisions about buying, selling, or investing in a property.

### **3.3 Update information in standard forms**

Standard forms for property valuation are typically used to capture and document key information about a property, such as its location, size, condition, and market value. Updating this information is important to ensure that the valuation report is accurate, reliable, and compliant with applicable standards and regulations. Here are some tips for updating information in standard forms for property valuation:

<b>Page 47 of 63</b>	<b>Ministry of Labor and Skills</b> <b>Author/Copyright</b>	<b>Rural land administration</b> <b>Level -III</b>	<b>Version 1</b>
			<b>May 2023</b>

- **Review the form carefully:** Before updating any information, it is important to carefully review the standard form to ensure that all required information is included. Check to see if any updates have been made to the form or if any new requirements have been added since the last time it was used.
- **Gather all relevant information:** Gather all relevant information about the property, including any recent changes or updates. This may include information on recent sales or leases of similar properties in the area, any changes in zoning regulations or building codes, and any repairs or renovations made to the property.
- **Verify the accuracy of information:** Verify the accuracy of all information before updating the form. This may involve conducting a site visit to confirm the condition of the property, reviewing public records to verify ownership or zoning information, and reviewing market data to ensure that the property is being valued appropriately.
- **Use consistent terminology:** Use consistent terminology throughout the form to ensure that the information is clear and easy to understand. This may involve using standard terms and definitions for property attributes, such as square footage, number of bedrooms, and building materials.
- **Be transparent about any assumptions or limitations:** Be transparent about any assumptions or limitations that may impact the accuracy of the valuation. For example, if there is limited market data available for a particular property type or location, it is important to note this in the form and explain how the valuation was arrived at. Similarly, if there are any limitations on the scope of the valuation, such as a restricted access to the property, these should also be noted in the form.
- **Use technology to streamline the process:** Use technology tools, such as property data management software or valuation software, to streamline the process of updating information in standard forms. These tools can help automate data entry, reduce errors, and improve the overall efficiency of the valuation process.
- **Follow applicable standards and regulations:** Ensure that all updates to the standard form are compliant with applicable standards and regulations, such as the Uniform

Standards of Professional Appraisal Practice (USPAP) or International Valuation Standards (IVS). These standards provide guidance on the information that should be included in a property valuation report and the methods that should be used to arrive at a valuation estimate.

Overall, updating information in standard forms for property valuation is an important step in ensuring that the valuation report is accurate, reliable, and compliant with applicable standards and regulations. By following these tips and using technology tools to streamline the process, property valuation professionals can ensure that they are providing the highest level of service to their clients.

### **3.4 Information management**

Information management is a critical component of property valuation, as it involves collecting, organizing, and analyzing data related to the property being valued. Effective information management can help ensure the accuracy and reliability of the valuation estimates, as well as improve the efficiency of the valuation process. Here are some key considerations for information management in property valuation:

- **Collect and verify data:** Collect and verify all relevant data related to the property being valued, including information on the property's location, size, condition, and market value. This may involve conducting site visits, reviewing public records, and analyzing market data to ensure that the information is accurate and up-to-date.
- **Organize data in a consistent manner:** Organize the data in a consistent and structured manner, using standard terms and definitions for property attributes. This can help ensure that the data is easy to understand and can be used consistently throughout the valuation process.
- **Use technology tools:** Use technology tools to help manage and organize the data more efficiently. This may involve using property data management software, valuation software, or other tools to automate data entry, reduce errors, and improve the overall efficiency of the valuation process.
- **Ensure data security and privacy:** Ensure that all data is stored and managed in a secure manner, in compliance with applicable data security and privacy regulations. This

may involve implementing appropriate access controls, encryption, and other security measures to protect the data from unauthorized access or disclosure.

- **Document the data and analysis:** Document all data used in the valuation process, as well as the analysis and conclusions reached based on the data. This may involve creating a comprehensive valuation report that summarizes the data, analysis, and conclusions, as well as any assumptions or limitations that may impact the accuracy of the valuation estimate.
- **Update data and analysis as needed:** Update the data and analysis as needed to ensure that the valuation estimate remains accurate and up-to-date. This may involve conducting periodic updates or reviews of the data, or updating the valuation estimate based on changes in market conditions or other factors that may impact the property's value.
- **Comply with applicable standards and regulations:** Ensure that all information management practices are compliant with applicable standards and regulations, such as the Uniform Standards of Professional Appraisal Practice (USPAP) or International Valuation Standards (IVS). These standards provide guidance on the information that should be included in a property valuation report and the methods that should be used to arrive at a valuation estimate.

Overall, effective information management is critical to the accuracy and reliability of property valuation estimates. By collecting, organizing, and analyzing data in a consistent and structured manner, using technology tools to streamline the process, and complying with applicable standards and regulations, property valuation professionals can provide their clients with the highest level of service and ensure that the valuation estimate accurately reflects the value of the property being valued.

There are several common challenges in information management for property valuation that can impact the accuracy and reliability of the valuation estimate. Here are some of the most common challenges:

- **Data quality:** One of the biggest challenges in information management for property valuation is ensuring the quality of the data being used. Data quality issues can arise due to errors in data entry, incomplete or inconsistent data, or outdated or inaccurate data.

These issues can impact the accuracy of the valuation estimate and may require additional time and effort to correct.

- **Data security and privacy:** Another challenge in information management for property valuation is ensuring the security and privacy of the data being used. Valuation professionals must ensure that all data is stored and managed in a secure manner, in compliance with applicable data security and privacy regulations. This may involve implementing appropriate access controls, encryption, and other security measures to protect the data from unauthorized access or disclosure.
- **Data storage and retrieval:** Managing large volumes of data can be a challenge in property valuation, particularly when it comes to storing and retrieving the data. Valuation professionals must ensure that all data is stored in a manner that is easily accessible and can be retrieved quickly when needed. This may involve using database management systems or other technology tools to help organize and store the data more efficiently.
- **Data analysis and interpretation:** Analyzing and interpreting large volumes of data can also be a challenge in property valuation. Valuation professionals must have the skills and expertise to analyze the data effectively, identify trends and patterns, and draw meaningful conclusions from the data. This may involve using statistical analysis tools, database management systems, or other technology tools to help streamline the analysis process.
- **Data integration:** Valuation professionals may also face challenges in integrating data from multiple sources, particularly when the data is in different formats or uses different terminology. This may require additional time and effort to reconcile the data and ensure that all data is being used consistently throughout the valuation process.
- **Data availability:** Another challenge in information management for property valuation is ensuring that all relevant data is available. This may be particularly challenging in cases where data is not readily available, such as in emerging or niche markets or for unique or specialized properties. Valuation professionals may need to conduct additional

research or analysis to ensure that all relevant data is being considered in the valuation process.

- **Compliance with regulatory requirements:** Valuation professionals must also ensure that all information management practices are compliant with applicable regulatory requirements, such as the Uniform Standards of Professional Appraisal Practice (USPAP) or International Valuation Standards (IVS). This may require additional time and effort to ensure that all data is being collected and analyzed in compliance with these standards.

Valuation professionals must be aware of these common challenges and take steps to mitigate them in order to ensure that the valuation estimate accurately reflects the value of the property being valued.

### **3.5 Maintain database and modification**

Maintaining a database of property valuation information is an important aspect of information management. A well-maintained database can help improve the efficiency and accuracy of property valuations by providing easy access to relevant data, enabling analysis of historical trends, and facilitating the identification of patterns and outliers. Here are some key considerations for maintaining a database and making modifications for property valuation:

- **Choose the right database management system:** Choose a database management system that is well-suited for property valuation, such as a relational database or a document-oriented database. The database management system should be able to handle large volumes of data, provide efficient querying and indexing capabilities, and be easy to use and maintain.
- **Define the database schema:** Define the database schema, which is the structure of the database and the relationships between different data elements. The schema should be designed in a way that reflects the needs of the valuation process, such as the types of properties being valued, the attributes of those properties, and the valuation methods being used.
- **Collect and enter data:** Collect and enter relevant data into the database, including property information, market data, and valuation estimates. It is important to

ensure that the data is entered accurately and consistently, using standard terms and definitions for property attributes.

- **Regularly update the database:** Regularly update the database with new data and modifications, such as changes in property ownership, market conditions, or valuation methods. This can help ensure that the database remains current and relevant.
- **Ensure data integrity:** Ensure that the data in the database is accurate and consistent by implementing data validation and verification procedures. This may involve using data entry forms or automated data validation tools to ensure that data is entered correctly and consistently.
- **Backup and secure the database:** Regularly backup the database to ensure that data is not lost in case of system failure or data corruption. Implement appropriate security measures, such as access controls and encryption, to protect the database from unauthorized access or disclosure.
- **Modify the database schema as needed:** Modify the database schema as needed to reflect changes in the valuation process or in response to feedback from users. This may involve adding new data elements, modifying existing data elements, or restructuring the database schema altogether.
- **Use technology tools to streamline database management:** Use technology tools, such as database management software or data analytics software, to streamline database management and analysis. These tools can help automate data entry, reduce errors, and improve the overall efficiency of the valuation process.
- **Comply with applicable standards and regulations:** Ensure that the database and any modifications made to it are compliant with applicable standards and regulations, such as the Uniform Standards of Professional Appraisal Practice (USPAP) or International Valuation Standards (IVS). These standards provide guidance on the information that should be included in a property valuation report and the methods that should be used to arrive at a valuation estimate.

Overall, maintaining a well-organized and up-to-date database is critical to the accuracy and reliability of property valuation estimates. By following these key considerations, property valuation professionals can ensure that their databases are accurate, reliable, and compliant with applicable standards and regulations.



<b>Self-check 3</b>	<b>Written test</b>
---------------------	---------------------

Name..... ID..... Date.....

**Directions:** Answer all the questions listed below.

**Test I: Choose the best answer** (4 point)

**1. Among the following which one is data organizing technologies for property valuation data:**

- A. Property Management Software
- B. Real Estate Appraisal Software:
- C. Real Estate Valuation Software:
- D. Property Tax Software:
- E. Geographic Information Systems (GIS)
- F. All

**2. Among the following which one is not about value of the property?**

- A. Appraisal Reports
- B. Comparative Market Analysis
- C. Tax Assessment Reports
- D. Property Inspection Reports
- E. None

**3. Which of the following is key information about a property,**

- A. Location,
- B. Size,
- C. Condition,
- D. Market value
- E. All
- F. None

**Test II: Short Answer Questions**

4 List and explain data quality challenges in property valuations?-----  
-----  
-----  
-----

5 List and explain key considerations for maintaining a database and making modifications for property valuation?-----

-----

-----

## Reference Materials

- ALADWAN, Z. & AHAMAD, M. S. S. 2019. Hedonic pricing model for real property valuation via GIS-A review. *Civil and Environmental Engineering Reports*, 29, 34-47.
- ASRES, H. B. 2019. Real property Valuation in expropriation in Ethiopia: Bases, approaches and procedures. *African Journal on Land Policy and Geospatial Sciences*, 2, 40-51.
- BAUM, A., MACKMIN, D. & NUNNINGTON, N. 2017. *The income approach to property valuation*, Routledge.
- BLACKLEDGE, M. 2016. *Introducing property valuation*, Taylor & Francis.
- BLACKWELL, M. 2007. The relationship of geographical indications with real property valuation and management. *Property Management*, 25, 193-203.
- BORST, R. A. 2007. *Discovering and applying location influence patterns in the mass valuation of domestic real property*. University of Ulster.
- CALHOUN, C. A. 2001. Property valuation methods and data in the United States. *Housing finance international*, 16, 12.
- D'AMATO, M. 2008. Rough set theory as property valuation methodology: The whole story. *Mass Appraisal Methods: An International Perspective for Property Valuers*, 220-259.
- FRENCH, N. & GABRIELLI, L. 2018. Pricing to market: Property valuation revisited: The hierarchy of valuation approaches, methods and models. *Journal of Property Investment & Finance*.
- KUCHARSKA-STASIAK, E. & ŻRÓBEK, S. 2015. An attempt to exemplify the economic principles in real property valuation. *Real Estate Management and Valuation*, 23, 5-13.
- MILLINGTON, A. 2013. *An introduction to property valuation*, Taylor & Francis.
- PYHRR, S. A., BORN, W. L., ROBINSON III, R. R. & LUCAS, S. R. 1996. Real property valuation in a changing economic and market cycle. *The Appraisal Journal*, 64, 14.
- SCARRETT, D. 2008. *Property valuation: The five methods*, Routledge.
- VANDELL, K. D. 1991. Optimal comparable selection and weighting in real property valuation. *Real Estate Economics*, 19, 213-239.
- WYATT, P. 2022. *Property valuation*, John Wiley & Sons.

## **AKNOWLEDGEMENT**

Ministry of Labor and Skills and Ministry of Agriculture Rural Land Administration and Use wish to extend thanks and appreciation to the many representatives of TVET instructors and respective industry experts who donated their time and expertise to the development of this Teaching, Training and Learning Materials (TTLM).

<b>Page 58 of 63</b>	<b>Ministry of Labor and Skills Author/Copyright</b>	<b>Rural land administration Level -III</b>	<b>Version 1</b>
			<b>May 2023</b>

**The experts who developed the learning guide**

<b>No</b>	<b>Name</b>	<b>Qualification</b>	<b>Educational background</b>	<b>Region/college</b>	<b>Phone number</b>	<b>E-mail</b>
<b>1</b>	Dessalegn Addis	MSc	Land Administration (BSc)  Land Administration and Management(MSc)	Assosa  ATVET	+251-920104909	Dessalegnaddis19@gmail.com
<b>2</b>	Abay Mustefa	MSc	Land Management(BSc)  Land Management(MSc)	Agarfa  ATVET	+251-910784067	Abayfx2007@gmail.com
<b>3</b>	Shumet Mengesha	MSc	Land Administration (BSc)  Geodesy and Geomatics(MSc)	Addis Ababa  MPTC	+251_984004128	mengeshashumet8@Gmail.Com
<b>4</b>	Dessalegn Gashu	MSc	Land Administration (BSc)  Business Administration (MBA)	Addis Ababa  MPTC	+251-912604368	dessugashu@gmail.com
<b>5</b>	<b>Hamid Kemal</b>	MSc	<b>Land Administration (BSc)</b>  <b>Land Administration and Management(MSc)</b>	<b>Assosa</b>  <b>ATVET</b>	<b>+251-938479541</b>	<b>hamidkemaladem@gmail.com</b>

6	Dilnesa Fentahun	MSc	Land Administration (BSc) Land Administration and Management(MSc)	Assosa ATVET	+251-989426464	dilnesafentahun@gmail.com
7	Abraham Desyibelew	MSc	Land Administration (BSc) Geodesy and geomatics(MSc)	Addis Ababa MPTC	+251-910006950	abrahdes@gmail.com
8	Reta Moti	MSc	Natural Resource Management(Bsc) Land administration and management(MSc)	Agarfa ATVET	+251-940626042	retamoti2004ec@gmail.com
9	Solomon Eshete	MSc	Land Management(BSc) Land Management(MSc)	Agarfa ATVET	+251-912307088	Se61921@gmail.com
10	Agonafir Bogale	MSc	Land Administration and Surveying(BSc) Land Administration and Management(MSc)	Agarfa ATVET	+251-902838317	dliyudaniel95@gmail.com

