MODULE 4
ACCOUNTING FOR NON-CURRENT ASSETS

MODULE OBJECTIVES
The main objectives of this module are to:
   (i) introduce accounting policies and principles guiding depreciation of non-current assets;
   (ii) introduce the computation of depreciation, accumulated depreciation and carrying cost; and
   (iii) teach the applications of depreciation figures and its effect on the financial report.

LEARNING OUTCOMES
Through this module, students should be able to identify non-current assets, understand the accounting computation and application of depreciation of non-current assets as well as its effect on financial reporting. Students should be able to use an asset register for non-current asset management. In addition, they should understand the provisions of:
IAS 8: Accounting Policies, Changes in Accounting Estimates and Errors; and
IAS 16: Property, Plant and Equipment (PPE).

4/1: DETERMINATION OF A NON-CURRENT ASSET

What is an asset?
This word should sound familiar to you, because of its popular everyday usage, but there is the need to explain in more details its accounting meaning and implication in financial reports.
An asset is a resource available for use by an entity for production of goods and rendering of services.

Types of asset
Asset classification can take diverse dimensions such as consideration under the heading: tangible, intangible and wasting assets; and non-current and current. Usually tangible assets depreciate, intangible assets are amortised, while wasting assets deplete. Examples of tangible assets are Motor Vehicles, Plant and Machinery. Patents, copyrights and trademarks are examples of intangible assets, while natural resources such as crude and solid material resources are wasting assets. One tangible asset that defy the principle of depreciation is land rather than depreciate, land appreciates.
For financial reporting however, only two types of assets are recognised in the Statement of Financial Position that is, non-current assets and current assets. Note here that the given examples are contextual for example if an entity deals in selling land, though land is a non-current asset, it is a current asset (inventory) to that entity, because it is held for sale. In addition, consider a Giant Stapler in an organisation, it could last up to several years in active use, but due to the materiality of its cost, big organisations may choose to expense it in any year of acquisition while a small entity may record it as a non-current asset. More information on materiality is found in Accounting Concepts and Conventions.

Table 1 shows recognised assets in accounting and their classifications:

<table>
<thead>
<tr>
<th>Types</th>
<th>Brief details</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-current assets (previously referred to as fixed assets)</td>
<td>With physical substance: See-able and touchable items used in the operations and activities of an entity. Depreciation and Amortisation</td>
<td>Land, Buildings, Equipment, Furniture etc.</td>
</tr>
<tr>
<td>Current assets</td>
<td>Held for sale items, which are easily convertible to cash</td>
<td>Receivables, inventories, cash etc.</td>
</tr>
<tr>
<td>Tangible assets</td>
<td>With physical substance</td>
<td>All non-current assets are tangible</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>Without physical substance. These are usually amortised.</td>
<td>Licenses, patents, copyrights, trademarks, franchises, etc.</td>
</tr>
</tbody>
</table>
Wasting assets

| These are tangible assets, because they have physical substance. They deplete with time. |
| Natural resources: Crude oil, solid minerals |

**How to determine a non-current asset**

According to the IFRS Foundation, a standard, the IAS 16 establishes principles for recognising property, plant and equipment as assets, measuring their carrying amounts, and measuring the depreciation charges and impairment losses to be recognised in relation to them. Property, plant and equipment are tangible items that:

- are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- are expected to be used during more than one period.

Property, plant and equipment includes bearer plants related to agricultural activity.

The cost of an item of property, plant and equipment is recognised as an asset if, and only if:

- it is probable that future economic benefits associated with the item will flow to the entity; and
- the cost of the item can be measured reliably.

**Internal control on non-current assets**

Non-current assets management is an essential responsibility of Management. Asset safeguard is an accounting function and its management has been highly correlated with variables such as profitability, managerial effectiveness and efficiency, stability and overall performance. Most organisations include it as a responsibility of the Internal Audit unit or Department.

**Asset coding**

Asset coding is a governance practice. An important justification for asset coding is the fact that Nigeria’s currency as a national asset has codes peculiar to each even the least (coin). Asset coding reduces chances of asset pilfering, unauthorised removal or movement. It places a subconscious in users of the asset to handle with care and diligence, with a consciousness that the asset is recorded and well accounted for. Good coding system reduces the stress on staff in calculating depreciation; reduce stress on Maintenance staff, by providing adequate information to them on the timeline for asset maintenance. Others include knowledge of all owned assets, and tracking its age can assist in planning capital investments. Contemporary technologies include the use of Property Identification Tags and ID Labels, which make the job of a manager much more efficient, lending to staff productivity and improved service levels.

**Ghost assets**

A “ghost asset” is property that is lost, stolen, or unusable, but is still listed as an active non-current asset in the database of existing non-current assets. It is a concept that typifies assets that are no longer functional or available for use to an organisation. Most times due to inadequacies in asset management, organisations still fall under the illusion that assets exist when they no longer in actual sense. Organisations therefore must endeavour to clear out all ghost assets. The effect of keeping ghost assets in inventory are additional cost with respect to the payment of insurance on those assets and illusion of a fat total of non-current asset value. Management of non-current assets is one area many entities ignore.

**Maintenance policy**

Maintenance of non-current assets is a significant practice that impacts on the financial resources of an entity. Due to use, assets usually require periodic maintenance of running parts or the whole. Putting up a sound maintenance policy is significant to ensure that the assets do not give way when they are in need or cause injury to the operator or user. An accountant should be able to consult with technical experts on maintenance issues and make adequate financial provisions.
Replacement strategies for non-current assets
Proper knowledge of replacement strategies will greatly influence the productive capacity of any entity and inform decisions with respect to finances. Arbitrary allocation of resources for maintenance of equipment and other assets by entities result to huge losses. Focusing on drafting, adopting and implementing a robust replacement strategy for assets can be of tremendous help to businesses.

4/2: NON-CURRENT ASSET COST DETERMINATION
This unit introduces students to how to determine the carrying amount of a non-current asset in the financial statement.
After recognition, an entity chooses either the cost model or the revaluation model as its accounting policy and applies that policy to an entire class of property, plant and equipment:
- under the cost model, an item of property, plant and equipment is carried at its cost less any accumulated depreciation and any accumulated impairment losses.
- under the revaluation model, an item of property, plant and equipment whose fair value can be measured reliably is carried at a revalued amount, which is its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations must be made regularly and kept current. Revaluation increases are recognised in other comprehensive income and accumulated in equity, unless they reverse a previous revaluation decrease. Revaluation decreases are recognised in profit or loss unless they reverse a previous revaluation increase.

IFRS Standards require an entity initially to recognise its obligations to decommission assets or to perform environmental restoration or rehabilitation both as part of the cost of the asset and as a liability. IFRIC 1 mainly addresses how an entity accounts for any subsequent changes to the amount of the liability that may arise from (a) a revision in the timing or amount of the estimated decommissioning, restoration and rehabilitation costs or from (b) a change in the current market-based discount rate.

There are two basic methods used in owning a non-current asset that is, by construction and by acquisition.

1. Construction: This involves the building/making of the asset by the entity. In determining the cost of the non-current asset, all associated costs such as Material, Labour and Overheads as well as Capitalised Interest (when the fund used in construction is from a financial facility) are computed.
   Example: Dele Casco Enterprises fabricates metals and decided to construct its own Bending Machine. The amount of materials used cost ₦560,000.00, estimated cost of labour was ₦120,500.00 and overheads was ₦34,900.00. The cost of the Bending Machine is ₦715,400.00.
   Note that if funding for the construction of a non-current asset is sourced from a financial facility, then its interest will be capitalised as part of the cost of the non-current asset.
   *the interest capitalised should be added to the Notes to the account.

2. Acquisition: This involves the outright purchase of a non-current asset from a manufacturer or vendor. The methods used is usually the acquisition cost or cash equivalent price approaches.
   Payments for the acquisition of non-current assets could be by:
   a. Cash;
   b. Debt;
   c. Equity;
   d. Other non-cash considerations such as replacement; and
   e. Any combination of the above
   Items to be included in the cost of an acquired non-current asset:
   a. Purchase price of the non-current asset;
   b. Installation cost;
   c. Transportation cost;
   d. Insurance cost;
e. Legal fees;
f. Repairs and renovation cost (prior to use);
g. In the case of land and buildings, other fees such as title deeds, commissions, surveying fees, certificate of occupancy fees etc.

**Items to be excluded from the cost of an acquired non-current asset:**

a. Discounts;
b. Interests; these are treated as period expenses
c. Maintenance contracts to cover the estimated useful life of the non-current assets.

Note that when more than one asset is acquired in group, the total cost is allocated to individual assets reasonably.

Following the construction and/or acquisition of a non-current asset, maintenance is required to ensure the asset’s functioning as well as further extending the useful life of the asset. Cost incurred in maintaining the optimal operation of a non-current asset is usually referred to as recurrent expenditure while cost incurred to improve performance, increase asset’s useful life and/or increase the capacity of an asset is capital expenditure.

Generally, according to the IFRS Foundation, an item of property, plant and equipment is initially measured at its cost. Cost includes:

- its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates;
- any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management; and
- the estimated costs of dismantling and removing the item and restoring the site on which it is located, unless those costs relate to inventories produced during that period.

**Recurrent expenditure:** is expensed in the current year that it occurs. These include general routine maintenance and minor repairs.

**Capital expenditure:** is added to the carrying amount of the non-current asset. An example of a capital expenditure is a total overhaul of a Building.

It is important to note that at sometimes, there is a thin line between recurrent and capital expenditures. When such situations arise, the IFRS provides for the use of professional judgement in determining what is recurrent and what is capital in nature. There is also conflicting interest such that for example, for the purpose of shoring up net profit, Management may prefer to capitalise maintenance cost while for taxation purposes, they may prefer to expense maintenance cost.

### 4/3: DEPRECIATION

**What is depreciation?**

Depreciation falls in the purview of using *estimates* to make provisions for the use and replacement of non-current assets. Depreciation is based on estimates, because it is difficult to determine accurately at the date of acquisition the amount for which the asset would be sold during and/or after its useful life.

It is usually referred to as the continuous reduction in value of an asset. Provision is *usually* made for depreciation to spread the cost of an asset over its estimated useful life thereby satisfying the matching concept and to make provision for the replacement of the asset out of profit over time. The part of cost that is not recovered on disposal of a non-current asset and the part of cost consumed during its useful life is depreciation (Wood, 1972).

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life. Depreciable amount is the cost of an asset, or other amount substituted for cost, less its residual value. Each part of an item of property, plant and equipment with a cost that is significant in relation to the
total cost of the item is depreciated separately. The depreciation charge for each period is recognised in profit or loss unless it is included in the carrying amount of another asset. The depreciation method used reflects the pattern in which the asset’s future economic benefits are expected to be consumed by the entity. To determine whether an item of property, plant and equipment is impaired, an entity applies IAS 36.

**Causes of depreciation**
1. **Physical deterioration**: rust, decay, wear and tear from use and exposure to forces of nature;
2. **Advancements in technology**: can render an asset outdated even during its useful life such that it becomes obsolete or inadequate to cater for the capacity of the entity;
3. **Passage of time**.

**Annual depreciation**
This is the annual *notional* expense estimated to be the value of use of a non-current asset. IFRS recommends the use of two methods for the determination of annual depreciation:
1. Straight line; and
2. Reducing balance.

*Units of production/mileage method is encouraged when it is possible to determine the use of the asset in comparison to its active production levels.*

Three (3) variables are necessary for the computation of depreciation: cost, estimated residual value (scrap) and estimated useful life of the asset.

**Cost** is the amount/value of the constructed or acquired asset determined using the methods described in 4/2.

**Estimated residual value** also known as scrap value is the amount expected to be realised from the disposal of the asset at the end of its useful life.

**Estimated useful life** of an asset is the determined number of years that an entity expects to use an asset.

**Straight-line method**
This method assumes a constant and equal amount of annual reduction in the value of an asset. It is simple to compute and easily understood. One short coming of this method is the fact that it is based on assumption that an asset will be used in the same way throughout its useful life. The mathematical computation is:

\[
\text{Annual depreciation} = \frac{\text{Cost} - \text{Estimated residual value}}{\text{Estimated useful life}}
\]

*Illustration 4.3.1*: Mansigner Ltd. acquired a Tractor for ₦55,000,000.00 and expects to use it for 10 years at which time it can be sold for ₦90,000.00. Determine the annual depreciation value.

**Solution:**

\[
\text{Mansigner Ltd.}
\]

\[
\begin{align*}
\text{Determination of depreciation value} \\
\text{Annual depreciation} &= \frac{\text{Cost} - \text{Estimated residual value}}{\text{Estimated useful life}} \\
\text{Annual depreciation} &= \frac{\text{₦55,000,000.00} - \text{₦90,000.00}}{10} \\
\text{Annual depreciation} &= \text{₦5,491,000.00}
\end{align*}
\]

*To prove that this computation is correct:* To convert the value of depreciation to percentage, the number of estimated useful life is used as a denominator for 100 such that for the above example, \( \frac{\text{rate}}{10} \times 100 = 10\% \). However, caution has to be observed in the application of the rate, because it should be applied to the difference between cost and estimated residual value, not on the cost.
Reducing balance method

One significant advantage of this method is that given that as non-current assets age, it becomes more expensive to maintain, the reduction in the value of depreciation at later years compensates for higher maintenance costs. For the reducing balance method, a percentage is determined using a formula below and applied annually on the carrying amount.

\[ r = 1 - \frac{\sqrt[3]{s}}{c} \]

where:
- \( r \): rate of annual depreciation;
- \( n \): estimated number of useful life;
- \( s \): estimated residual (scrap) value;
- \( c \): cost of the asset.

Use the Illustration 4.3.1 to determine the rate of depreciation and the value of depreciation for the first two years.

\[ r = 1 - \frac{\sqrt[3]{90,000.00}}{55,000,000.00} \]

Activity: Using the information from Illustration 4.3.1, use Microsoft Excel to show the computation in Table 2:

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual depreciation</th>
<th>Accumulated depreciation</th>
<th>Carrying amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N26,070,000.00</td>
<td>N26,070,000.00</td>
<td>N28,930,000.00</td>
</tr>
<tr>
<td>2</td>
<td>N13,712,820.00</td>
<td>N39,782,820.00</td>
<td>N15,217,180.00</td>
</tr>
<tr>
<td>3</td>
<td>N7,212,943.32</td>
<td>N46,995,763.32</td>
<td>N8,004,236.68</td>
</tr>
<tr>
<td>4</td>
<td>N3,794,008.19</td>
<td>N50,789,771.51</td>
<td>N4,210,228.49</td>
</tr>
<tr>
<td>5</td>
<td>N1,995,648.31</td>
<td>N52,785,419.81</td>
<td>N2,214,580.19</td>
</tr>
<tr>
<td>6</td>
<td>N1,049,711.01</td>
<td>N53,835,130.82</td>
<td>N1,164,869.18</td>
</tr>
<tr>
<td>7</td>
<td>N552,147.99</td>
<td>N54,387,278.81</td>
<td>N612,721.19</td>
</tr>
<tr>
<td>8</td>
<td>N290,429.84</td>
<td>N54,677,708.66</td>
<td>N322,291.34</td>
</tr>
<tr>
<td>9</td>
<td>N152,766.10</td>
<td>N54,830,474.75</td>
<td>N169,525.25</td>
</tr>
<tr>
<td>10</td>
<td>N80,354.97</td>
<td>N54,910,829.72</td>
<td>N89,170.28</td>
</tr>
</tbody>
</table>

Total depreciation \( N54,910,829.72 \)
Estimated residual value \( N89,170.28 \)
Cost \( N55,000,000.00 \)

Accumulated depreciation
This is the cumulative value of annual depreciation of an asset over its useful life. It is simply the arithmetic addition of annual depreciation.
Carrying amount/value

This is also known as the Net Book Value (NBV). It is the difference between the cost of an asset and its accumulated depreciation. When the cost is not given, the carrying amount is the difference between the asset’s value brought forward and its annual depreciation.

4/4: ASSET REGISTER (ACQUISITIONS AND ADDITIONS, DEPRECIATION, AND DISPOSAL)
Every entity is expected to maintain an asset register to document and track non-current assets; this is to ensure effective management of non-current assets. A typical example of an asset register is shown in Table 3.
Table 3: Non-current asset register

Retrynx Ltd.

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Opening Balance</th>
<th>Additions</th>
<th>Revaluations</th>
<th>Disposals</th>
<th>Impairment</th>
<th>Closing Balance</th>
<th>Opening Balance</th>
<th>Depreciation - Cost</th>
<th>Depreciation - Revaluation</th>
<th>Depreciation - Total</th>
<th>Revaluations</th>
<th>Disposals</th>
<th>Closing Balance</th>
<th>Closing Carrying Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>Land &amp; Buildings</td>
<td>1,500,000</td>
<td>-</td>
<td>-</td>
<td>(200,000)</td>
<td>-</td>
<td>1,300,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,300,000</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>Plant &amp; Equipment</td>
<td>5,586,320</td>
<td>87,419</td>
<td>(190,000)</td>
<td>-</td>
<td>1,641,189</td>
<td>5,124,531</td>
<td>347,328</td>
<td>1,609</td>
<td>348,936</td>
<td>(5,124,531)</td>
<td>(34,833)</td>
<td>314,103</td>
<td>1,327,086</td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>Computer Equipment</td>
<td>29,700</td>
<td>-</td>
<td>(14,200)</td>
<td>-</td>
<td>15,500</td>
<td>29,700</td>
<td>-</td>
<td>6,533</td>
<td>6,533</td>
<td>(29,700)</td>
<td>-</td>
<td>6,533</td>
<td>8,967</td>
<td></td>
</tr>
<tr>
<td>OE</td>
<td>Office Equipment</td>
<td>8,550</td>
<td>-</td>
<td>(1,350)</td>
<td>-</td>
<td>7,200</td>
<td>5,760</td>
<td>1,288</td>
<td>513</td>
<td>1,800</td>
<td>(5,760)</td>
<td>-</td>
<td>1,800</td>
<td>5,400</td>
<td></td>
</tr>
<tr>
<td>FF</td>
<td>Furniture &amp; Fixtures</td>
<td>21,100</td>
<td>-</td>
<td>(11,650)</td>
<td>-</td>
<td>9,450</td>
<td>16,411</td>
<td>1,575</td>
<td>-</td>
<td>1,575</td>
<td>(16,411)</td>
<td>-</td>
<td>1,575</td>
<td>7,875</td>
<td></td>
</tr>
<tr>
<td>MV</td>
<td>Motor Vehicles</td>
<td>252,200</td>
<td>288,500</td>
<td>(45,000)</td>
<td>-</td>
<td>288,500</td>
<td>221,387</td>
<td>40,975</td>
<td>-</td>
<td>40,975</td>
<td>(221,387)</td>
<td>(1,000)</td>
<td>39,975</td>
<td>248,525</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from design@excel-skills.com
MODULE SUMMARY AND CONCLUSION

Students were taught how to identify a non-current asset, determine revenue and capital expenditure with respect to non-current assets and accounting manipulations surrounding the figures. In this module, students are able to use Microsoft Excel to compute the cost of a non-current asset, its annual and accumulated depreciation value as well as its carrying amount using both the straight line and reducing balance methods. This module highlights the financial accounting principles and practices on non-current asset management and reporting.

ASSIGNMENT

NB: Use Microsoft Excel for your computations

1. SamFlor Farms Ltd. built a customised shelter for livestock. The company paid ₦1,200,000.00 for timber, nails, bricks and cement, ₦500,000.00 to the Supervisor of the project, ₦700,000.00 to other labourers and ₦30,000.00 for land preparation. The
   a. Determine the cost of the non-current asset.
   b. Assuming the funding for the Shelter was from a Bank facility, and an interest of ₦96,000.00 was paid, how much is the cost of the asset?
   c. If the company signed a contract of maintenance with the Supervisor for 10 years at a cost of ₦600,000.00, to what extent would this alter the cost of the asset?

2. Descovec Enterprises acquired the following non-current assets:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Scrap</th>
<th>Cost</th>
<th>Estimated Useful life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicle</td>
<td>156,700.00</td>
<td>25,600,900.00</td>
<td>4</td>
</tr>
<tr>
<td>Furniture</td>
<td>23,300.00</td>
<td>18,800,000.00</td>
<td>10</td>
</tr>
<tr>
<td>Generator</td>
<td>0.00</td>
<td>13,350,000.00</td>
<td>5</td>
</tr>
</tbody>
</table>

Required:
Using IFRS-recommended methods, compute the value of annual depreciation and carrying amount for the first four years of use.

3. The cost of a non-current asset is ₦44,500,000.00 and the value of accumulated depreciation is ₦10,340,000.00. Using the reducing balance method with a rate of 34%, determine the annual depreciation value.

FURTHER READING/REFERENCES
IASB. IAS 8: Accounting Policies, Changes in Accounting Estimates and Errors.
IASB. IAS 16: Property, Plant and Equipment (PPE).