IAS 16
Property, plant and equipment

1. Objective

This Standard prescribes the accounting treatment of property, plant and equipment (tangible fixed assets).
This Standard must be applied except when another standard requires or permits a different accounting treatment, such as, for example, IAS 41 on non-bearer biological assets related to agricultural activities, IAS 40 on investment property, IFRS 5 on non-current assets held for sale and discontinued operations or IFRS 6 on the recognition and measurement of exploration and evaluation of mineral resources assets.

2. Scope

IAS 16 defines certain basic terms.
Property, plant and equipment are tangible assets:

- **held** by an entity for use in the production or supply of goods or services for rental to others or for administrative purposes; and
- expected to be **used over more than one period.**

It should be noted that an entity that regularly disposes of assets initially acquired for rental to customers over a specified period may transfer them to property, plant and equipment, when they are no longer rented and are offered for sale. Such transfer is recognized at the residual value of the assets recovered.

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 any other amount substituted for cost less its residual value as if at the end of its useful life.

Useful life is:

- the period over which an asset is expected to be available for use by an entity;

- the number of production units or similar units expected to be obtained from the asset by an entity.

Fair value is the price that would be received to sell an asset or paid to transfer liability in an orderly transaction between market participants at the measurement date (see IFRS 13).

Residual value is the estimated amount that an entity would obtain from disposal of an asset at the end of its useful life, after deducting the estimated cost of disposal.

Recoverable amount is either an asset's fair value less costs to sell or its value in use, whichever is higher.

"Bearer biological assets" are living animals or plants used in production over several periods and not likely to be sold as agricultural products (for example, grape vines, fruit trees, rubber trees, oil palms, etc.).
Other terms are also defined in IAS 36 (such as, for example, carrying value, impairment loss, cost).

3. Accounting impact

3.1 Date of recognition

The cost of an item of property, plant and equipment should be recognized as an asset when and only when both of the two conditions below are met:

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

3.2 Aggregation of items

IAS 16 permits the aggregation of individually insignificant items when they are similar or are used together (for example an alternator and its coil).

3.3 Breakdown into components

Conversely, the components of an asset are recognized as separate items when they have a different useful life or if they yield economic benefits at different times in the future (for example, an aircraft and its engines, the various components of a building, a bridge and its roadway).

Example 1: For a block of apartments, breakdown into components may result in the following items being recognized and depreciated separately:

Items	Depreciation period
Structure and related works	50 years
External joinery	25 years
Collective heating	20 years
Individual heating	15 years
Roofing	20 years
Power supply	25 years
Plumbing	25 years
Elevators	15 years

3.4 Items included in cost

The cost of an item of property, plant and equipment comprises the purchase price (including import duties and non-recoverable taxes) after deducting trade discounts and rebates, and all costs directly attributable to bringing the asset into the location and operational condition necessary for it to be capable of operating in the manner intended by management, for example: site preparation costs, delivery and handling expenses, architects and engineers' fees, etc.

The cost includes the estimate of expenses which will be required to dismantle and remove the item and to restore the site on which it is located.

In principle, administration and general overhead costs are not part of the cost of an asset unless they can be allocated specifically to the relevant item of property, plant and equipment.

Subsequent costs incurred must be added to the carrying amount of the related asset if it is probable that the entity will derive future economic benefits above the degree of performance initially defined for the existing asset.

Example 2:

What types of costs can be included in the initial cost of an asset?

Types of cost	Included?
Feasibility study	NO
Registration taxes and fees	YES
Employee training costs	NO
Ancillary costs directly related to purchase	YES
Initial operating losses	NO
Administrative and general overhead costs	NO
Expenses incurred to remove former assets	NO
Costs to restore the site	YES

3.5 Measurement after recognition

Two options are offered for revaluation and they are applicable to all items of property, plant and equipment within the same class:

- the **cost model** where the item of property, plant and equipment is carried at cost, less any accumulated depreciation and impairment losses **(depreciated cost method).** We recall that these depreciation expenses and impairment losses are recorded in the profit or loss statement;
- the second method, the revaluation model, consists initially of carrying the item of property, plant and equipment at its **fair value** and thereafter deducting any subsequent depreciation based on the revalued amount and after deducting any impairment losses.

Revaluations must be performed at such frequency as to ensure that the carrying amount does not differ materially from the fair value. It is stated that without consideration of the valuation method used, accumulated depreciation should correspond to the difference between the gross revalued amount and the net recorded amount.

Example 3: An item of property, plant and equipment purchased for 100 is depreciated over a period of 10 years.
At the end of the fourth year, the accumulated depreciation is 40 and the carrying amount of the item is therefore 100 – 40 = 60.
The fair value of the item is then estimated at 40, giving rise to an impairment of 20.
The **cost model** recommends the following treatment:
At the end of year 4:

Item:	100.00
Accumulated depreciation	– 40.00
Impairment:	– 20.00
Carrying amount:	**40.00**

Depreciation for year 5 is: 40/6 = 6.67
The carrying amount is then:

Item:	100.00
Accumulated depreciation:	– 46.67
Impairment:	– 20.00
Carrying amount:	**33.33**

At the end of year 10, the situation is as follows:

Item:	100.00
Accumulated depreciation:	– 80.00
Impairment:	– 20.00
Carrying amount:	**0.00**

3.6 Recognizing the revaluation of property, plant and equipment

If an asset's carrying amount is decreased as a result of a revaluation, the decrease must be recognized as an expense, while an increase resulting from a revaluation must be recognized directly in equity ("revaluation surplus") and in the comprehensive income statement as «other comprehensive income» (OCI). To the extent that increase in the current revaluation reverses a revaluation decrease relating to the same asset, an increase must be recognized in equity.

Example 4: In 2016, an entity acquired a plot of land for a price of 10,000 with the intention to set up its headquarters on the outskirts of a large city. Remember that land should not be depreciated except in very rare cases, as it generally has an indefinite useful life.

In 2017, the site was unexpectedly selected for development by the local authorities in order to attract other companies and offices. Significant investment was planned to develop the area in 2020 (road infrastructure, extension of a suburban railway line, etc.).
As a result, demand for plots on the site went up sharply, leading to higher land prices. The land value was determined by a qualified professional surveyor who set it at 15,000. The increase in asset value must be recognized in equity as "revaluation surplus" for an amount of 5,000 (15,000 – 10,000).

In 2018, the local authorities abandoned the development plan for this site in favour of another site requiring less costly investment. The same surveyor valued the land at 8,000. The carrying amount of the asset would be 7,000 lower (8,000 – 15,000). The negative revaluation amount is recognized in the first place under the heading of "revaluation surplus" in equity for 5,000, and the remainder in the profit or loss statement for 2,000.

3.7 Depreciation

A variety of depreciation methods can be used that comply with the systematic basis requirement mentioned in the definition of depreciation: for example, the straight-line method, the declining or reducing balance method, and the units of production method.
The depreciable amount of an asset is determined after deducting its residual value, assuming it can be estimated sufficiently reliably.

3.8 Review of useful life and depreciation method

The useful life of an asset has to be reviewed periodically (at least at each financial year-end according to IAS 1 and IAS 34): the depreciation expense or charge for the period and for future financial years must be adjusted if expectations differ significantly from previous estimates.
The same applies to the depreciation method.
Whenever changes are necessary, they must be accounted for in accordance with IAS 8 as changes in accounting estimates.
See also IAS 36 for examples of impairment and depreciation.

4. Disclosure

The notes to the financial statements must disclose the following information:

- the measurement bases for determining the gross carrying amount;
- the depreciation methods used;
- the gross carrying amount and accumulated depreciation at the beginning and end of the period;
- a detailed reconciliation of changes in carrying amount during the period (for example, additions, asset sales, revaluations, depreciation);
- the existence and amounts of restrictions on property, plant and equipment (pledges, guarantees, etc.);
- the accounting method used to estimate the dismantling costs;
- the value of property, plant and equipment produced or being produced;
- the amount of commitments for the acquisition of property, plant and equipment; ;
- and finally, if items of property, plant and equipment are revalued, additional information must be disclosed (methods used, date of the revaluation, whether an independent assessor was involved, valuation surplus).