

# Non-current assets

## Plants, property and equipment (PPE) Assets

PPE assets
<ul style="list-style-type: none"><li>Tangible assets that are held for use in the production or supply of goods or services, rental, administrative purposes</li><li>Expected to be used for more than one time period.</li></ul>
<p>There are 3 accountable events in the lives of PPE assets:</p> <ol style="list-style-type: none"><li>Acquisition and valuation</li><li>Allocation of acquisition cost to expense over useful life (depreciation)</li><li>Sale or disposal</li></ol>
Acquisition of PPE assets
<p>When a PPE asset is acquired, the amount recognised for the PPE should be measured at its cost.</p> <p>The cost of a PPE asset includes all expenditures that are <i>reasonable</i> and <i>necessary</i> for getting the asset to the desired location and ready for use.</p> <p><u>Special considerations when measuring cost of PPE</u></p> <ul style="list-style-type: none"><li><b>Extended payment for PPE:</b> Charges <b>after</b> the equipment is ready for use (e.g. instalment, interest) are recorded as expenses. All charges during construction period/prior to PPE being ready is part of the asset's cost.</li><li><b>Land purchases:</b> all additional transaction costs and legal fees are considered part of the cost. If existing buildings are on them that are not intended for use, then the costs to tear them down are also factored in.</li><li><b>Land improvements:</b> Improvements to real estate (e.g. driveways, fences, parking, landscaping) have limited life and are subject to depreciation. They are recorded in a separate asset account called Land Improvements, not considered as part of the PPE asset.</li><li><b>Buildings:</b> If buildings are purchased with the intention of repairing them prior to use, these repairs are factored into the cost. Any subsequent repairs <b>after</b> the building is used are considered as expenses.</li><li><b>Equipment:</b> All costs – sales taxes, delivery, repair etc. – are considered as part of the asset's costs. Once the equipment has been placed in operation, maintenance costs (interest, insurance etc.) are treated as expenses.</li><li><b>Lump sum purchases:</b> Several different PPE assets may be purchased at one time in a single lump sum. The purchase price must be <i>allocated</i> among these assets separately under different accounts. The allocation is based on the relative fair market value of each asset.</li></ul> <p><u>Capital vs revenue expenditure</u></p> <ul style="list-style-type: none"><li>Capital expenditure any material expenditure that will benefit several accounting periods, charged to assets.</li><li>Revenue expenditure: any expenditure that will benefit only the current period or that is not material in amount, charged to expenses</li></ul>

Measurement after acquisition: depreciation
Depreciation
<p>PPE assets are shown in the statement of financial position at their <i>book values</i>. After initial recognition, an entity is required to choose either the cost model or revaluation model as its accounting policy for measuring a class of PPE assets.</p> <p><u>Models of measuring value of PPE assets</u></p> <ul style="list-style-type: none"><li>Cost model:<ul style="list-style-type: none"><li>In times of inflation, capital (and its expenses) are underestimated → profit is overstated</li><li><b>Book value = historical cost – accumulated depreciation (contra-asset) – accumulated impairment losses (contra-asset)</b></li></ul></li><li>Revaluation model:<ul style="list-style-type: none"><li><b>Book value = revalued amount (fair value at date of revaluation) – subsequent accumulated depreciation – subsequent accumulated impairment losses</b></li></ul></li></ul> <p><u>Depreciation</u></p> <ul style="list-style-type: none"><li>The allocation of cost of a PPE asset to expense in the period in which <i>services are received from the asset</i> in the generation of revenue</li><li>Depreciation is not a process of valuation, but cost allocation (to fairly represent expenses and economic activity)</li><li>Think of it as allocating the value of service for which the company pre-paid</li></ul> <p><u>'Causes' of depreciation</u></p> <ul style="list-style-type: none"><li>Physical deterioration</li><li>Obsolescence</li></ul> <p>These factors change the value of the service that an asset can provide – so it must be appropriately considered in depreciation models <i>how</i> the cost should be expensed according to the value it provides in those periods of time.</p> <p><u>Recording depreciation in the asset and expense accounts</u></p> <ul style="list-style-type: none"><li>Asset account does not change</li><li>At the end of financial year:<ul style="list-style-type: none"><li>debit depreciation expenses, credit accumulated depreciation</li><li>debit impairment losses, credit</li></ul></li></ul>

## Methods of computing depreciation

### Depreciation for fractional periods

When an asset is acquired in the middle of an accounting period, it is not necessary to compute depreciation expenses to the nearest day or week (which would give a misleading impression of precision, when they are estimates). Two approaches are used to account for depreciation in the first year for assets purchased in the financial year:

- **Half-year convention:** based on the assumption that the actual purchase dates will average out to approximately mid-year, so one-half year's depreciation on *all* assets acquired during the year is expensed. One-half year's depreciation is also taken in the last year of the asset's life.
- **Nearest whole month**
- **By output (following model of depreciation)**

### Models of depreciation

1. Straight line method

**Estimate: years of useful life, residual value**

$$\text{annual depreciation expense} = \frac{\text{cost} - \text{residual value}}{\text{years of useful life}}$$

2. Declining balance method

**Estimate: fixed percentage of declining balance, residual value**

$$\text{annual depreciation expense} = \text{remaining book value} \times n \times \frac{1}{\text{useful life}}$$

**When depreciation expense causes book value to drop below residual value, then final year expense = difference between book and residual value**

3. Units of output method

**Estimate: total units of useful output**

$$\text{annual depreciation expense} = \frac{\text{output for the year}}{\text{total lifetime output}} \times (\text{cost} - \text{residual value})$$

All three methods will produce the same total depreciation over the asset's useful life, but the amount of depreciation expense and book value will differ from year to year.

## Depreciation in the cost vs revaluation model

1. Cost model – just applying the depreciation models directly
2. Revaluation model – asset is revalued periodically. Balance between book value and present value is adjusted through the accumulated depreciation account. New book value is then used for future calculations until next revaluation finds discrepancy between book and market value.

Year	Computation	Depr. Expense	Accumulated Depreciation	Book Value
First	\$ 340,000 × 40%	\$ 136,000	\$ 136,000	\$ 204,000
Second				
Before	204,000 × 40%	81,600	217,600	122,400
After	340,000 - 131,400		208,600	131,400
Third	131,400 × 40%	52,560	261,160	78,840
Fourth	78,840 × 40%	31,536	292,696	47,304
Fifth	Plug year # 5	4,304	297,000	43,000
Total Depreciation		\$ 306,000		

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## Revision of estimates & impairment

### Revision of estimates

- Revised estimates should be used for calculation of *current and future* periodic depreciation expenses
- Financial statements of past periods are not revised

### Impairment

If it becomes apparent that a company cannot reasonably expect to recover the book value of PPE assets (through use or sale), the asset should be written down to its *net realisable value*. Credit impairment loss (contra-asset), debit expenses.

## Disposal or sale of PPE

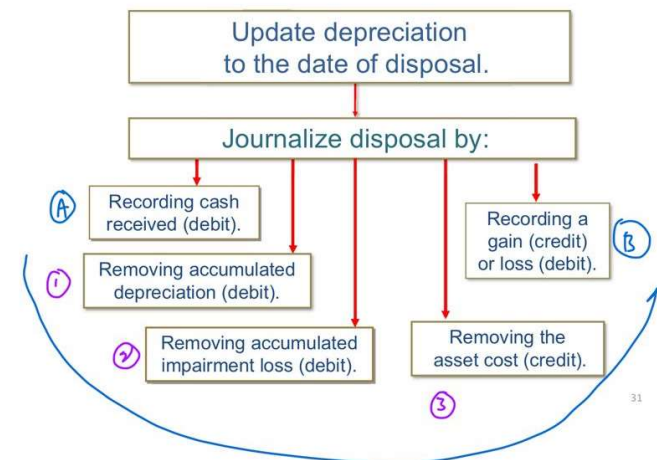
### Accounting for depreciation before disposal

When depreciable assets are disposed of at any date other than the end of the accounting year, entry should be made to record depreciation for that fraction of the year before disposal.

### Disposal or sale

Note that for revaluation model, updating depreciation here includes the revaluation of the asset.

**Gain = what you get for asset (cash, market value of equipment) – book value of asset**



### Trading

1. Update depreciation to date of disposal
2. Record cash flow
3. Remove accumulated depreciation, impairment losses, asset to be traded
4. Add asset gained from trade to assets
5. Record gain or loss on disposal of PPE asset

Note that income tax rules do not recognise gains or losses on exchanges of assets that are used for similar purposes.

### Watch out for in practice

- Physical inspections of fixed assets (to verify their existence, check their condition to support their book value)
- Useful life being less than actual life → impact on profit (without change in real terms)
- Changes to depreciation policy and estimates → impact on profit (without change in real terms)

## Intangible Assets

Intangible assets
<ul style="list-style-type: none"><li>Identifiable non-monetary assets without physical substance</li><li>Controlled by the entity and will generate future economic benefit</li><li>Appear in financial statement at cost, regardless of <i>value</i></li></ul> <p><u>Classification as operating expense vs. intangible asset</u></p> <ul style="list-style-type: none"><li>Intangible assets are only listed if significant costs are incurred in their acquisition or development</li><li>Intangible assets recognised only if there is reasonable evidence of future economic benefits (e.g. patent vs. employee training)</li></ul>
Measurement after recognition & amortisation
<p><u>Measurement after recognition</u></p> <p>As in tangible PPE assets, after initial recognition an entity can choose either the cost model or revaluation model to measure an intangible asset.</p> <ul style="list-style-type: none"><li>But if there is no active market for the assets, then they are by default accounted for by the cost model</li></ul> <p><u>Amortisation</u></p> <p>The equivalent of depreciation, but for intangible assets.</p> <ul style="list-style-type: none"><li>Note: the usual accounting entry for amortisation is debit to amortisation expense and credit to the intangible asset directly. There is no theoretical reason to credit accumulated amortisation account rather than intangible asset directly but is seldom seen in practice.</li></ul>
Goodwill
<p>The amount a company has paid to acquire certain favourable intangible attributes as part of acquisition of another company. A business has goodwill when investors will pay a <i>higher price</i> than the net identifiable assets are worth because the businesses earns <i>more</i> than the rate of return from these assets.</p> <p>Goodwill is thus measured by the difference in price <i>paid</i> and value of net identifiable assets of a company.</p> <p><b>Goodwill = price – fair market value of net identifiable assets</b></p> <p><u>Recording goodwill</u></p> <ul style="list-style-type: none"><li>There is no objective way of determining intangible qualities of a businesses unless it is sold – so internally generated goodwill is not recorded</li><li>Goodwill can be impaired – when the amount of goodwill recorded is no longer recoverable (through a sale, for example) an impairment loss must be recorded by reducing the asset amount (credit) and a loss in the income statement (debit expense).</li><li>Goodwill does not undergo amortisation</li></ul>
Trademarks, patents, copyrights
<p>All three intangible assets undergo amortisation.</p> <p><u>Patents</u></p> <ul style="list-style-type: none"><li>The exclusive right granted by the government to sell or manufacture an invention</li><li>Cost = purchase price + legal costs to defend</li><li>Useful life for amortisation = estimated useful life or legal life (20 years)</li></ul> <p><u>Copyrights</u></p> <ul style="list-style-type: none"><li>Costs of obtaining copyright are often minor, and thus charged to expense. Only when a copyright is purchased from an existing owner will it be material enough to be recognised as an intangible asset.</li><li>Useful life = shorter of legal life (life of creator + 50 years) or years un which revenue is expected</li></ul> <p><u>Trademarks and trade names</u></p> <ul style="list-style-type: none"><li>A symbol, design, logo or name associated with a business</li><li>Internally developed trademarks have no recorded asset cost</li><li>Purchased trademarks are recorded at cost and amortised over the shorter of legal or useful life</li><li>If the use of the trademark is discontinued or its contribution to earnings becomes doubtful, any unamortised cost should be written off as expenses</li></ul>

## R&D and R&D costs

- Costs: expenditure on research or the research phase of an internal project are expensed when incurred
- Intangible assets arising from R&D is only recognised as an asset if the criteria are met:
  - The technical feasibility of completing the intangible asset for use or for sale
  - The entity intends to complete the intangible asset and use or sell it
  - The entity has the ability to use or sell the intangible asset
  - The intangible asset will generate probably future economic benefits
  - There is available adequate technical, financial and other resources to complete the development and to use or sell the intangible asset
  - The entity has the ability to measure reliably the expenditure attributable to the intangible asset during its development