IFRS Training

IAS 2 – Inventories

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Section 1

Overview

Overview

- The term inventories includes raw material, work-in-progress, finished goods and goods for resale
- The amount of cost to be recognized as an asset and carried forward until related revenue is recognized
- IAS 2 provides practical guidance on:

1	Determination of cost
2	Subsequent expense recognition (including any write-down to NRV)
3	Cost formulas used to assign costs to inventories

- Cost of inventories comprise expenditure which has been incurred in the normal course of business in bringing the product or service to its present location or condition
- Matching principle

Section 2

Scope

Scope

- ✓ IAS 2 applies to inventories in all financial statements except:

1	IAS 11 – WIP arising under construction contracts including directly related service contracts
2	IAS 39 – Financial instruments
3	IAS 41 – Biological assets related to agricultural activity and agricultural produce at the point of harvest

Scope

- ✓ The measurement provisions of IAS 2 do not apply to the measurement of inventories held by:
  - ❑ Producers of agricultural and forest products, agricultural produce after harvest, and minerals and mineral products, to the extent that they are measured at NRV in accordance with well established practices in those industries. When such inventories are measured at NRV, changes are recognized in profit or loss in the period of change. For example, when agricultural corps have been harvested or minerals have been extracted and sale is assured under a government guarantee, or when an active market exists and there is a negligible risk of failure to sell
  - ❑ Commodity broker-traders who measure their inventories at FV less costs to sell. If these inventories are measured at FV less costs to sell, the changes are recognized in profit or loss in the period of the change. Broker-traders are those who buy or sell commodities for others or on their own account and these inventories are principally acquired with the purpose of selling in the near future and generating profit from fluctuations in price or broker traders' margin
- ✓ These inventories are scoped out only from the measurement requirement of IAS 2, i.e. not from the IAS 2 other requirements, such as disclosures

Scope

- ✓ Spare parts and servicing equipment are usually carried as inventory and recognized in profit or loss as consumed. However, major spare parts and stand-by equipment qualify as property, plant and equipment when an entity expects to use them during more than one period. Similarly, if the spare parts and servicing equipment can be used only in connection with an item of property, plant and equipment, they are accounted for as property, plant and equipment

Section 3

Definitions

Definitions

Inventories are defined by IAS 2 as:

- Assets held for sale in the ordinary course of business
- Assets in the process of production for such sale
- Materials or supplies to be consumed in the production process or in the rendering of services

Definitions

- ✓ Inventories can include:
  - ❑ All types of goods **purchased and held for resale**, including:
    - ❖ Merchandised purchase by a retailer
    - ❖ Other tangible assets such as land and other property held for resale (not IAS 40)
  - ❑ **Finished goods produced or WIP being produced** by the entity and includes materials and supplies awaiting use in the production process
  - ❑ If an entity is a **service provider** its inventories **may be intangible** (the cost of the service for which the entity has not yet recognized the related revenue and it will probably consist mainly of the labor costs providing the service)
- ✓ Net Realizable Value: is the **estimated selling price** in ordinary course of business less the **estimated cost of completion and estimated costs necessary** to make the sale
- ✓ Fair Value: Is the price that would be received to sell an asset (or paid to transfer a liability) in an orderly transaction between market participants at the measurement

Section 4

Definitions

Measurement

- ✓ Inventories are measured at:
  - ❑ Lower of cost
  - ❑ NRV
  - ❑ FMV
- ✓ Therefore inventories apart from those scoped out of IAS 2 measurement requirements noted before are measured at the Lower of Cost and NRV

Measurement

NRV Versus FV

NRV		FV
• Estimated selling prices in the ordinary course of business • Less: Estimated costs of completion • Less: Estimated costs necessary to make the sale • The amount that entity actually expects to make from selling that particular inventory; where fair value is not	≠	• Amount for which an asset could be exchanged or a liability settled between knowledgeable willing parties in an arm's length transaction

What may be Included in Cost?

The costs attributed to inventories under IAS 2 comprise all costs involved in bringing the inventories to their present location and condition

Purchase costs → Costs of conversion → Other costs → **Inventory**

What may be Included in Cost?

Purchase Costs

- Purchase price
- Import duties and other unrecoverable taxes
- Transport/handling and other costs directly attributable to inventories
- Trade discounts and similar rebates should be deducted from the costs attributed to inventories

For example, a supplier may pay to its customer an upfront cash incentive when entering into a contract. This is a form of rebate and the incentive should be accounted for as a liability by the customer until it receives the related inventory, which is then shown at cost net of this incentive

What may be Included in Cost?

Conversion Costs

Direct production costs (DM and DL)

Production overheads (fixed and variable) based on normal capacity – i.e. expected on average and normal circumstances

Joint product costs (deduct NRV of by-product)

What may be Included in Cost?

- Overhead costs must be apportioned using a "**systematic allocation** of fixed and variable production overheads that are incurred in converting materials into finished goods"
- The standard also suggests that there may be **indirect** materials and labor that vary with the volume of production
- Fixed production overheads are indirect costs that **remain relatively constant** over a wide range of production, such as building and equipment maintenance and depreciation, and factory management and administration expenses
- The allocation of fixed production overheads is to be based on the **normal capacity** of the facilities
- Normal capacity is defined as "the production expected to be achieved on average over a number of periods or seasons under normal circumstances", taking into account the loss of capacity resulting from planned maintenance. While actual capacity may be used if it approximates to normal capacity, increased overheads may not be allocated to production as a result of low output or idle capacity. In these cases the unrecovered overheads must be expensed. The contrary situation is also considered; in periods of abnormally high production, the fixed overhead absorption must be reduced, as otherwise inventories would be recorded at an amount in excess of cost

What may be Included in Cost?

- ✓ IAS 2 mentions the treatment to be adopted when a production process results in the output of more than one product, for example a main product and a by-product. If the costs of converting each product are not separately identifiable, they should be allocated between the products on a rational and consistent basis; for example this might be the relative sales value of each of the products. If the value of the by-product is immaterial, it may be measured at NRV and this value deducted from the cost of the main product

Other Costs

- Only if incurred in bringing inventories to present location and condition (such as non-production overheads) and specific design costs
- Borrowing costs in limited circumstances (IAS 23)

What may be Included in Cost?

- IAS 2 mentions the treatment to be adopted when a production process results in the output of more than one product, for example a main product and a by-product. If the costs of converting each product are not separately identifiable, they should be allocated between the products on a rational and consistent basis; for example this might be the relative sales value of each of the products. If the value of the by-product is immaterial, it may be measured at NRV and this value deducted from the cost of the main product

- Other costs are to be included in inventories only to the extent that they bring them into their present location and condition. An example is given in IAS 2 of design costs for a special order for a particular customer as being allowable, and as a result other non-production overheads may possibly be appropriately included

What may be Included in Cost?

- A number of examples are given of costs that are specifically disallowed. These include:

Abnormal amounts of wasted materials, labor or other production costs	Storage costs, unless those costs are necessary in the production process	Administrative overheads that do not contribute to bringing inventories to their present location and condition	Selling costs

- IAS 2 states that, in limited circumstances, borrowing costs are to be included in the costs of inventories

- IAS 23 requires that borrowing costs be capitalized on qualifying assets but the scope of that standard exempts inventories that are manufactured in large quantities on a repetitive basis (IAS 2 clarifies that inventories manufactured over a short period of time are not qualifying assets). Qualifying assets include the following:

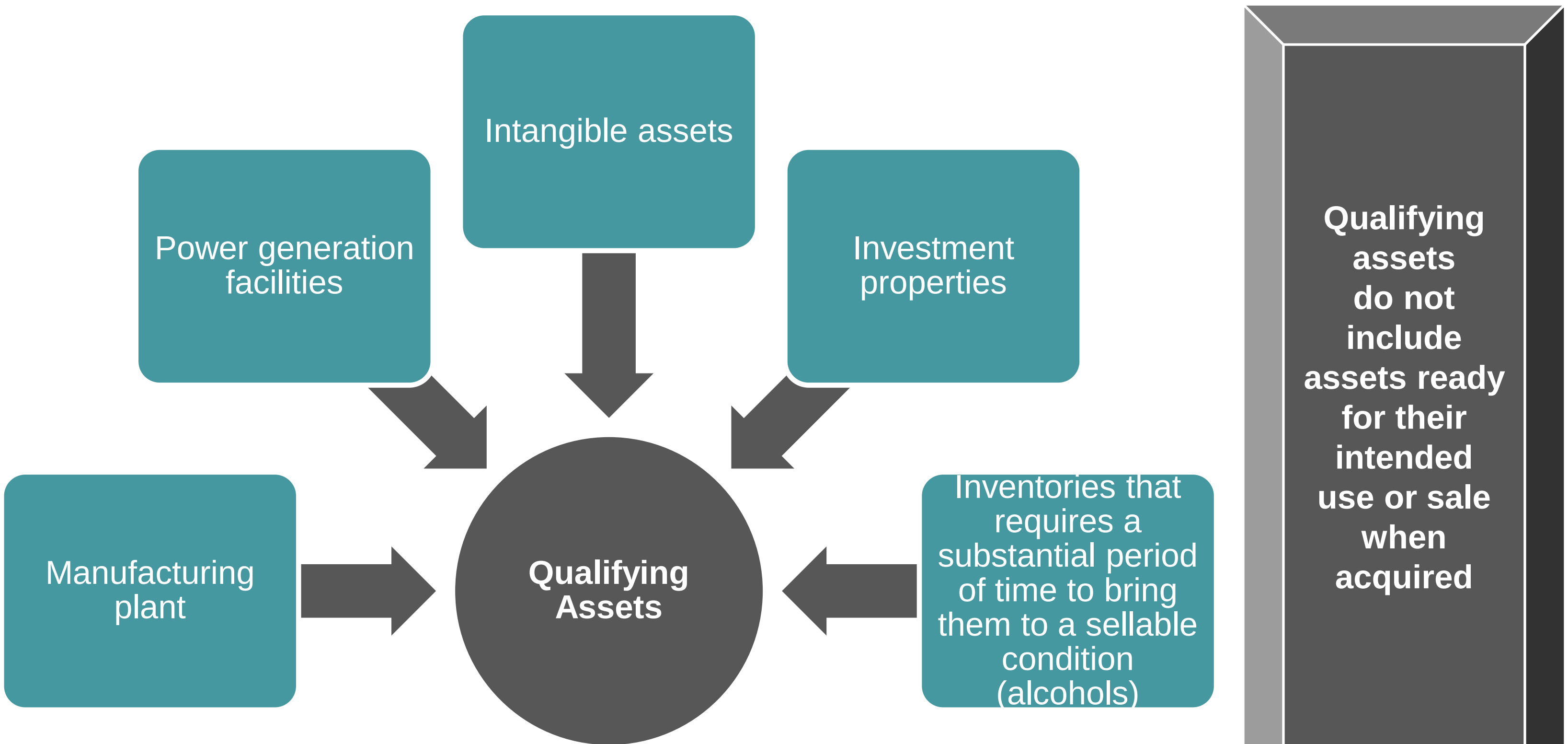
What may be Included in Cost?

- ✓ Storage costs are not permitted as part of the cost of inventory unless they are necessary in the production process. Where it is necessary to store raw materials or work in progress prior to a further processing or manufacturing stage, the cost of such storage should be included in production overheads. For example: wine, cheese and whisky

- ✓ Costs of distribution to the customer are not allowed, they are selling costs and the standard prohibits their inclusion in the carrying value of inventory. It therefore seems probable that distribution costs of inventory whose production process is complete should not normally be included in its carrying value. If the inventory is transferred from one of the entity's storage facilities to another and the condition of the inventory is not changed at either location, none of the warehousing costs maybe included in inventory costs. The same argument appears to preclude transportation costs between the two storage facilities

- ✓ A question arises about the meaning of production in the context of large retailers, for example supermarkets. As the transport and logistics involved are essential to their ability to put goods on sale at a particular location in an appropriate condition, it seems reasonable to conclude that such costs are an essential part of the production process and can be included in the cost of inventory

What may be Included in Cost?



What may be Included in Cost?

- IAS 2 also states that on some occasions, an entity might purchase inventories on **deferred settlement terms**, accompanied by a price increase that effectively makes the arrangement a combined purchase and financing. Under these circumstances the price difference is to be recognized as an **interest expense** over the period of the financing

- It is worth mentioning that for **service providers**, the cost of inventories consists primarily of labor including supervisory personnel and attributable overheads (WIP). IAS 2 allows labor and other costs of personnel directly engaged in providing the service, including supervisory personnel and attributable overheads, to **be included in the cost of inventories**. However, labor and other costs relating to sales and general administrative personnel must be expensed as incurred and inventories should not include profit margins or non-attributable overheads

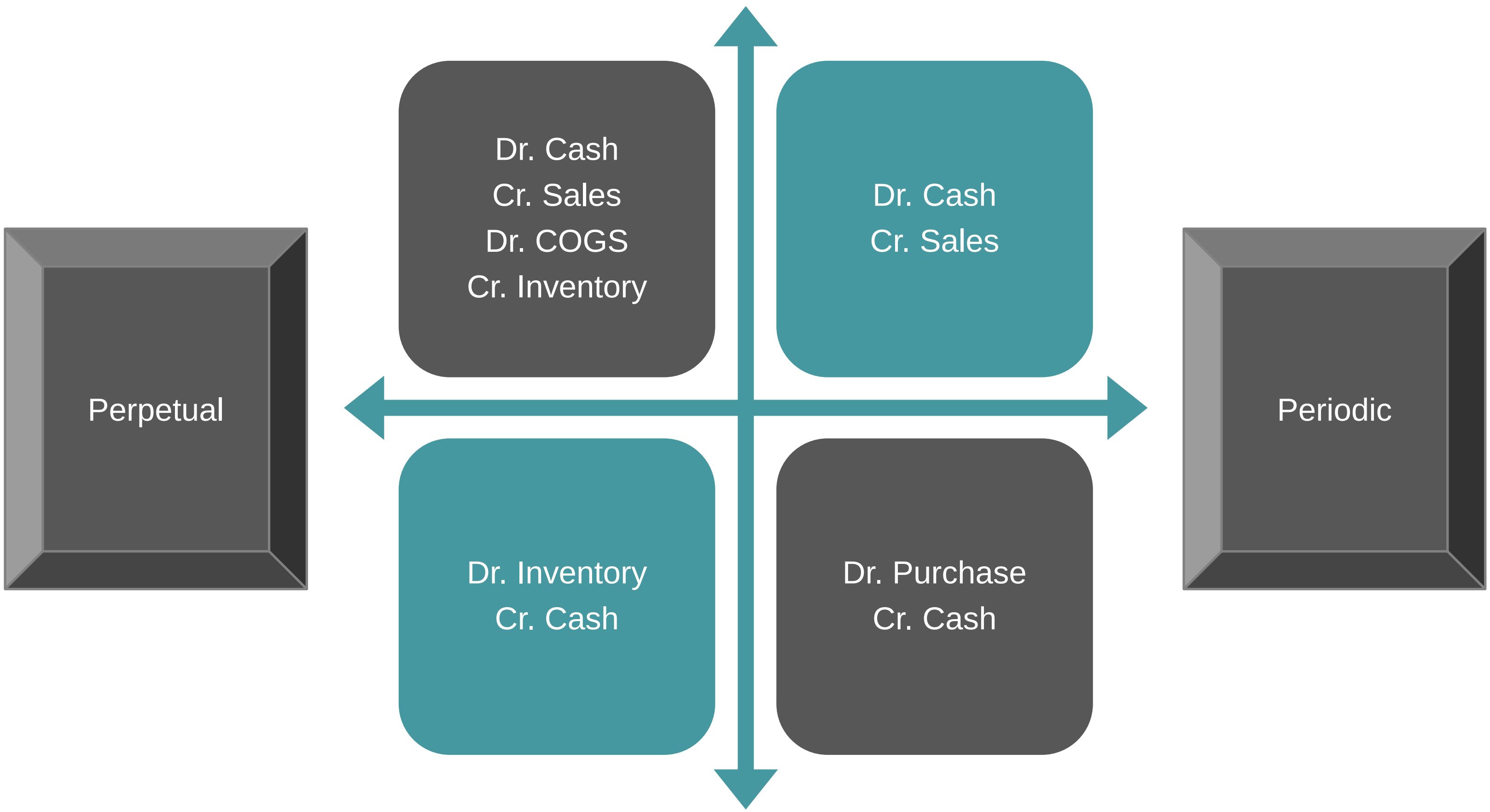
What may be Included in Cost?

- ✓ Assume a broker-trader was purchasing oil and the forward contract price was US$140 per barrel of oil, but at the time of delivery the spot price of oil was US$150 and the forward contract had a fair value of US$10 at the date. The oil would be recorded at fair value which is US$150. The US$140 cash payment would in substance consist of US$150 payment for inventory offset by US$10 receipt on settlement of the derivative contract

Section 5

Perpetual Versus Periodic

Perpetual Versus Periodic



Section 6

Cost Formulas

Cost Formulas

1. Specific Identification
2. FIFO
3. Weighted Average
4. LIFO

Specific Identification

- ✓ Items that are **not** interchangeable
- ✓ Goods or services produced for **specific projects**

Specifically Identified

- ✓ Relatively **unusual** method of valuation
- ✓ Such as: antiques, jeweler and automobiles
- ✓ This method is inappropriate where these are **large number of items that are interchangeable**

Transfer of Rental Assets to Inventory

- ✓ An entity may, in the course of its ordinary activities, routinely sell items that had previously been held for rental and classified as PPE. For example, car renal companies may acquire vehicles with the intention of holding them as rental cars for a limited period and then selling them. IAS 16 requires that when such items become held for sale rather than rental they be transferred to inventory at their carrying value. Revenue from the subsequent sale is then recognized gross rather than net

FIFO

- ✓ Gives the closest approximation to actual cost flows, since it is assumed that when inventories are sold or used in a production process, the oldest are sold or used first. Consequently the balance of inventory on hand at any point represents the most recent purchases or production

- ✓ Example: During its first year of operations, ABC has purchased all of its inventory in 3 separate batches.

  - Batch 1: 4,000 units at US$4.25 per unit
  - Batch 2: 2,000 units at US$4.50 per unit
  - Batch 3: 3,000 units at US$4.75 per unit

  4,000 units in total were sold, 3,000 units after the first purchase and 1,000 units after the second purchase

FIFO

- ✓ Solution: Periodic Inventory System
  - ❑ COGS: US$17,000
  - ❑ Ending Inventory: US$23,250
- ✓ Solution: Perpetual Inventory System
  - ❑ COGS: US$17,000
  - ❑ Ending Inventory: US$23,250

Weighted Average

- ✓ Used for like items used in production/sales without regards to when received

- ✓ Example: During its first year of operations, ABC has purchased all of its inventory in 3 separate batches

  - Batch 1: 4,000 units at US$4.25 per unit
  - Batch 2: 2,000 units at US$4.50 per unit
  - Batch 3: 3,000 units at US$4.75 per unit

  4,000 units in total were sold, 3,000 units after the first purchase and 1,000 units after the second purchase

Weighted Average

- Solution: Weighted Average Method
  - COGS: US$17,889
  - Ending Inventory: US$22,361

Conclusion

- An entity must use the same cost formula for all inventories having a similar nature and use within entity

- Different cost formulas may be used for inventories that have different characteristics

Section 7

Net Realizable Value

Net Realizable Value

- ✓ The cost of inventory may have to be reduced to its NRV if it has become:

Damaged
Costs to complete or the estimated selling costs may have increased to levels such that the costs of inventory may not be recovered from sale
Wholly or partly obsolete
Selling price has declined

- ✓ The costs to consider in making this assessment should only comprise direct and incremental costs to complete and sell the inventory and will not include any profit margin on these activities
- ✓ They will also not include overheads or the costs of distribution channels (such as shops), since these costs will be incurred regardless of whether or not any sale of this inventory actually takes place (except for shops that is entirely dedicated to selling impaired goods)

Net Realizable Value

- ✓ Writing inventory down to NRV should normally be done on **an item by item basis**. IAS 2 specifically states that it is **not appropriate** to write down an **entire** product line or group of inventories (such as finished goods or all the inventory of a particular industry)

- ✓ Considerations: estimates of NRV take into consideration:

  - ❑ Fluctuations of price or cost after the end of the period if this is evidence of conditions at the end of the period

  - ❑ The purpose for which inventory is held

- ✓ Materials and other supplies held for use in the production of inventories are **not written down** below cost if the finished goods in which they will be incorporated are expected to be sold at or above cost

- ✓ However when a decline in the price of materials indicates that the cost of finished products will exceed the NRV, the materials are written down to NRV

Section 8

Recognition

Recognition

- IAS 2 specifies that when inventory is sold, the carrying amount of the inventory must be **recognized** as an **expense** in the period in which the revenue is recognized (IAS 18)

- Matching principle / Prudence

- Any write-down or losses of inventory **must be recognized as an expense** when the write-down or loss occurs

- Reversals of previous write-down **shall be recognized as a reduction in the expense** in the period in which the reversal occurs

- **Inventories allocated to asset account (self constructed PPE) are recognized as an expense during the useful life of an asset**

Cost of Real Estate Inventory

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- ✓ A real estate developer of a multi-unit complex will be able to track and record various costs that are specific to individual units; such as individual fit out cost

- ✓ There will also be various costs that are incurred which are not specific to any individual unit, such as the cost of land and shared facilities, and a methodology will be required to allocate these costs

- ✓ Two approaches:

  - ❑ First: allocate non-unit specific costs based on some relative cost basis (size of each unit) or cost of each unit

  - ❑ Second: allocate non-unit specific costs based on the relative sales value of each unit. The second will lead to a consistent profit margin for each unit

Section 9

Disclosure

Disclosure

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- ✓ Accounting policy for inventories
- ✓ Carrying amounts
  - ❑ Carrying amount, generally classified as merchandise, supplies, materials, work in progress, and finished goods. The classifications depend on what is appropriate for the entity
  - ❑ Carrying amount of any inventories carried at fair value less costs to sell
  - ❑ Carrying amount of inventories pledged as security for liabilities

Disclosure

- ✓ Expense in the period
  - ❑ Amount of any write-down of inventories recognized as an expense in the period
  - ❑ Amount of any reversal of a write-down to NRV and the circumstances that led to such reversal
  - ❑ Cost of inventories recognized as expense (cost of goods sold). IAS 2 acknowledges that some enterprises classify income statement expenses by nature (materials, labor, and so on) rather than by function (cost of goods sold, selling expense, and so on). Accordingly, as an alternative to disclosing cost of goods sold expense, IAS 2 allows an entity to disclose operating costs recognized during the period by nature of the cost (raw materials and consumables, labour costs, other operating costs) and the amount of the net change in inventories for the period). This is consistent with IAS 1 Presentation of Financial Statements, which allows presentation of expenses by function or nature
  - ❑ Circumstances or events that led to reversal of a write down