

Education session

IPSAS 46 *Measurement*





Disclaimer

The views and opinions expressed in this presentation are those of the individual. Official positions of the ASB on accounting matters are determined only after extensive due process and deliberation.

ASB Measurement project

Research phase:

Identify measurement issues in GRAP

Assess whether IPSAS 46 is appropriate for the local environment



Overview of discussion

- Education on:
 - *IPSASB Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities*
 - *IPSAS 46 Measurement*



IPSASB Conceptual Framework



Chapter 7 of the Conceptual Framework

- Chapter 7 identifies measurement concepts to guide the selection of measurement bases for assets and liabilities.
 - They guide the IPSASB in the selection of measurement bases for IPSAS; and preparers in selecting measurement bases in the absence of requirements in IPSAS
- It provides guidance on the selection of a measurement basis for assets and liabilities in order to meet the measurement objective.



Chapter 7 of the Conceptual Framework

Measurement objective:

To select those measurement bases that most fairly reflect the cost of services, operational capacity, and financial capacity of the entity in a manner that is useful in holding the entity to account, and for decision-making purposes.

Initial Measurement

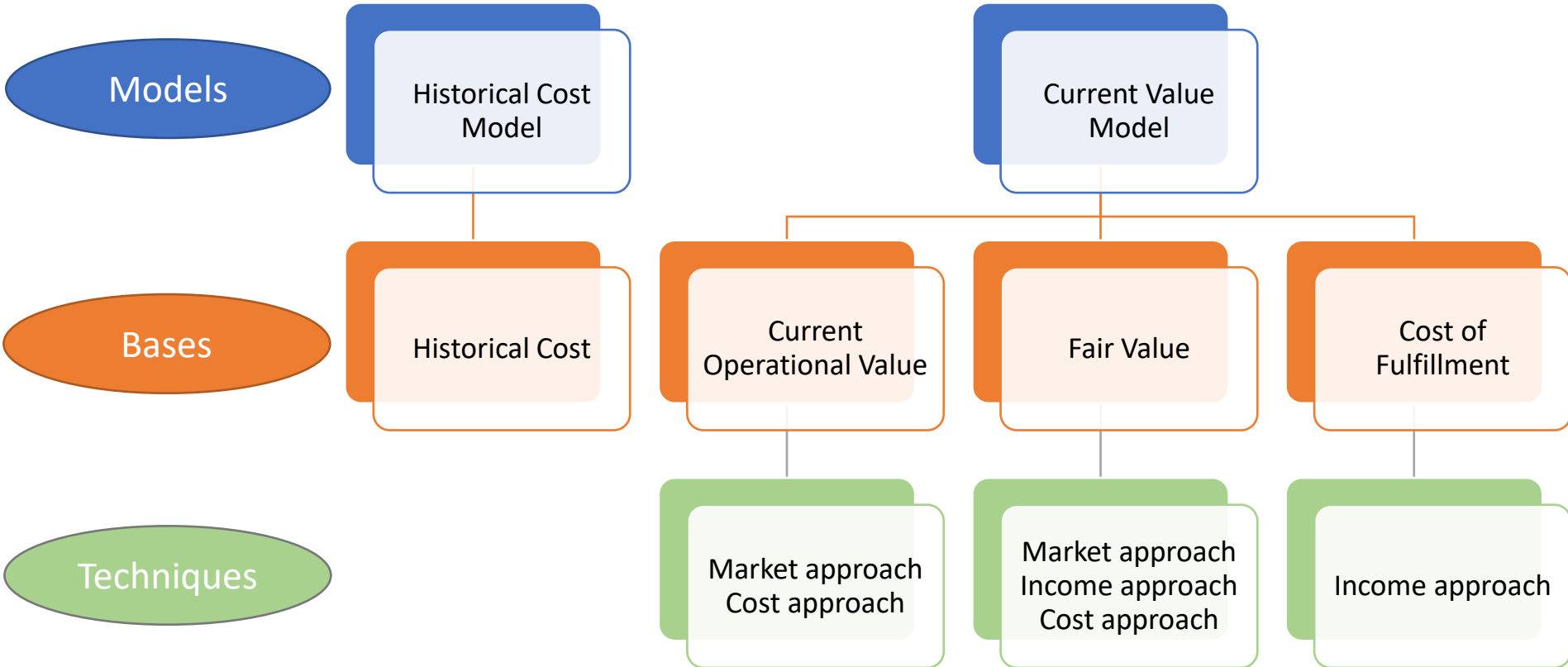
Asset

- Transaction price
- +
- Transaction costs

Liability

- Transaction price
-
- Transaction costs

Subsequent measurement



Measurement bases

Bases
for
assets

- Historical cost
- Fair value
- Current operational value

Value in use
mentioned in CF but
no longer as a
measurement basis

Bases
for
liabilities

- Historical cost
- Fair value
- Cost of fulfillment

Measurement bases

Measurement basis Summary of changes

Historical cost

- Existing measurement basis for assets and liabilities
- Inclusion of transaction costs in definition
- The only basis under the historical cost model

Fair value

- New measurement basis to replace market value for assets and liabilities.
- Drawn from IFRS 13
- A current value measurement used when assets/liabilities are held for financial capacity.

Current operational value

- New measurement basis
- A current value measurement used when assets are held for their operational capacity.

Cost of fulfillment

- Existing measurement basis for liabilities - no substantial changes.

IPSAS 46 on *Measurement*



Overview of IPSAS 46

- Objective
- Scope
- Initial measurement
- Subsequent measurement
- Potential benefits and implications

Objective

- IPSAS 46 defines measurement bases that assist in reflecting the cost of services, operational capacity and financial capacity of assets and liabilities.
- IPSAS 46 identifies approaches under those bases to be applied through individual IPSAS.

Scope

- IPSAS 46 is applied when another IPSAS requires or permits the use of one or more of the measurement bases.
- Applied to both initial and subsequent measurement.
- Not in scope:
 - Leases to IPSAS 43;
 - Service Concession Arrangements to of IPSAS 32;
 - Net realizable value in IPSAS 12;
 - Value in use in IPSAS 21 and IPSAS 26.

Initial measurement

- Items are measured initially at transaction price plus/minus transaction costs, unless
 - transaction price does not faithfully represent the asset or liability; or
 - required or permitted by another IPSAS

Transaction Price = consideration given to acquire an asset or received to assume a liability.

Transaction costs

Transaction costs incurred to acquire asset or incur liability
Included at initial measurement of asset or liability (i.e. to enter the transaction) but excluded in subsequent measurement

Transaction cost incurred to sell an asset or settle/transfer a liability
Excluded in initial measurement of asset or liability but included at subsequent measurement (i.e. to exit the transaction)

Transaction costs = incremental costs that are directly attributable to the acquisition, incurrence or disposal of an asset or liability and would not have been incurred if the entity had not acquired, incurred or disposed of the asset or liability.

Initial measurement

- Deemed cost may be used to estimate the initial measurement of assets/liabilities when transaction not undertaken in an orderly market:
 - transaction price is unobservable; or does not faithfully present relevant info on the asset or liability; or is zero.
- Estimated using one of the current value measurement basis.
- Difference between deemed cost and consideration is recognised as revenue/expense.

Subsequent measurement

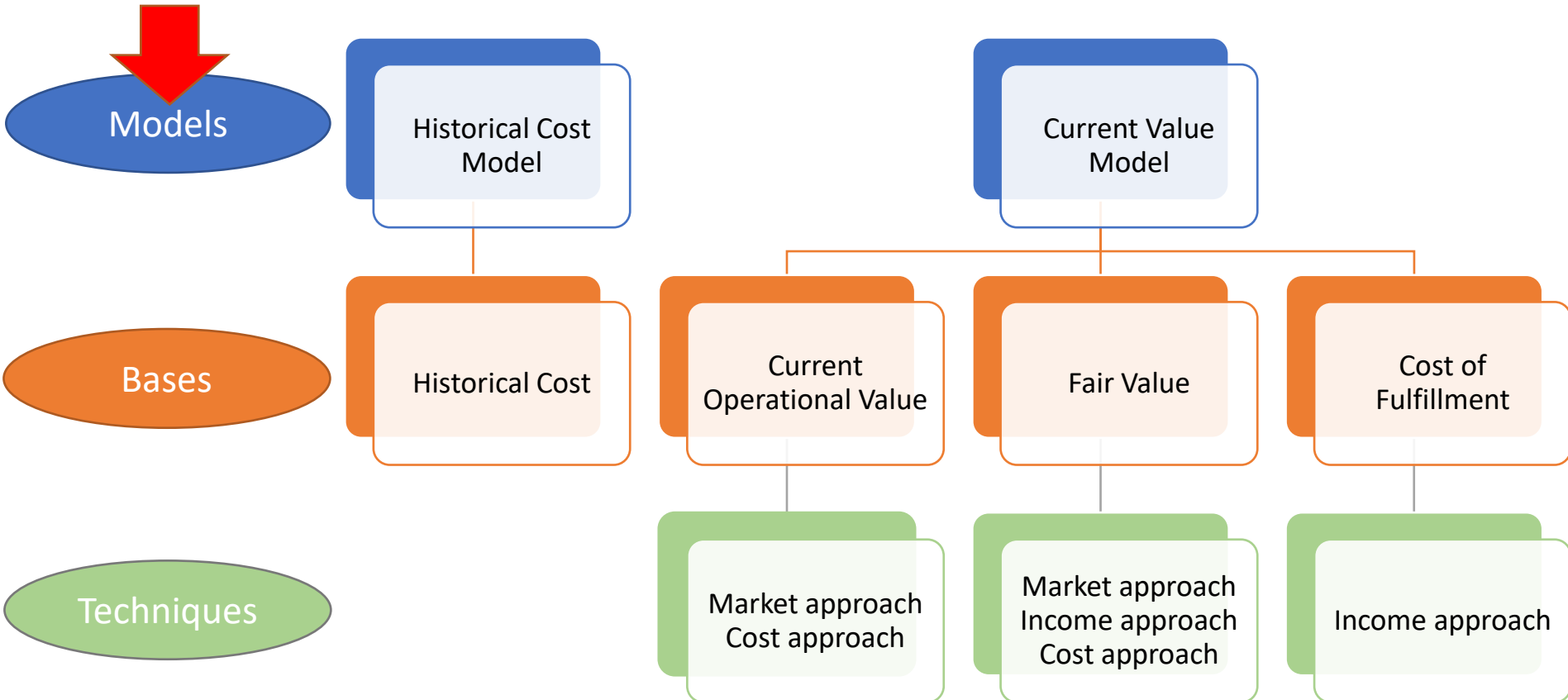
An accounting policy choice is made to measure an asset or liability at **historical cost model** or at **current value model**... depending on what the individual IPSAS requires.

This means entities will need to make decisions about which measurement model, measurement basis and measurement techniques to apply.





Selecting the model

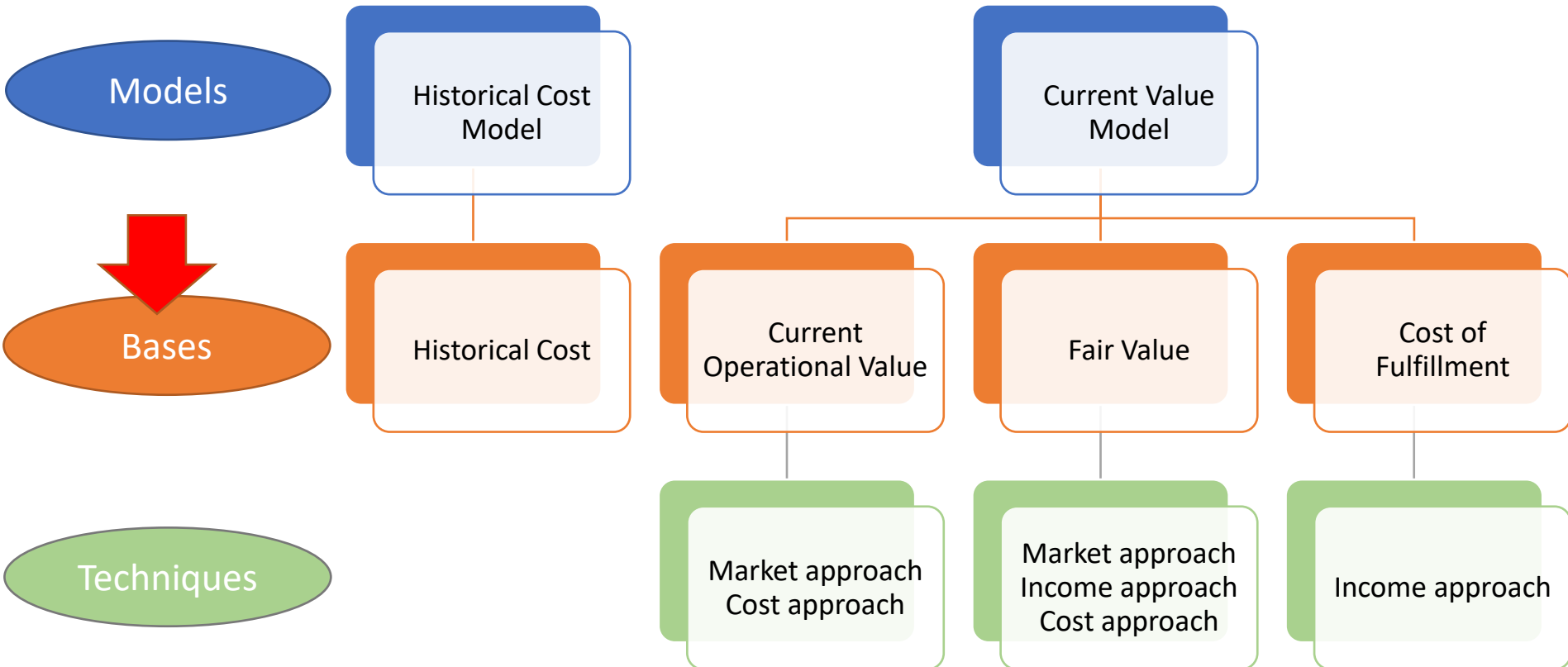




Selecting the model

- The choice between the historical cost and current value measurement model considers the:
 - characteristics of the asset or liability being measured;
 - measurement objective; and
 - monetary information being presented.

Selecting the basis





Selecting the basis

- Depends on the measurement model applied.
 - If current value model, then basis depends on the primary measurement objective of holding the asset/liability:
 - Operational capacity → held for service delivery
 - Financial capacity → held to generate FEB



Selecting the basis

- Consider the characteristics of the asset or liability at the measurement date, for example:
 - a) Condition, use and location of the asset; and
 - b) Restrictions on the sale or use of the asset.



Definitions of measurement bases

Measurement basis	Definition
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Historical cost	The consideration given to acquire, construct or develop an asset plus transaction costs, or the consideration received to assume an obligation minus transaction costs, at the time the asset is acquired, constructed or developed, or the liability is incurred.
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Fair value	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 date.
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Current operational value	The amount the entity would pay for the remaining service potential of an asset at the measurement date.
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Cost of fulfillment	The cost that the entity will incur in fulfilling the obligations represented by the liability, assuming that it does so in the least costly manner.
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Attributes of measurement bases

Attributes

Historical cost

Entry/exit value

Entry value

- It measures the consideration given to acquire an asset, or to assume an obligation, at the time the asset is acquired, or the liability is incurred.

Entity-specific or market-based

Entity-specific

Measurement considerations or assumptions

It is unaffected by changes in current market conditions, unless those changes trigger an impairment.

Monetary info provided

Monetary information is derived using price of the transaction or event that gave rise to the assets, liabilities and related revenue and expenses.



Attributes of measurement bases

Attributes

Fair value

Entry/exit value

Exit value

- It measures how much an entity would receive to sell an asset.

Entity-specific or market-based

Market-based

- It measures an asset or liability from the perspective of a **market participant** (the seller).

Measurement considerations or assumptions

It considers:

- an **orderly transaction** between market participants under current market conditions.
- transactions take place in **principal or most advantageous market** for the asset or liability
- the same assumptions that market participants would use when pricing the asset or liability (if acting in their economic best interest)
- the **highest and best use** of the asset when measuring non-financial assets

Attributes of measurement bases

Attributes

Fair value

Monetary info provided

- Monetary information is derived using information updated to reflect conditions at the measurement date.
 - Reflects changes in the values of assets and liabilities since the previous measurement date.
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Attributes of measurement bases

Attributes

Current operational value

Entry/exit value

Entry value

- It measures how much an entity would pay to replace an asset.

Entity-specific or market-based

Entity-specific

- Uses assumptions from the entity's perspective, assuming that entity acts in accordance with its policy objectives.

Measurement considerations or assumptions

It reflects the:

- economic position of the entity, rather than the position of the market
- current age, functionality and condition of the asset
- value of an asset in its existing use rather than its highest and best use
- value of the asset in its existing location

Monetary info provided

- Monetary information is derived using information updated to reflect conditions at the measurement date.
- Reflects changes in the values of assets since the previous measurement date.



Attributes of measurement bases

Attributes

Cost of fulfillment

Entry/exit value

Exit value

- It measures how much an entity would incur to fulfil its obligation.

Entity-specific or market-based

Entity-specific

Measurement considerations or assumptions

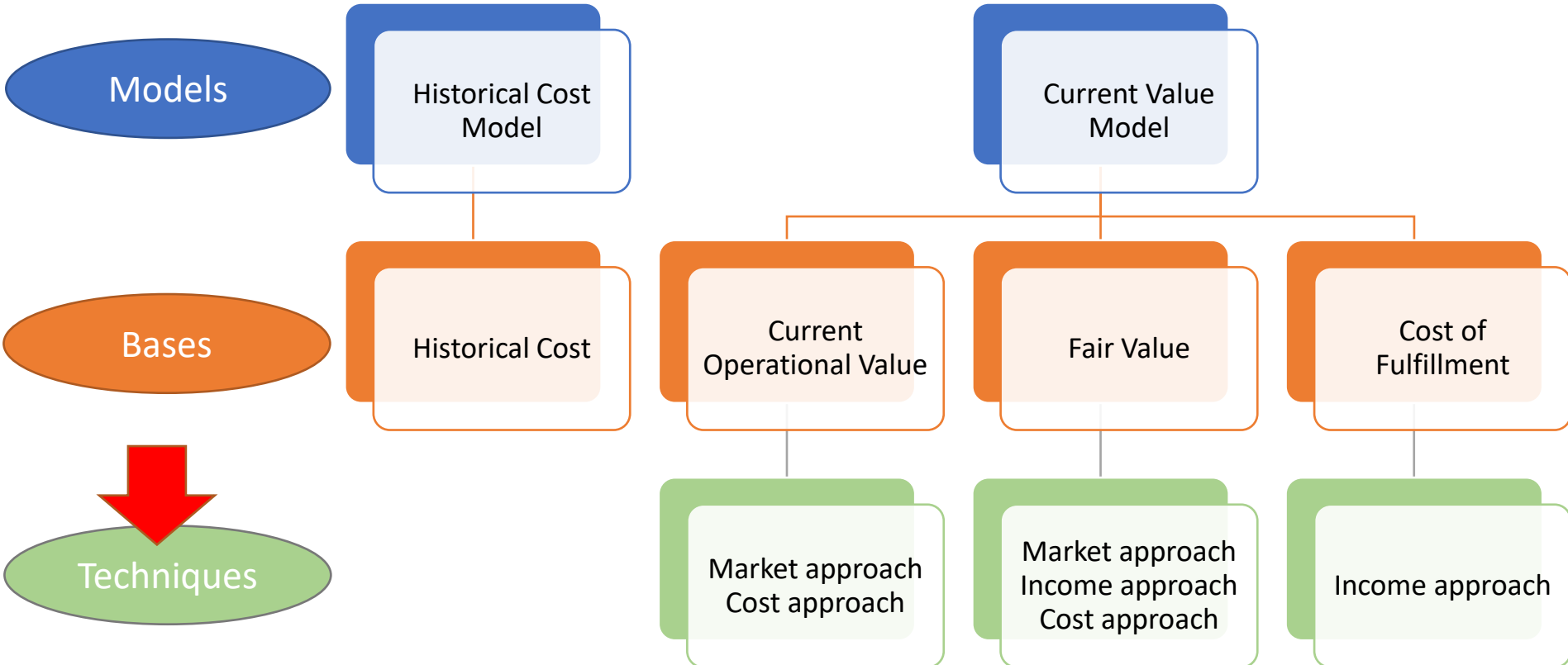
It reflects the:

- costs that entity will incur to satisfy the obligation
- entity-specific assumptions rather than assumptions used by market participants (cannot be observed directly)
- settlement will be in a least costly manner - the minimum amount an entity would incur

Monetary info provided

- Monetary information is derived using information updated to reflect conditions at the measurement date.
- Reflects changes in the values of liabilities since the previous measurement date.

Selecting techniques





Measurement techniques

- Applied to estimate the amount at which an asset or liability is recognised under the selected measurement basis (or in determining deemed cost).
- The selection considers:
 - entity's circumstances;
 - availability of data to estimate the measurement basis (or determine deemed cost); and
 - the attributes applicable to that measurement basis.

Measurement techniques

Measurement techniques	Description	Measurement bases
Market approach	Uses prices and other relevant information generated by market transactions involving identical/comparable assets or liabilities.	<ul style="list-style-type: none"> • fair value • current operational value
Cost approach	Reflects the amount that would be required currently to replace the service provided by an asset (i.e. current replacement cost) through the acquisition or construction of a substitute asset of comparable utility, adjusted for obsolescence.	<ul style="list-style-type: none"> • fair value • current operational value
Income approach	Converts future amounts to a single current (discounted) amount.	<ul style="list-style-type: none"> • fair value • cost of fulfillment

Applying the measurement techniques

Measurement techniques

Measurement base: Fair value

Objective

Estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions.

Fair value can be determined directly by observing prices in an active market. In other cases, it is determined indirectly using measurement techniques.

Market approach

- Requires the existence of market transactions involving identical or similar assets.
- Use market multiples derived from a set of comparables or matrix pricing.

Applying the measurement techniques

Measurement techniques

Measurement base: Fair value

Cost approach

The cost approach reflects the amount that would be required currently to replace the service capacity of an asset (current replacement cost).

- From the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence.

Income approach

Value reflects current market expectations about those future amounts. Use several methods including, for example, the following,

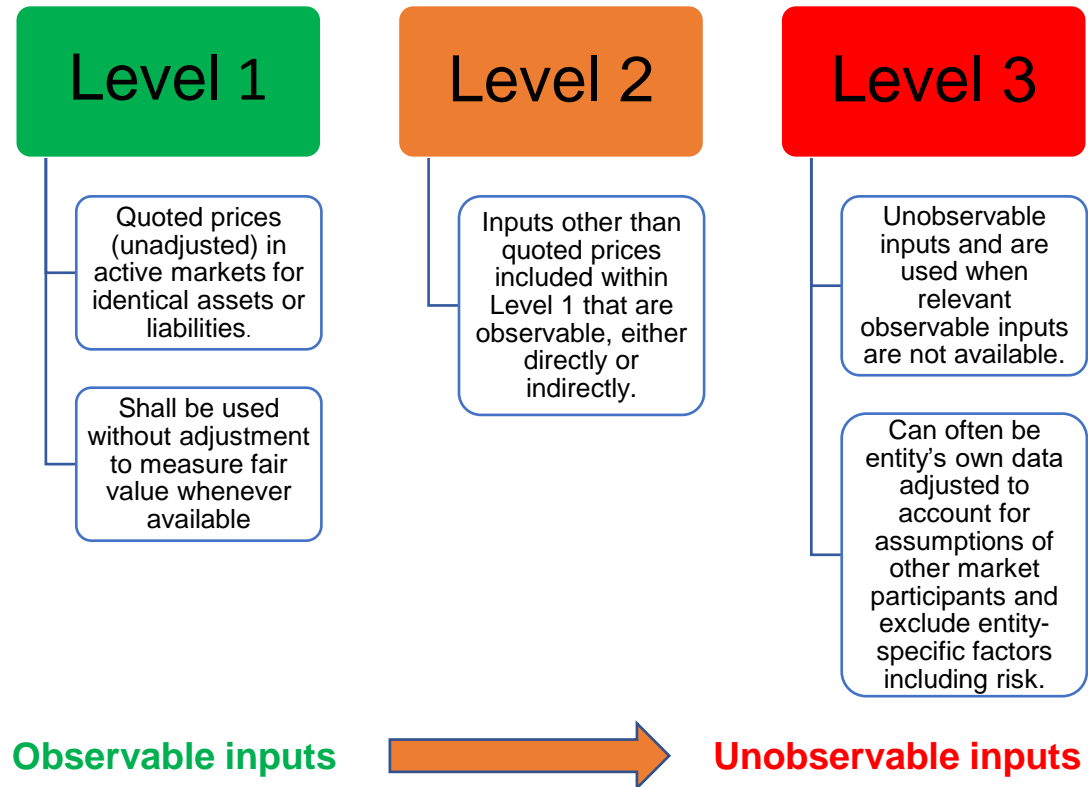
- present value techniques,
- option pricing models, such as the Black-Scholes-Merton formula or a binomial model; and
- the multi-period excess earnings method, which is used to measure the fair value of some intangible assets.

Applying the measurement techniques

Fair value hierarchy

For disclosure and comparability purposes, the fair value hierarchy categorises the inputs to measurement techniques into three levels:

- Level 1 inputs
- Level 2 inputs
- Level 3 inputs



Applying the measurement techniques

Measurement techniques

Measurement base: Current operational value

Objective

Estimate the amount an entity would pay for the remaining service potential of an asset based on conditions at the measurement date. In some cases, current operational value cannot be determined directly by observing prices in an active market and must be determined indirectly by other means.

Market approach

- Requires the existence of an active market involving identical/similar assets.
- Asset price from an orderly transaction in the principal market.
- Value established by reference to the buying price of a similar asset with similar remaining useful life, service potential.



Applying the measurement techniques

Measurement techniques

Measurement base: Current operational value

Cost approach

- Used when no active market for similar or identical assets exists, therefore market approach is inappropriate (specialized assets).
- Costs to develop/produce similar asset.
- No cost information available/asset would not be replaced with identical asset – may use the cost of a modern equivalent asset adjusted for obsolescence and optimization.

Applying the measurement techniques

Measurement techniques

Measurement base: Cost of fulfillment

Objective

Estimate the cost that the entity will incur in fulfilling the obligations represented by the liability at the measurement date under current market conditions.

The cost of fulfillment cannot be observed directly in an active market - determined using income approach techniques.

Income approach

Reflects entity-specific assumptions rather than assumptions used by market participants. Takes into account the attributes of the measurement basis. This includes:

- Estimates of future cash flows.
- Possible variations in the estimated amount or timing of future cash flows for liability being measured, caused by the uncertainty inherent in the cash flows.
- The time value of money.
- Other factors that impact the value of the liability.



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