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Department:
Treasury

PROVINCE OF KWAZULU-NATAL

PROVINCIAL mSCOA & FINANCIAL MANAGEMENT FORUM

**Review of useful lives and residual values
Assessing impairment and reversal of impairment**

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GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Determining useful lives and residual values

- **Useful life:** the period over which an asset is expected to be used (available for use) by an entity
- **Economic life:** the period over which an asset is expected to be economically usable by one or more users, not limited to the municipality (actual/complete life span)
- Useful life **may be shorter** than its economic life, as management may have a practice of disposing the assets after a specified time – which will then imply a residual value
- Example: Policy to replace vehicles every 3 years (useful life), however the vehicles may be usable for 10 years (economic life)
- **Residual value:** estimated amount that would be **currently** obtained from the disposal of an asset, after deducting estimated costs of disposal, if the asset was already of the age and condition expected at the end of its useful life.



GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Assessing Residual values

- **Example: A municipality has purchased an Audi on 1 July 2014 for R 400 000.**
- In order to determine the residual value, the entity must determine the useful life of the asset.
- If the entity estimates the useful life to be 5 years, which is shorter than the economic life of Audis, it therefore can be assumed that the asset will have a residual value.
- Similar Audis that are 5 years old are currently sold for R 100 000. The municipality must then estimate the residual value of the vehicle to be R 100 000 at the end of its useful life. (remember to obtain evidence supporting residual values)
- Note: If residual value is greater than or equal to carrying amount of asset (**no depreciation** is recognised until the residual value has decreased below carrying amount)



- GRAP 17 requires municipalities to **review** the useful life and residual value of an asset **at least, at each reporting date (end of financial year)**
- **If estimates differ from previous estimates**, the change shall be accounted for as a Change in accounting estimate, which is in accordance with the Standard on GRAP 3 (Accounting Policies, change in accounting estimates and errors)
- Change in accounting estimate is Prospectively applied – meaning that the change is applied from the **beginning** of the current reporting period going forward
- Review of useful lives and residual values **does not mean physical inspection.**
- Municipalities are to consider factors relevant to each asset, which could impact on a change in useful life or residual value



GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Assessing Residual values

- Methodology should be documented on factors to be considered and evidence of review of these factors
- Not appropriate to reassess useful lives or residual values by taking a blanket approach per class of asset. It must be assessed with specific reference to each asset.
- Factors to take into consideration that may be considered in reviewing the useful life of an asset:
 - Assets where the carrying amount is zero or close to zero, but are still in use
 - Maintenance costs of an asset to determine whether there is a significant increase as compared to previous years
 - Performance of the asset to determine whether a decrease/reduction in performance
 - Municipal plans to dispose the asset or municipal plans to replace the asset
 - Past experience in terms of holding similar assets
 - Condition of the asset
 - Other relevant factors



GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Assessing Residual values

- Not all classes of assets will have residual values or the residual values may be insignificant and therefore immaterial. Assets may not be disposable after its useful life, example infrastructure assets (waste water networks, roads)



GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Assessing Residual values

- Example: Motor vehicle purchased at a cost of 1 July 2013 at R 120 000 (excl VAT), and is expected to be used for 5 years, with a residual value of R 15 000. **As at 30 June 2015**, the entity has established that currently a 5 year old motor vehicle sells for R 25 000, therefore the **new residual value** is estimated at this amount.
- Remaining useful life as at 1 July 2014 (beginning of current year) = $5 - 1 = 4$
- New depreciation = $(120\,000 - 25\,000) / 4 = R\,23\,750$
- Old depreciation = $(120\,000 - 15\,000) / 5 = R\,21\,000$
- Change in estimate = $23\,750 - 21\,000 = R\,2\,750$ (to be disclosed in AFS)
- Journal entry to record change in residual value:

| | | |
|-------------------------------|--------|--------|
| • Dr Depreciation | 23 750 | |
| • Cr Accumulated Depreciation | | 23 750 |



GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Assessing Useful Life

- Motor vehicle purchased at a cost of 1 July 2013 at R 120 000(excl VAT), and is expected to be used for 5 years, with a residual value of R 15 000. **As at 30 June 2015**, the useful life of the asset has been reviewed to be 10 years from the purchase date (remaining useful life at current reporting date is 8 years)
- We need to calculate depreciation from the beginning of the current reporting period (1 July 2014) and therefore we need to determine the useful life at 1 July 2014.
- Useful life as at 1 July 2014:
 - Revised useful life = $10 - 1$ (2014 year that has passed) = 9 years OR
 - Remaining useful life = $8 + 1$ (current financial year) = 9 years
- New depreciation = $(120\ 000 - 15\ 000) / 9 = R\ 11\ 667$
Old depreciation = $(120\ 000 - 15\ 000) / 5 = R\ 21\ 000$

Change in accounting estimate = $21\ 000 - 11\ 667 = R\ 9\ 333$



GRAP 17 – PROPERTY, PLANT AND EQUIPMENT Assessing Useful Life

- Journal to be processed on 30 June 2015:
- Dr Depreciation 11 667
- Cr Accumulated Depreciation 11 667
- Recognition of depreciation based on revised useful life
- Disclosure of change in estimate covered in GRAP 3 – Changes in Accounting Policies, Estimates and Errors



GRAP 26 AND GRAP 21 – IMPAIRMENT OF CASH GENERATING AND NON- CASH GENERATING ASSETS



GRAP 21 and 26 – IMPAIRMENT OF ASSETS cash generating vs non-cash generating

- **Cash generating assets** are assets held with primary objective of generating a commercial return (positive cash flows)
- **Non-cash generating assets** are assets other than cash generating assets generally primarily held for service delivery
- Instances may apply where a portion of the asset is used for profit making (eg. Portion of hospital is rented out as kiosk) - Consider **primary purpose** of holding an asset e.g. profit making (cash generating) or service delivery (non cash generating)
- Roads – more likely to be non cash generating assets as they are mainly used in providing a service to the general public.
- Other assets such as substation, water reservoir and sewerage plant can be treated as cash generating, if these assets generate cash flows independently from other assets (not incidental/insignificant)



GRAP 21 and 26 – IMPAIRMENT Indications of impairment

• Indicators of impairment – Non Cash Generating Asset:

- Demand or need for service has ceased or is about to cease eg. The need for the service is no longer needed as the parties to whom the service was provided for has obtained its own asset to perform the service;
- Significant long terms changes with adverse effect on the entity have taken place during the period (technological, legal, government policy changes)
- Demand or need for services provided by the asset has taken a significant long term decline;
- Market value of the asset has declined significantly, more than what is expected from the passage of time or use.
- Physical damage of the asset
- Asset becoming idle, plans to discontinue use or restructure the operation relating to the asset, or planned disposal of asset before end of useful life;
- Construction of the asset has halted before the asset is complete or in usable condition
- Economic performance of the asset is or will be significantly worse than expected eg. Increase in maintenance costs, lower service/output levels



GRAP 21 and 26 – IMPAIRMENT

Indications of impairment

• Indicators of impairment – Cash Generating Asset:

- Significant long term changes with adverse effect on the entity have taken place during the period (technological, legal, government policy changes)
- Market value of the asset has declined significantly, more than what is expected from the passage of time or use.
- Interest rates have increased and those increases are most likely to affect the discount rate in calculating the asset's value in use and decrease asset's recoverable amount significantly.
- Obsolescence or Physical damage of the asset
- Asset becoming idle, plans to discontinue use or restructure the operation relating to the asset, or planned disposal of asset before end of useful life;
- Economic performance of the asset is or will be significantly worse than expected eg. Increase in maintenance costs, actual net cash flows or net surplus is worse than budgeted



- At each reporting date, an entity has to assess whether or not there is an indication that assets are impaired.
- Irrespective of whether there is any indication of impairment, an entity should annually test the following assets for impairment:
 - Intangible assets with an indefinite useful life, or
 - Intangible asset not yet available for use, eg. in stage of development
- Cash Generating Assets - If there is an indication of impairment, then the recoverable amount should be determined.
- Non Cash Generating Assets - If there is an indication of impairment, then the recoverable service amount should be determined.
- Impairment loss recognised carrying amount of the asset exceeds its recoverable amount/recoverable service amount.
- Recoverable or recoverable service amount = higher of fair value less costs to sell and its value in use.



GRAP 21 and 26 – IMPAIRMENT Determining fair value less cost to sell

- Fair value less cost to sell = the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.
- To determine the fair value less cost to sell, GRAP 21 indicates the following:
 - Does the asset have a sales agreement for the sale of the asset or for an identical asset? If yes, then the sales price as per the agreement, less any costs to sell the asset, is the recoverable service amount. If no, move to the next question.
 - Is the asset traded in an active market. If so, then the market price, less any estimated costs sell the asset, is the recoverable service amount. If no, move to the next question.
 - If none of the above is applicable, the recoverable service amount can be determined by estimating what the end could sell the asset for to another party in an arm's length transaction. Also consider most recent transactions for similar assets in the same industry.



GRAP 21 and 26 – IMPAIRMENT Determining value in use

- Value in use for a **non cash generating asset** = Present value of the assets remaining service potential.
- Methods to be used:
 - Depreciated replacement cost: current cost that will have to be incurred to replace asset's gross service potential and is then depreciated to reflect the asset's age or condition.
 - Restoration cost: depreciation replacement cost less the cost required to repair the damaged asset.
 - Service units: **lower** of depreciated replacement cost or depreciated restoration cost less decline in service potential of the asset
- Choice of method depends on availability of data and nature of impairment e.g. Restoration cost appropriate for physically damaged assets; service unit method appropriate for assets impaired due to significant long term changes in technological, legal or government policy.



GRAP 21 and 26 – IMPAIRMENT

Depreciated replacement cost approach

- Municipality purchases a new mainframe computer at R 100 000. At acquisition date, useful life is 5 years and on average 75% of central processing unit capacity will be used by finance division.
- In year 3, Microsoft introduced a new central processing unit(CPU) that operates three times faster than the current CPU, and the municipality intends to upgrade its computers to the new CPU. However the mainframe computer is not compatible with the new CPU and cannot be upgraded. Mainframe computer similar to the one currently in use is available on the market at a price of R 60 000.
- Accumulated depreciation at end of year 3 = $(100\ 000 \times 3/5) = R\ 60\ 000$
- Carrying amount at end of year 3 = $100\ 000 - 60\ 000 = R\ 40\ 000$
- Accumulated depreciation based on market price = $60\ 000 \times 3/5 = R\ 36\ 000$
- Recoverable service amount = Market price R 60 000 less Accumulated depreciation based on market price R 36 000 = R 24 000
- Impairment loss = $R\ 40\ 000 - R\ 24\ 000 = R\ 16\ 000$



GRAP 21 and 26 – IMPAIRMENT Restoration cost approach

- Fire trucks were purchased in 1 July 2008 at a cost of R 750 000. Useful life is 10 years. In 30 June 2011, the fire truck was damaged due to a fire. Cost of repairing the truck is R 150 000. Estimated new cost for a similar fire truck is R 900 000.
- Carrying amount at end of year 3 = $750\ 000 - (750\ 000 \times 3/10) = R\ 525\ 000$
- Replacement cost = R 900 000
- Accumulated depreciation on replacement cost = $900\ 000 \times 3/10 = R\ 270\ 000$
- Depreciated replacement cost (not damaged) = $900\ 000 - 270\ 000 = R\ 630\ 000$
- Restoration cost = R 150 000
- Recoverable service amount = depreciated replacement cost R 630 000 less restoration cost R 150 000 = R 480 000
- Impairment loss = $525\ 000 - 480\ 000 = R\ 45\ 000$



GRAP 21 and 26 – IMPAIRMENT Service unit approach

- Entity acquires a specialised printer for R 200 000 to print rates accounts. Expected to print 5 million rates accounts over its useful life of 5 years. Two years after acquiring the printer, a part broke and can only be replaced by a part that will result in 1 million reduction in rates accounts printed. Part is replaced at no additional cost to the municipality. 2 million copies have been printed to date. Current replacement cost of printer is R 250 000.
- Carrying amount at end year 2 = $R\ 200\ 000 - (R\ 200\ 000 \times 2m/5m) = R\ 120\ 000$
- Depreciated replacement cost = $R\ 250\ 000 - (R\ 250\ 000 \times 2m/5m) = R\ 150\ 000$
- Recoverable service amount = $150\ 000 \times 2m/3m = R\ 100\ 000$
- Impairment loss = $120\ 000 - 100\ 000 = R\ 20\ 000$



GRAP 21 and 26 – IMPAIRMENT Determining value in use

- Value in use of a **cash generating asset** = Present value of estimated future cash flows expected to be derived from continuing use of asset and from its disposal at the end of its useful life.
- To estimate the value in use:
 - Estimate the future cash inflows from continuing use of the asset and its ultimate disposal;
 - Estimate the future cash outflows from continuing use of the asset;
 - Apply the appropriate discount rate to future estimated cash flows.
- An appropriate discount rate to be used should be a pre-tax rate that reflects current market assessments of time value of money (current risk free rate of interest) and risks specific to the asset for which future cash flow estimates have not been adjusted.
- Pre-tax discount rate is generally incremental borrowing rate, market borrowing rate or government bond rate



GRAP 21 and 26 – IMPAIRMENT Determining value in use

- When determining future cash flows, cash flows from financing activities must be excluded.
- Projections should include day to day servicing of the asset and future overheads attributable to the use of the asset.
- Future cash flows must be determined based on asset's current condition. Any planned enhancements should be ignored.



GRAP 21 and 26 – IMPAIRMENT Impairment loss journals

- Municipality owns a building that has a carrying amount of R 25000, fair value less costs to sell of R 22 000 and a value for use of R 23 000.
- Recoverable service amount = R 23 000 as it is the higher of FV less cost to sell and value for use.

30 June 2014:

- Dr Impairment loss (25 000 – 23 000) 2000
 - Cr Accumulated depreciation and impairment 2000
- Recognise impairment loss*

• 30 June 2015:

- Depreciation (23 000/remaining useful life of three years) 7666
 - Accumulated depreciation and impairment loss 7666
- Recognising depreciation on remaining carrying value*

- On the cost model, impairment loss is recognised to surplus/deficit



GRAP 21 and 26 – IMPAIRMENT Reversal of impairment loss

- At each reporting period, a municipality should assess whether circumstances/indications resulting in an asset to be impaired in prior periods, still exist.
- If circumstances no longer exist, recalculate recoverable service amount to determine extent to which the impairment loss can be reversed.
- Consider opposite effect of impairment indicators
- On cost model: carrying amount of asset must be calculated as if no impairment loss has occurred. Reverse the impairment loss limited to the value of carrying amount before impairment



GRAP 21 and 26 – IMPAIRMENT Reversal of impairment loss

- Municipality owns a computer that has a cost of R 50 000 on 1 July 2012 with a useful life of 5 years that has a carrying amount of R 30000 after two years, fair value less costs to sell of R 22 000 and a value for use of R 23 000.
- Recoverable service/recoverable amount = R 23 000 as it is the higher of FV less cost to sell and value for use.

30 June 2014:

- Dr Impairment loss (30 000 – 23 000) 7000
 - Cr Accumulated depreciation and impairment 7000
- Recognise impairment loss*

30 June 2015:

- Depreciation (23 000/remaining useful life of three years) 7666
 - Accumulated depreciation and impairment loss 7666
- Recognising depreciation on remaining carrying value*

- On the cost model, impairment loss is recognised to surplus/deficit



GRAP 21 and 26 – IMPAIRMENT Reversal of impairment loss

- Carrying amount as if no impairment has occurred on 30 June 2015:
 $50\ 000 \times 2/5 = R\ 20\ 000$
 - Carrying amount after impairment = $30\ 000 - 7\ 000 - 7\ 666 = 15\ 334$
 - Recoverable service amount at 30 June 2015 = R 27 000
 - Impairment loss reversal = R 20 000 (limited to original CA as recoverable amount is higher) – 15 334 = R 4 666
 - Reversal of Impairment: 30 Jun 2015
- | | | |
|---|-------|-------|
| Dr Accumulated depreciation and impairment loss | 4 666 | |
| Cr Reversal of impairment loss (P &L) | | 4 666 |



THANK YOU!

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