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IAS® Standard 36 Impairment of Assets

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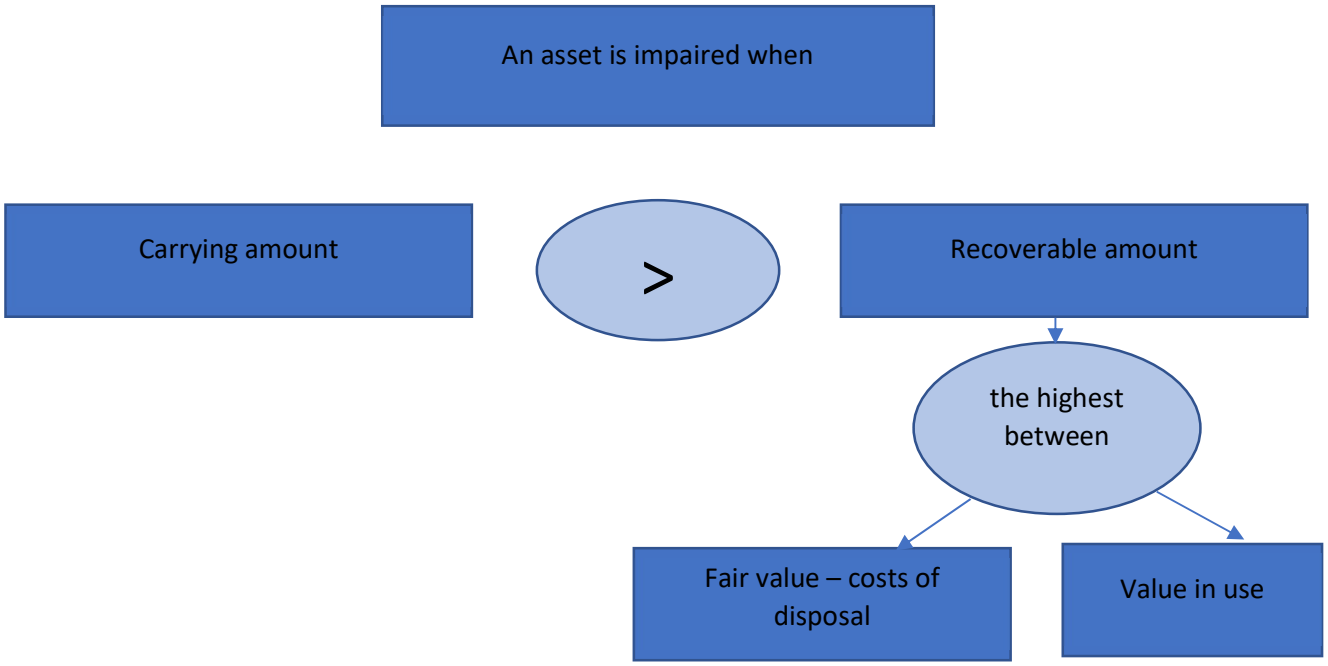
IAS® Standard 36 Impairment of Assets

SCOPE AND KEY DEFINITIONS

IAS Standard 36 Impairment of assets impacts a wide range of, if not all, entities, since it addresses the applicable procedures to ensure that assets are carried at no more than their recoverable amount. The standard applies to various assets, except those that are measured at fair value (such as financial instruments, investment property or biological assets measured at fair value) and except for assets for which particular details about losses exist (such as inventories or deferred tax assets, for which the applicable standards cover the treatment of potential losses). Therefore, the standard applies to assets such as property, plant and equipment, intangibles, including goodwill, and investment property measured at cost.

The basic principle of IAS 36 is that if the carrying amount of an asset exceeds its recoverable amount, an impairment loss shall be recognized (IAS 36.6). Figure 1 describes the process of determining whether an asset is impaired.

Figure 1. Determination of asset impairment



The key definitions applicable are (IAS 36.6):

Carrying amount is the amount at which an asset is recognised after deducting any accumulated depreciation (amortisation) and accumulated impairment losses thereon.

The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use.

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 date. Also see IFRS 13 Fair Value Measurement on fair value determination.

Costs of disposal are incremental costs directly attributable to the disposal of an asset or cash-generating unit, excluding finance costs and income tax expense.

Value in use is the present value of the future cash flows expected to be derived from an asset or cash-generating unit.

RECOGNITION AND MEASUREMENT

An impairment loss is recognized when the recoverable amount of an asset is less than its carrying amount, which actually reduces the carrying amount to the recoverable amount (IAS 36.59). The impairment loss is recognized in profit or loss, unless the asset is carried at revalued amount (in accordance with IAS 16 Property, Plant and Equipment), in which case it is treated as a revaluation decrease. After the recognition of an impairment loss, the depreciation and amortisation shall be adjusted in the future periods taking into consideration the revised carrying amount (IAS 36.63).

PROCEDURES

IAS 36 details when and how impairment tests should be conducted. The steps might be summarised as shown in Figure 2:

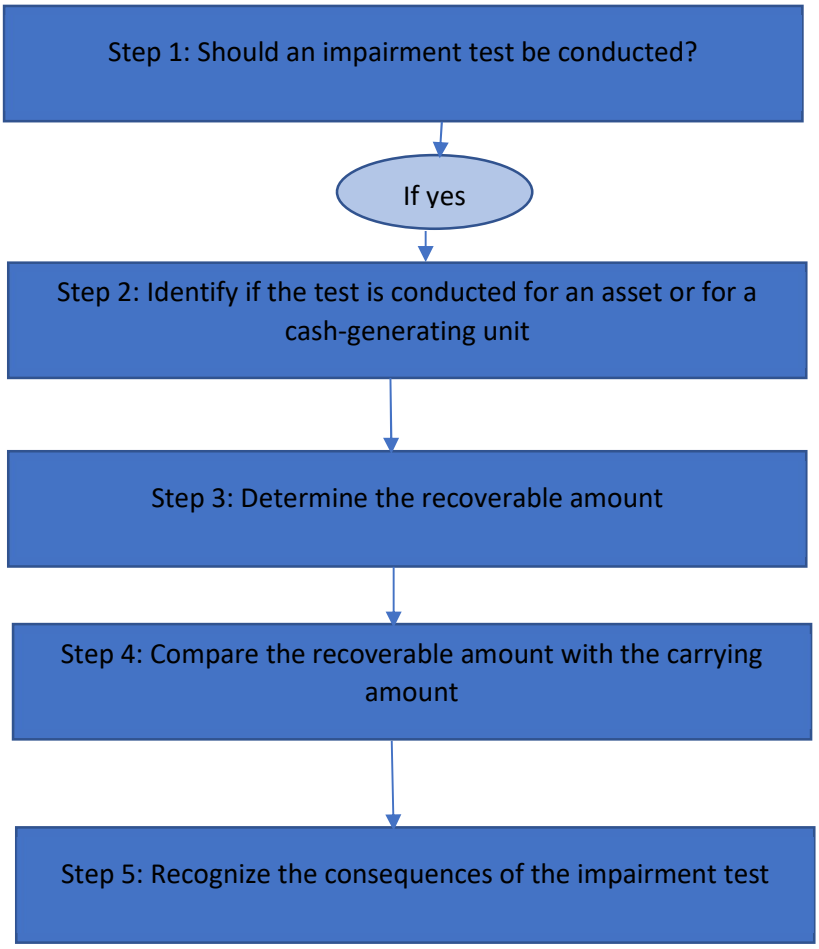


Figure 2. Main steps in the application of IAS 36

Step 1: IAS 36 requires first to identify the asset(s) that may be impaired. Determining the fair value and value in use for all assets would be a very costly endeavour, and therefore this should only be done if there are indications that any asset(s) may be impaired, or if there are requirements for specific assets to conduct the test. The impairment test at each reporting date is mandatory for intangible assets that have an indefinite useful life, such as goodwill. For other assets, an entity shall assess at each reporting date whether there are such indications (IAS 36.9). In doing so, the entity should consider external and internal sources of information. External sources of information include indications that the changes in the technological, market, economic environment of the entity have adverse consequences, or that market interest rates have increased. Internal sources of information include evidence that the asset is physically damaged or obsolete, or internal reporting suggests that the economic performance of the asset will be worse than expected.

For example, an entity operates a building that has just been affected by a fire. This is an internal indication that the building's value may be decreasing, and an impairment test should be conducted. Also, the same entity operates an equipment for which the intention upon purchase was to be used to produce and sell 20,000 products per year. The market for that product is now shrinking, and internal estimates indicate that only 12,000 products might be sold per year. This is an internal indication that the value of the asset cannot be recovered as expected through use, and an impairment test is necessary.

Step 2: If an asset is impaired, the impairment test should be conducted for the asset. But in many cases the recoverable amount cannot be determined for a specific item, in which case the impairment test should be conducted for the cash generating unit (CGU). Determining the recoverable amount, and particularly the value in use, implies the identification of cash flows generated by the assets. If assets do not generate cash inflows independently from other assets, the impairment test should be performed on the smallest group of assets generating cash-flows independently of the cash flows of other assets or CGUs. In practice, CGUs include entire entities, departments or business units, production lines, or groups of items within a department.

For example, an entity uses several types of equipment to manufacture furniture. If there are indications that a certain type of equipment is impaired, an impairment test shall be conducted. However, the test cannot be performed for only one type of equipment, because it does not generate cash flows independently from other equipment. Therefore, the test should be performed for the entire CGU (the smallest group of assets generating cash flows).

Step 3: To ascertain if an asset or a CGU is impaired or not, an entity shall first determine their recoverable amount. An asset might be recovered through use or sale, hence both alternatives should be considered and the value in use and the fair value less cost of disposal shall be determined. The principles are the same for individual assets and CGUs.

The fair value less costs of disposal represents the value that might be obtained when the asset is disposed of. Examples of costs of disposal include legal costs, costs to bring the asset in the condition for its sale, or transaction taxes.

For example, if a three-year old equipment is tested for impairment, the market prices for comparable three-year old pieces of equipment are an indication of the fair value. Let's say that the average price for such equipment on the market is CU1,300,000. Then, the entity shall estimate the cost of disposal.

Assuming that bringing the equipment in the condition for its sale costs CU50,000, the fair value less cost of disposal is CU1,250,000.

Determining value in use is more complex, and basically implies discounting the future cash flows generated through the use of the asset, according to internal plans. IAS 36.30 requires entities to take into consideration the following elements when computing the value in use:

a) an estimate of the future cash flows the entity expects to derive from the asset;
b) expectations about possible variations in the amount or timing of those future cash flows;
c) the time value of money, represented by the current market risk-free rate of interest;
d) the price for bearing the uncertainty inherent in the asset; and
e) other factors, such as illiquidity, that market participants would reflect in pricing the future cash flows the entity expects to derive from the asset.

Therefore, the value in use is determined based on the estimated cash flows (items a and b from above) and on the appropriate discount rate applied (item c above) (elements from items d and e are either reflected in cash flows or in the discounted rate). Cash flows should be estimated considering internal and external evidence, particularly budgets and forecasts, covering a period of maximum 5 years (unless a longer period can be justified). The impact of taxation and financing costs is not considered in determining the cash flows.

Building on the previous example, we assume now that the equipment is used to manufacture a product with a unit price of CU100 and a unit production cost (excluding depreciation) is CU70. The entity sold 10,000 units of that product in the year 20X1, and it estimates that sales would increase by 2% per year. It is also expected that all prices will increase by 1% per year because of inflation. The estimated discount rate is 10%. We first determine in Table 1 the value of cash flows for each of the following 5 years (in the absence of justifications the maximum number of years taken into consideration is 5) (rounding up to one decimal):

Table 1. Computation of yearly cash flows

Year	Net cash flow per unit of product	Sales (units)	Cash flow
20X2	(CU100-CU70)*1.01 = CU30.3	10,000*1.02 = 10,200	CU309,060
20X3	CU30.3 * 1.01 = CU30.6	10,200*1,02 = 10,404	CU318,362.4
20X4	CU30.6*1.01 = CU30.9	10,404*1,02=10,612	CU327,910.8
20X5	CU30.9*1.01 = CU31.2	10,612*1,02 = 10,824	CU337,708.8
20X6	CU31.2 * 1.01 = CU31.5	10,824*1,02 = 11,041	CU347,791.5

The next step consists in discounting the cash flows, by using the estimated discount rate (see Table 2).

Table 2. Computation of the discounted cash flows

Year	Cash flow	Discount factor	Discounted cash flow
20X2	CU309,060	$(1+10\%)^{-1}$=0.9091	CU280,966.4
20X3	CU318,362.4	$(1+10\%)^{-2}$=0.8264	CU263,094.7
20X4	CU327,910.8	$(1+10\%)^{-3}$=0.7513	CU246,359.4
20X5	CU337,708.8	$(1+10\%)^{-4}$=0.6830	CU230,655.1
20X6	CU347,791.5	$(1+10\%)^{-5}$=0.6209	CU215,943.7
Total			CU1,237,019.3

Concluding, the value in use for the equipment is CU1,237,019.3, and the fair value less cost of disposal was determined as being of CU1,250,000. The recoverable amount is the highest amount of the two, which is CU1,250,000.

Step 4 consists in comparing the carrying amount with the recoverable amount, to determine if there is a loss of value.

Continuing our previous example, we now compare the recoverable amount of CU1,250,000 with the carrying amount. If the carrying amount is, for example, CU1,400,000, the asset is impaired and a loss of CU150,000 must be recognized.

Step 5 consists in the recognition of the consequences of impairment tests. We saw in the measurement and recognition principles of IAS 36 that the loss is recognized in profit or loss unless the asset had been revalued.

Continuing our previous example, the loss is recognized as follows if the asset is not revalued:

Dr.	Impairment expense	150,000	
	Cr. Impairment of assets		150,000

If the asset had been previously revalued, and the revaluation surplus is higher than the impairment loss, the loss will decrease the revaluation surplus (if lower, the difference will be recognized as an expense).

Dr.	Revaluation surplus	150,000	
	Cr. Impairment of assets		150,000

Steps 2 to 5 may incorporate some complex judgements and calculations in the case of CGUs. CGUs include all the assets that are used to generate cash inflows.

Step 2 refers to the unit for which the impairment test is performed, which is an asset or a CGU, and in the latter case also includes determining the components of the CGU. Particular cases refer to goodwill and corporate assets.

Given that goodwill is not amortised and that an impairment test shall be conducted annually, it must be allocated to CGUs or groups of CGUs. This is because goodwill does not generate cash flow by itself, and usually contributes to the cash flow of multiple CGUs. IAS 36.80 requires goodwill to be allocated to units or group of units representing the lowest level within the entity at which goodwill is monitored for internal management purposes, but not larger than an operating segment.

Moreover, entities have corporate assets, such as headquarters' building or the IT infrastructure, which also do not generate cash inflows by themselves, but support the entity's activity. Corporate assets should also be allocated to CGUs, on a reasonable and consistent basis. One example of a reasonable and consistent basis is based on the relative values of the CGUs.

For example, an entity has 2 cash generating units – CGU1 and CGU2. The carrying amount of the assets in CGU1 is CU10,000 and CU20,000 in CGU2. The carrying amount of the building hosting the

entity's headquarters is CU6,000. The value of the building will be allocated to CGUs by using the value of their carrying amount (see Table 3).

Table 3. Allocation of corporate assets

	CGU1 (in CU)	CGU2 (in CU)	Total (in CU)
Carrying amount	10,000	CU20,000	30,000
Allocate the value of the building	6,000/30,000*10,000 = 2,000	6,000/30,000*20,000 = 4,000	6,000
Carrying amount including corporate assets	12,000	24,000	36,000

If there is a significant difference in the remaining useful life of the assets of various CGUs, the weighting will consider both the amount and the useful lives. Let's suppose that the remaining useful life of assets is 5 years in CGU 1, and 10 years in CGU 2. We recalculate the value of CGU1 and CGU2 in Table 4.

Table 4. Allocation of corporate assets when assets have different useful life

	CGU1	CGU2	Total
Carrying amount	CU10,000	CU20,000	CU30,000
Remaining useful life	5 years	10 years	
Weighting for the useful life	1	2 (10 years/5 years)	
Weighted amount	CU10,000 * 1= CU10,000	CU20,000*2 = CU40,000	CU50,000
Allocate the value of the building	CU6,000*CU10,000/CU50,000 = CU1,200	CU6,000*CU40,000/CU50,000 = CU4,800	CU6,000
Carrying amount including corporate assets	CU11,200	CU24,800	CU36,000

The principles applied next in step 3 are the same as the ones discussed above for single assets. However, complexities appear in steps 4 and 5, concerning the allocation of the loss to various assets. IAS 36.104 specifies that the impairment loss shall be allocated to reduce the carrying amount of the assets of the unit (group of units) in the following order: first, to reduce the carrying amount of any goodwill allocated to the cash-generating unit (group of units); and then, to the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit. However, when performing this allocation, the amount of an asset shall not be reduced below the highest of: its fair value less costs of disposal (if measurable), its value in use (if determinable), and 0. The amount of the impairment loss that would have otherwise been allocated to the asset shall be allocated pro rata to the other assets of the unit (group of units) (IAS 36.105).

We now exemplify these cases. First, we assume that a CGU includes equipment 1 with a carrying amount of CU5,000 and equipment 2 with a carrying amount of CU15,000. Therefore, the carrying amount of the CGU is CU20,000. The fair value less costs of disposal is CU19,000, and the value in use is CU18,500. Therefore, the recoverable amount is CU19,000, which is lower than the value of the

carrying amount, and therefore an impairment of CU20,000 – CU19,000 = CU1,000 should be recognized. This loss is allocated to both assets, pro rata on the basis of the carrying amount of each asset in the unit (see Table 5).

Table 5. Allocation of an impairment loss

	Equipment 1	Equipment 2	Total
Carrying amount	CU5,000	CU15,000	CU20,000
Impairment loss	CU1,000*CU5,000/ CU20,000 = CU250	CU1,000*CU15,000/CU20,000 = CU750	CU1,000
Carrying amount after the impairment test	CU4,750	CU14,250	CU19,000

The loss is recognised as an expense (unless the assets are revalued)

Dr. Impairment expense 1,000

Cr. Impairment of assets (equipment 1) 250

Cr. Impairment of assets (equipment 2) 750

If the fair value less costs of disposal for equipment 1 is measurable and it is of CU4,900, this means that the value of the asset cannot be reduced below this amount. Therefore, only a loss of CU5,000 – CU4,900 = CU100 may be recognized for this asset, and the remaining CU900 will be allocated to equipment 2.

Dr. Impairment expense 1,000

Cr. Impairment of assets (equipment 1) 100

Cr. Impairment of assets (equipment 2) 900

Let's now consider the case of goodwill. The following assets are part of a CGU: equipment 1 with a carrying amount of CU5,000, equipment 2 with a carrying amount of CU14,500, and goodwill for CU500. The carrying amount of the CGU is thus CU20,000, and its recoverable amount is CU19,000. This loss of CU1,000 is allocated first to goodwill (CU500), and the remaining (CU500) to both assets, pro rata on the basis of the carrying amount of each asset in the unit. Recalculated numbers are shown in Table 6.

Table 6. Allocation of an impairment loss in a CGU with goodwill

	Equipment 1	Equipment 2	Goodwill	Total
Carrying amount	CU5,000	CU14,500	CU500	CU20,000
Impairment loss	CU500*CU5,000/CU19,500 = CU128.2	CU500*CU14,500/CU19,500 = CU371.8	CU500	CU1,000
Carrying amount after the impairment test	CU4,871.8	CU14,128.2	0	CU19,000

Impairment losses may be reversed, except for goodwill. IAS 36.110 states that an entity shall assess at the end of each reporting period whether there is any indication that an impairment loss recognised in prior periods for an asset other than goodwill may no longer exist or may have decreased. If any such indication exists, the entity shall estimate the recoverable amount of that asset. Similar to potential losses, internal and external sources of information might be used as signals of improvements. In terms of recognition, IAS 36.114 states that if there are improvements, the carrying amount of the asset shall be increased to its recoverable amount and that the increase is a reversal of an impairment loss. However, the increased carrying amount of an asset other than goodwill attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior years (IAS 36.117). An impairment loss recognised for goodwill shall not be reversed in a subsequent period (IAS 36.124).

For example, equipment acquired at the beginning of year 20X1 for CU10,000 was to be used for 5 years. The straight-line method of depreciation is used, and there is no expected residual value. At the end of year 20X2 there is a significant decrease in the market of the product manufactured with the equipment, given an economic crisis. This is an indication for impairment, and an impairment test is conducted. The recoverable amount of the equipment is estimated at CU5,100. At the end of 20X3 the economic situation improves considerably, and the recoverable amount is estimated at CU4,200. See Table 7 for the subsequent value adjustments relative to this asset.

Table 7. Reversal of impairment

Year	Depreciable amount	Depreciation expense	Carrying amount before impairment	Impairment	Carrying amount after impairment	Comments
20X1	CU10,000	CU10,000/5 = CU2,000	CU8,000			
20X2	CU8,000	CU8,000/4= CU2,000	CU6,000	Loss of CU900	CU5,100	Recoverable amount is CU5,100
20X3	CU5,100	CU5,100/3 = CU1,700	CU3,400	Reversal of CU600	CU4,000	Recoverable amount is CU4,200. The maximum value of the asset is CU4,000 (CU6,000 – CU2,000).

The loss is recognized as follows:

Dr.	Impairment loss (expense)	900	
Cr.	Impairment of assets		900

In 20X3, the recoverable amount is higher than the carrying amount, therefore the loss may be reversed. However, the value of the asset shall not exceed its historical cost, i.e., the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior years. In our case, this is CU4,000. Therefore, the value of the asset might be increased from CU3,400 to CU4,000, which implies that CU600 is reversed.

The reversal is recognized as follows:

Dr.	Impairment of assets	600	
Cr.	Impairment loss		600

DISCLOSURE

IAS 36 requires extensive disclosures, regardless of whether an impairment has been recognized, since impairment tests involve many estimates and the exercise of significant professional judgement, and that its consequences may substantially impact financial statements. The amount of impairment losses recognized during the period, the amount of reversals, the events and the circumstances leading to the recognition of a loss or of a reversal, a description of the assets or CGUs, should all be disclosed in the notes to the financial statements. Moreover, IAS 36 requires extensive disclosures on the estimates used to measure the recoverable amount, together with explanations on how goodwill has been allocated, the key assumptions used, including growth rates, discounted rates, and the periods over which cash flows are forecast.

EXAMPLE

IMP manufactures a product in two sections – A and B. A semi-finished product is obtained in section A, which is further manufactured in section B. A unit of the finished product may be sold at CU5, and its production cost (before depreciation) is CU3. Sales forecasts are made for 4 years at the end of 20X1, given that the market is highly unpredictable beyond this date. Sales volume is estimated as follows: 7,000 units in 20X2; 5,000 units in 20X3; 4,000 units in 20X4; and 4,000 units with a probability of 50% and 2,000 units with a probability of 50% for 20X5. IMP has the following assets (carrying amounts):

	Section A	Section B	Corporate assets
Assets	Equipment: CU15,000 Machines: CU5,000	Equipment: CU7,000 Intangibles: CU3,000	Building: CU5,000 IT infrastructure: CU1,000

The discount rate is 10%. The fair value less costs of disposal is estimated at CU21,000 for Section A and CU12,000 for Section B.

The market for the product is undergoing major changes, and forecasted sales are below the ones estimated when the assets were purchased. Therefore, an impairment test is conducted. Discuss how the impairment test is conducted in the following scenarios:

Scenario 1: The semi-finished product cannot be sold on the market

Scenario 2: The semi-finished product may be sold on the market; its cost is of CU1 per unit, and the market price is CU2 per unit.

SOLUTION

Scenario 1: Since the semi-finished product cannot be sold on the market, section A has no cash inflows and therefore it is not a CGU. In this case, the smallest group of assets generating cash inflows is the entire entity. Therefore, the impairment test is performed at the entity level.

Carrying amount = CU20,000 (section A) + CU10,000 (section B) + CU6,000 (corporate assets) = CU36,000

Fair value less costs of disposal = CU21,000 (section A) + CU12,000 (section B) = CU33,000

Determination of the value in use:

Year	Net cash flow per unit of product	Sales (units)	Cash flow	Discount factor	Discounted cash flow
20X1	CU5-CU3 = CU2	7,000	CU14,000	$(1+10\%)^{-1}$=0.9091	CU12,727.4
20X2	CU2	5,000	CU10,000	$(1+10\%)^{-2}$=0.8264	CU8,264
20X3	CU2	4,000	CU8,000	$(1+10\%)^{-3}$=0.7513	CU6,010.4
20X4	CU2	4,000*50% + 2,000*50% = 3,000	CU6,000	$(1+10\%)^{-4}$=0.6830	CU4,098
Total					CU31,099.8

The recoverable amount is therefore CU33,000 (the highest between value in use and fair value less costs of disposal). Since the carrying amount is CU36,000, the CGU is impaired.

Impairment loss = CU36,000 – CU33,000 = CU3,000. The impairment is allocated to assets.

Assets	Carrying amount before the impairment	Impairment loss	Carrying amount after the impairment
Section A: Equipment	CU15,000	CU3,000* CU15,000/CU36,000 =CU1,250	CU13,750
Section A: Machines	CU5,000	CU3,000* CU5,000/CU36,000 =CU416.7	CU4,583.3
Section B: Equipment	CU7,000	CU3,000* CU7,000/CU36,000 =CU583.3	CU6,416.7
Section B: Intangibles	CU3,000	CU3,000* CU3,000/CU36,000 =CU250	CU2,750
Building	CU5,000	CU3,000* CU5,000/CU36,000 =CU416.7	CU4,583.3
IT infrastructure	CU1,000	CU3,000* CU1,000/CU36,000 =CU83.3	CU916.7
Total	CU36,000	CU3,000	CU33,000

Scenario 2: Since the semi-finished product may be sold on the market, each section is a CGU, and the impairment test is conducted at the section level. Corporate assets shall be allocated to the two sections.

	Section A	Section B	Total
Carrying amount	CU20,000	CU10,000	CU30,000
Allocate the value of the building	CU5,000*CU20,000/CU30,000 = CU3,333.3	CU5,000*CU10,000/CU30,000 = CU1,666.7	CU5,000
Allocate the value of the IT infrastructure	CU1,000*CU20,000/CU30,000 = CU666.7	CU1,000*CU10,000/CU30,000 = CU333.3	CU1,000
Carrying amount including corporate assets	CU24,000	CU12,000	CU36,000

Fair value less costs of disposal: CU21,000 (section A) and CU12,000 (section B). Given that the fair value less costs of disposal of section B is equal to the carrying amount, there is no impairment for this CGU. Therefore, we determine the value in use only for section A:

Determination of the value in use for section A only:

Year	Net cash flow per unit of product	Sales (units)	Cash flow	Discount factor	Discounted cash flow
20X1	CU2-CU1 = CU1	7,000	CU7,000	$(1+10\%)^{-1}$=0.9091	CU6,363.7
20X2	CU1	5,000	CU5,000	$(1+10\%)^{-2}$=0.8264	CU4,132
20X3	CU1	4,000	CU4,000	$(1+10\%)^{-3}$=0.7513	CU3,005.2
20X4	CU1	4,000*50% + 2,000*50% = 3,000	CU3,000	$(1+10\%)^{-4}$=0.6830	CU2,049
Total					CU15,549.9

The recoverable amount of section A is therefore CU21,000 (the highest between its value in use and the fair value less costs of disposal). Since the carrying amount is CU24,000, the CGU is impaired.

Impairment loss = CU24,000 – CU21,000 = CU3,000. The impairment is allocated to assets.

Assets	Carrying amount before the impairment	Impairment loss
Section A: Equipment	CU15,000	CU3,000*CU15,000/CU24,000 =CU1,875
Section A: Machines	CU5,000	CU3,000*CU5,000/CU24,000 =CU625
Building	CU3,333.3	CU3,000*CU3,333.3/CU24,000 =CU416.7
IT infrastructure	CU666.7	CU3,000*CU666.7/CU24,000 =CU83.3
Total	CU24,000	CU3,000