

United Nations

Corporate Guidance

for

**International Public Sector Accounting
Standards**

Infrastructure Assets

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Corporate Guidance to Support the Adoption of International Public Sector Accounting Standards (IPSAS) by the United Nations

This material was prepared jointly by:

PricewaterhouseCoopers LLP

300 Madison Avenue

New York, N.Y. 10017

and

The United Nations IPSAS Implementation Team

United Nations HQ

New York, N.Y. 10017

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Corporate Guidance #6 – Infrastructure assets

This corporate guidance will cover the following topics with respect to infrastructure assets:

- Guidelines for asset classification into IPSAS asset classes and sub-classes; Need to create a clear line of separation between what should be called "Infrastructure asset" as opposed to "Machinery and equipment" and "Buildings"; Need to determine the level of aggregation for financial statement reporting purposes and for purposes of creating a PP&E record of infrastructure asset at which level (aggregated or disaggregated) should accounting reflect this? And if at higher level of aggregation, how should this be agreed to how engineering staff think about these items (see table above)?; United Nations IPSAS team thinks that it should be a higher level of aggregation for FS reporting purposes (analogous to 10 building components that are used by Facilities / Engineering). It seems that 119 items just for infrastructure sub-asset classification might be a bit over board. Perhaps sub-classes of Infrastructure asset class could be developed, in order to simplify the approach: **see section 4;**
- Guidance on recognition and valuation of wells, fountains, landing strips, access roads, etc.: **see sections 3.1, 5 and 6.**

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1 Introduction

IPSAS 17 *Property, Plant, and Equipment* provides the fundamental guidance surrounding the classification, recognition, measurement, and disclosure requirements of property, plant, and equipment including infrastructure assets. There are no differences in the fundamental accounting for property, plant and equipment versus infrastructure assets, however the Secretariat (United Nations) views infrastructure assets as a separate class of assets. In the following sections of this document, the guidance has been presented, along with “in practice” examples of how the United Nations should apply the guidance.

The goal of this document is to present relevant **infrastructure asset** guidance in order for the United Nations to adopt and apply a comprehensive and consistent accounting treatment of infrastructure assets across its entities. We refer to CG # 10 *Property, Plant and Equipment* for the treatment of Property, Plant and Equipment excluding infrastructure assets.

This corporate guidance is only applicable to infrastructure assets owned by the United Nations. We refer to CG #1 *Leasing* regarding leasing or “right-to-use” arrangements.

2 Definitions

General Terms

Property, plant, and equipment (PP&E) are tangible items that are:

- Held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- Expected to be used during more than one reporting period.

Some assets are commonly described as **infrastructure assets**. These assets usually display some or all of the following characteristics:

- They are part of a system or network;
- They are specialized in nature and do not have alternative uses;
- They are immovable; and
- They may be subject to constraints on disposal.

For purposes of Corporate Guidance # 6, the United Nations defines **self-constructed assets** as infrastructure assets that are constructed by the United Nations and contracted out construction projects.

In certain situations the United Nations may acquire assets designated for use in a specific construction project. These assets are referred to as **acquired assets**.

Fair value is the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm’s length transaction.

A **class** of property, plant and equipment means a grouping of assets similar in nature or function in the United Nations operations that is shown as a single item for the purpose of disclosure in the financial statements.

Carrying amount is the amount at which an asset is recognized after deducting any accumulated depreciation and accumulated impairment losses.

Accumulated impairment losses are the cumulative amount of impairment losses of the property, plant, and equipment at a point in time.

Depreciation

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

Depreciable amount is the cost of an asset, or other amount substituted for cost, less its residual value.

Accumulated depreciation is the cumulative depreciation of the property, plant, and equipment at a point in time.

The **residual value** of an asset is the estimated amount that the United Nations would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

The **useful life** of an item of PP&E is:

- The period over which an asset is expected to be available for use by the United Nations; or
- The number of production or similar units expected to be obtained from the asset by the United Nations.

3 Infrastructure assets in the opening statement of financial position

With the adoption of IPSAS the United Nations will now be required to recognize infrastructure assets in the financial statements. In the opening statement of financial position¹, the United Nations will measure infrastructure assets at fair value.

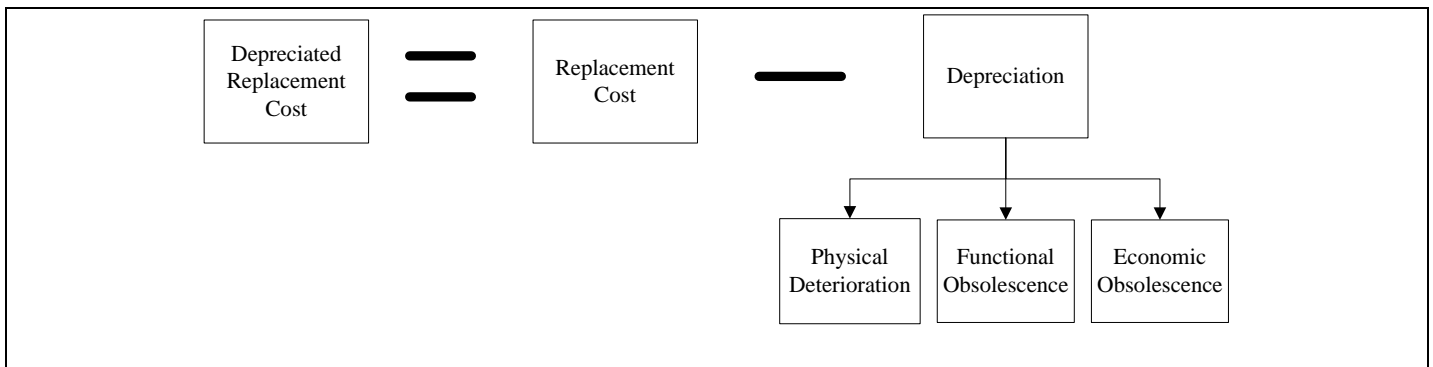
3.1 Infrastructure assets measured at fair value in the opening statement of financial position

At the date of the opening statement of financial position, the United Nations will value infrastructure assets at fair value. To determine the fair value, the United Nations has elected to use the **depreciated replacement cost** (DRC) methodology.

The DRC methodology determines value by subtracting depreciation from replacement cost:

Depreciated Replacement Cost

¹ Except for cases where transitional provisions are applied.



Replacement cost is the cost to replace the asset with an equivalent asset. Replacement cost can be calculated by collecting construction cost data, utilizing in-house cost data (if it exists), or using external cost estimators.

Construction cost data can be obtained from a variety of sources such as historical data, standard published construction cost data, and independent cost estimates. Where the replacement asset is of a generic nature, it is normal and acceptable practice to use standard published construction cost data in lieu of historical data. However, due to the on-going programme of construction required by the scale of UN operations in-house, cost data exists. Replacement cost will be derived from United Nations’ historical construction costs in conjunction with independent construction indices to modify for size, location, and price escalation as appropriate and with reference to standard construction cost data where necessary.

Depreciation in the context of depreciated replacement cost is the sum of physical deterioration, functional obsolescence, and economic obsolescence:

- Physical deterioration is the result of wear and tear combined with a lack of necessary maintenance and other factors that may impact the prospective life of the asset such as weathering from the elements.
- Functional obsolescence is caused by changes in technology, legislation or regulation that affect the ability of the asset to perform to modern standards or requirements and relates to a deficiency or superadequacy in design of the asset.
- Economic obsolescence is the impact of external macroeconomic and microeconomic conditions on the utility of the asset.

Depreciation should be applied on a straight line basis over the useful life of the asset.

3.1.1 Infrastructure assets

Some assets are commonly described as **infrastructure assets**. These assets usually display some or all of the following characteristics:

- They are part of a system or network;
- They are specialized in nature and do not have alternative uses;
- They are immovable; and
- They may be subject to constraints on disposal.

Examples of infrastructure assets include road networks, sewer systems, water and power supply systems, and communication networks.

Infrastructure assets will be valued at fair value on the opening statement of financial position. Similar to buildings, the United Nations has elected to determine fair value using the **DRC** methodology. We refer to Section 9: Case Study 1 for an example.

3.1.2 Infrastructure assets under construction

Assets under construction are those assets that are not complete or available for use at the date of the statement of financial position. Assets under construction as of the opening statement of financial position will be valued at fair value. The United Nations will determine fair value using **replacement cost**².

4 Classification of infrastructure assets

A **class** of property, plant and equipment is a grouping of assets of a similar nature or function in the United Nations’ operations that is shown as a single item for the purpose of disclosure in the financial statements. Each item within an asset **sub-class** is united by a single useful life range.

Infrastructure assets shall be classified into a class and subclass, similar to other items of PP&E, as detailed in the table below. The classifications and useful lives will be reviewed annually.

Asset Classes	Asset sub class
Infrastructure assets	Telecommunication Energy Protection Transport Waste management Water management Recreation Landscaping
Assets under construction	Infrastructure assets under construction

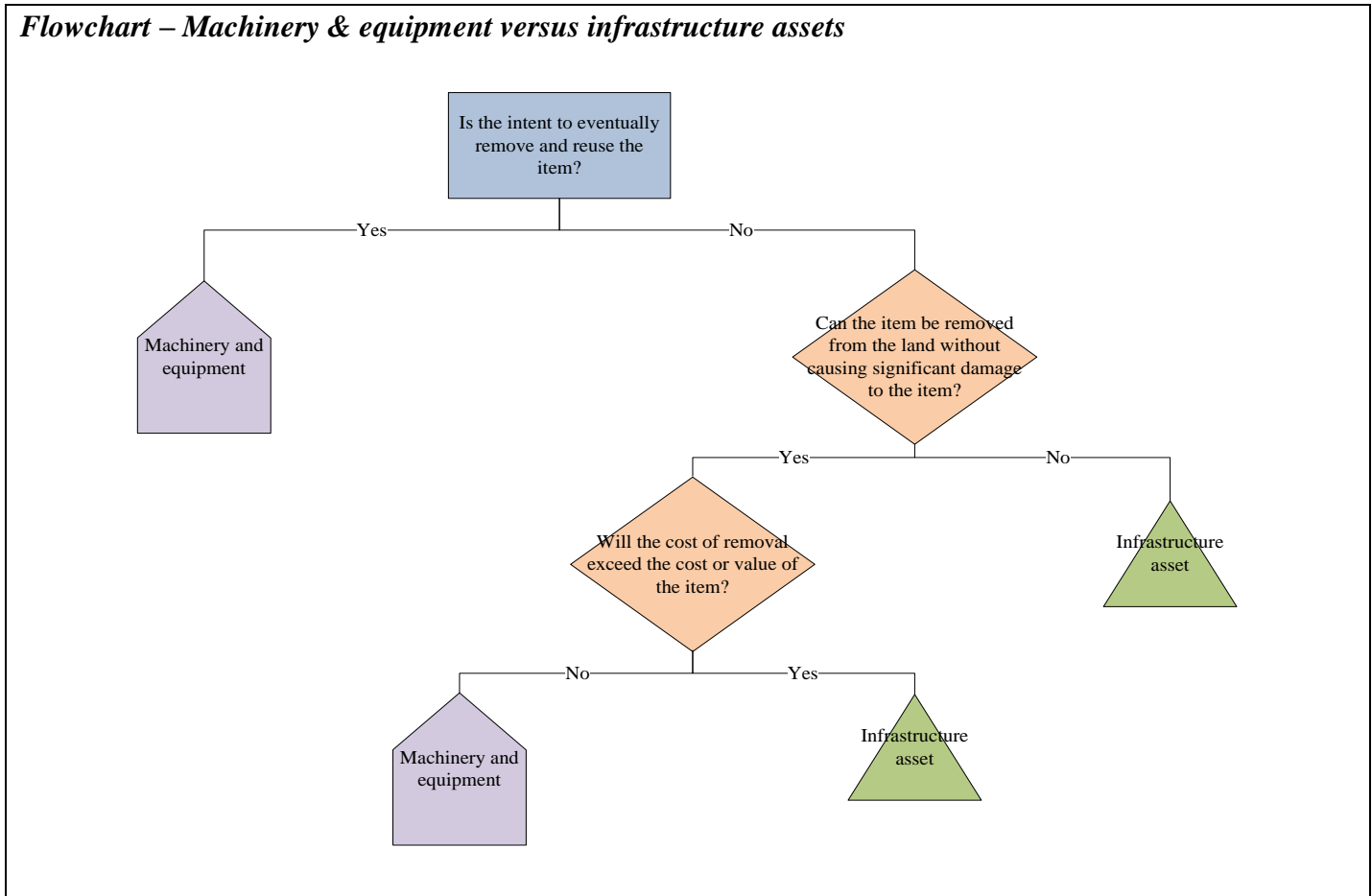
² Assets under construction are not yet subject to depreciation and thus should be measured at replacement cost, not depreciated replacement cost.

With regard to guidance for distinguishing infrastructure assets from machinery and equipment and buildings, the following questions should be considered.

4.1 Criteria to distinguish an infrastructure asset from machinery and equipment

Parking lots, roadways, and air fields are generally considered long-lived improvements that are made to land. As none of these are installed with the intent of being removed and reinstalled elsewhere, nor are they able to be removed without significant damage to the item, these items should be recognized as **infrastructure assets**. The following is a list of criteria that can be used in distinguishing infrastructure assets from machinery and equipment.

- Upon installation or development of the item, is the intent to eventually remove and reuse the item? If yes, the item is machinery and equipment, if no;
- Can the item be removed from the land without causing significant damage to the item? If the answer is no, the item is an infrastructure assets. If yes;
- Will the cost of removal exceed the cost or value of the item? If the answer is yes, the item is an infrastructure asset. If no, the item is machinery and equipment.



Example –Machinery & equipment versus infrastructure assets - telephone network:

Field Mission X is building out a telecommunications network, primarily consisting of an IT tower and voice and data cabling. It was recently constructed at a cost of \$120,000. Field Mission X has determined:

- (1) There is no intent/or ability to eventually remove and reuse the telephone network.
- (2) The voice and data cabling cannot be removed from the land without causing significant damage to the network as a whole.

As result the **telephone network** is classified as a communications infrastructure asset rather than machinery and equipment.

Example – Infrastructure assets

In each of the following scenarios below, the waste water treatment system and fuel distribution system would be classified as an infrastructure asset as the intent would be to not eventually remove the item. Even if in some circumstances the intent was to remove the item the cost of removal (i.e. the cost to dig out the system, clean it, transport it, and reinstall it into its new location) would exceed the cost of the item. It is important to note that the method by which the item is ordered is not relevant to how the item is classified. However, it may impact when the item is recognized.

Scenario 1 – Waste Water Treatment System

Case 1: Field Mission X is in need of installing a Waste Water Treatment System for 200persons; the Eng Section decides to order the system from the available System Contract (for example Euromec - PD-C0132-07); the WWTS modules (Module 1A-septic system stand-alone + Module2-lift station + Module3-containerized waste water treatment plant) arrive in the mission (PMS assigns a barcode to the system and reports it under Galileo IMS); and the ENG staff install the WWTS as per provided installation manual including all the necessary piping lines.

Case 2: Field Mission Y is in need of installing a Waste Water Treatment System for 800persons; the Eng Section prepares the project requirements and sends them to Procurement to initiate the bidding exercise. The Project includes the design, provision, installation and testing of the complete system. Procurement awards the contract to Company Z. The proposed plant will have the following main modules: a gravity collection system that collects effluent from 3 sections through various lift stations and pumps it to the WWTS. The effluent is then transferred to a storage pond via a gravity line and irrigated. It is an activated sludge process consisting of the following items: aeration basin, final clarifier and chlorine contact chamber. The sludge is stabilized by aerobic digestion. The Company completes the installation and hands it over to Mission Y (No barcode and/or report done in Galileo).

Scenario 2 - Fuel Distribution System

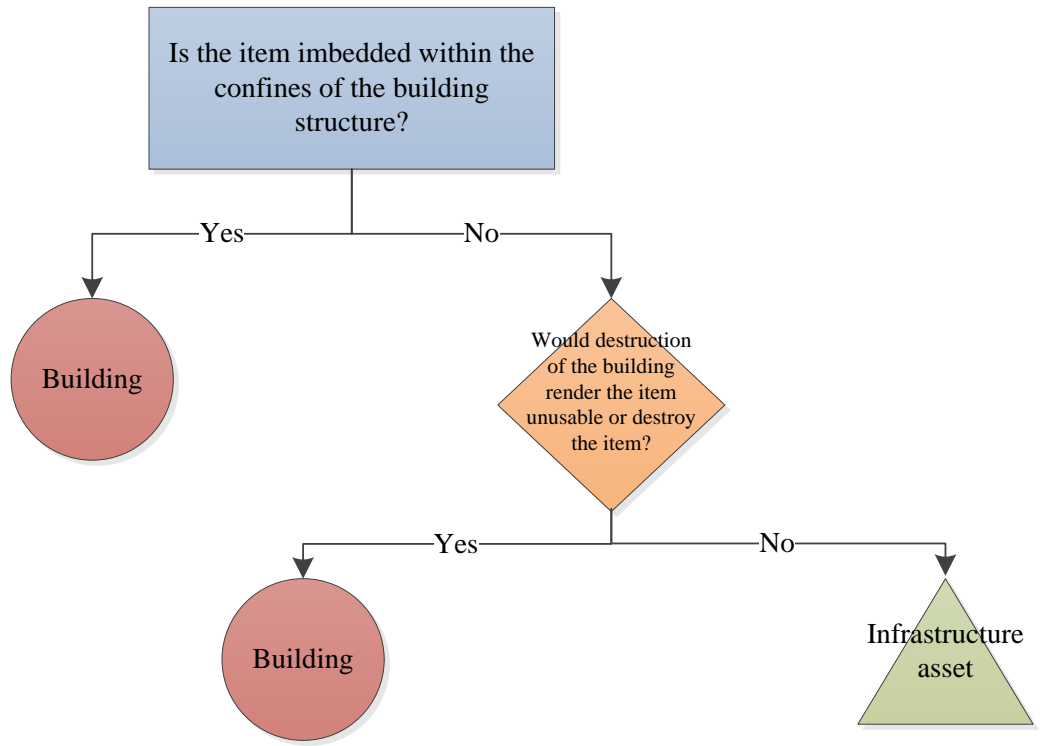
Case 1: Field Mission H is in need of installing a Fuel Distribution System; the Eng Section decides to order the system from the available System Contract (for example AMCA Hydraulic Fluid Power - PD-C0245-00); the Fuel Distribution System is composed of the following modules: fuel pumping assembly portable station (150 liters/min) and 2x1000 gallons fuel bladders. The system arrives at the mission (PMS assigns a barcode to the system and reports it under Galileo IMS) and the ENG staff installs it as per provided installation manual including all the necessary piping connections.

Case 2: Field Mission J is in the need of installing a Fuel Distribution System; the Eng Section prepares the project requirements and sends them to Procurement to initiate the bidding exercise. The Project includes the design, provision, installation and commissioning of the complete system. Procurement awards the contract to Company W. The project requirements include the following 2 automatic fuel distribution pumps, underground fuel tanks, oil separator system, concrete retainer basin for fuel storage and roof shed. The Company completes the installation and hands it over to Mission J (No barcode and/or report done in Galileo).

4.2 Criteria to distinguish building from infrastructure assets

- Upon installation of the item, is the majority of the item imbedded within the confines of the building structure? If yes, the item is part of the building, if no
- Would destruction or demolition of the building render the item unusable or destroy the item altogether? If yes, the item is part of the building, if no, it is an infrastructure asset.

Flowchart – Building versus infrastructure assets



By way of **example**, assume the item in question is communication cables that originate within the interior of a building and then run externally from one building and terminate on the interior of another. Regardless of whether the cables are either buried in the ground or strung from poles, it is assumed that it has already been determined that the cables are not machinery and equipment. If the majority of the communication cables are located outside of the buildings, the communication cables should be considered an infrastructure asset, unless it is determined that the removal or destruction of one or more of the interconnecting buildings would render the communication cables permanently unusable or would destroy them all together. Also note that if the identical communication cables are located throughout the interior of the building, the communication cables would be classified as a building.

Example – Buildings versus infrastructure assets – guard post:

Field Mission J has decided to add, adjacent to a UN building, a standalone guard post with no intention of removing it. The guard post is cemented into the ground and houses security personnel and equipment. The construction of a guard post in total will cost \$122,000 including the labor and materials. Field Mission J has determined:

- (1) The guard post though adjacent to the building, is not imbedded within the confines of the building structure; and
- (2) If the building is destroyed, the guard post would not be completely destroyed however it would be unusable because it would no longer serve a purpose, since there are no other UN buildings in the area.

As a result the United Nations concludes the guard post will be classified as a building. Also see *Flowchart – Building versus infrastructure asset*.

5 Recognition of infrastructure assets

5.1 Initial recognition

Assets are resources:

- Controlled by the United Nations as a result of past events; and
- From which future economic benefits or service potential are expected to flow to the United Nations.

An asset shall be **recognized** as an item of infrastructure assets under IPSAS if, and only if **all** of the following conditions are met:

- It is probable that future economic benefits or service potential associated with the item will flow to the United Nations;
- The cost or fair value of the item can be measured reliably;
- The asset has a useful life of more than one year; and
- The asset meets the minimum established cost threshold of USD 100,000 or more per unit.

In accordance with IPSAS 17, it may be appropriate to aggregate individually insignificant items for purposes of applying the minimum established cost threshold. Refer to the catalogue of infrastructure assets which lists assets, unit of measure and how that asset should be grouped for purposes of determining whether it meets the recognition threshold of USD 100,000. If items of infrastructure assets do not meet the threshold levels, they will be **expensed**.

Control over assets arises when the United Nations can:

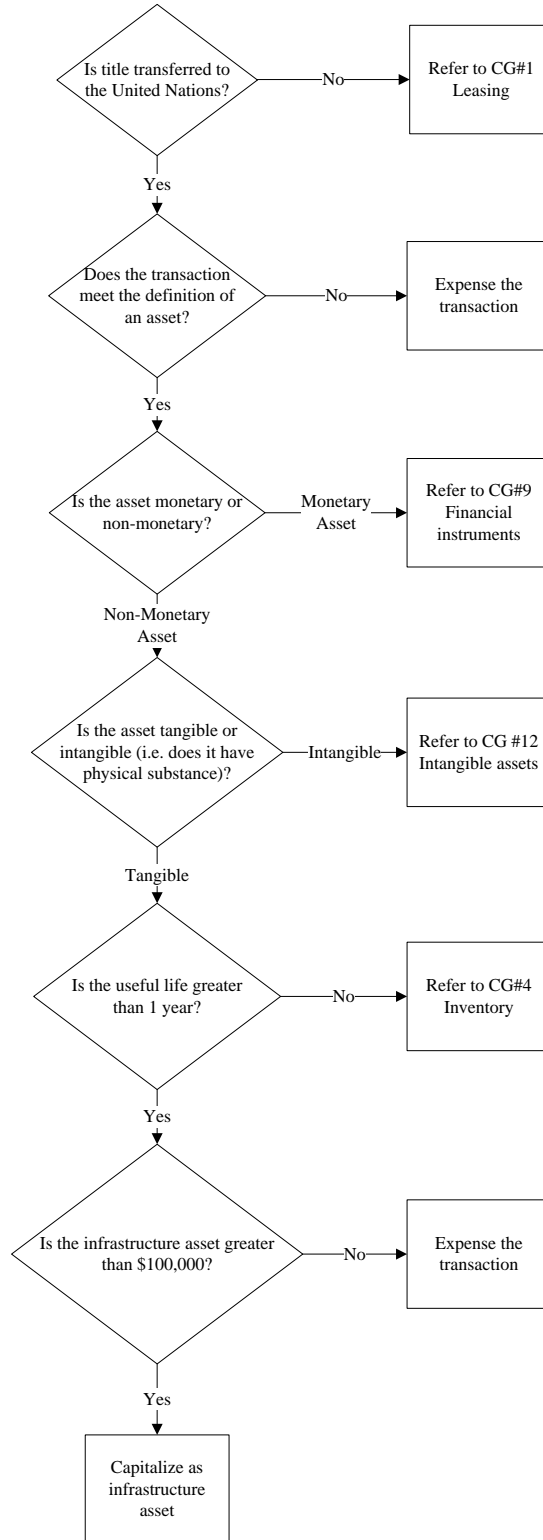
- Use or otherwise benefit from the asset in pursuit of its objectives; and

- Exclude or otherwise regulate the access of others to that benefit.

A significant factor in deciding whether project assets will be capitalized as infrastructure assets in the books of the United Nations or not, is based on the determination of who controls these assets. We refer to CG #5 *Funding Agreements* for a detailed discussion regarding project assets.

Since infrastructure assets are generally **self-constructed**, all assets under construction are reflected in the statement of financial position at the stage of completion of the asset. Once the infrastructure asset under construction becomes “available for use”, then it should be reclassified to the correct asset class. “Available for use” is determined to be when the physical construction of the asset is complete even though routine administrative work might still continue. For **acquired infrastructure assets** the date of recognition is determined by the applicable Incoterms if the shipment is not subject to installation by the vendor. We refer to CG #2 *The delivery principle*. When goods are shipped subject to installation by the vendor the assets are only recognized upon completion of installation. **Donated infrastructure assets** are recognized on the acquisition date.

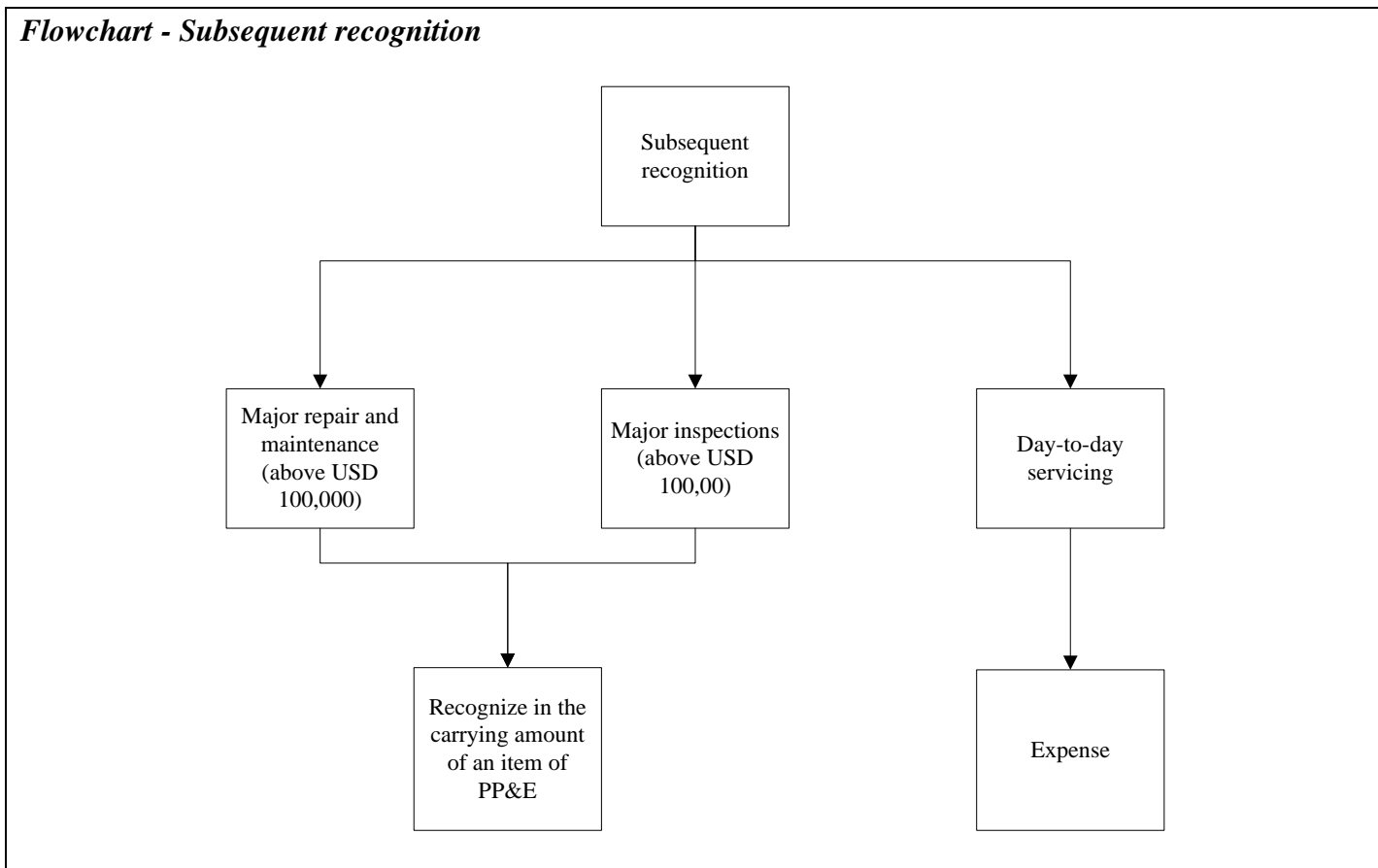
Recognition of infrastructure assets



5.2 Subsequent recognition

The **recognition criteria** used in the subsequent recognition of infrastructure assets are identical to that used in initial recognition.

Flowchart - Subsequent recognition



5.2.1 Major repair and maintenance

If the United Nations recognizes in the carrying amount of an item of infrastructure assets the cost of a **replacement** for part of the item (e.g. a repair and maintenance above USD 100,000), then it derecognizes the carrying amount of the replaced part regardless of whether the replaced part had been depreciated separately. If it is not practicable for the United Nations to determine the carrying amount of the replaced part, it may use the cost of the replacement as an indication of what the cost of the replaced part was at the time it was acquired or constructed.

The United Nations does not recognize in the carrying amount of an item of infrastructure assets the costs of the day-to-day servicing of the item. Day-to-day servicing generally includes repair and maintenance costs, such as the cost of labor and consumables, and may include the cost of small parts. These costs are recognized in the statement of financial performance as incurred.

5.2.2 Major inspections

A condition of continuing to operate an item of infrastructure assets (for example, roads) may be performing regular **major inspections** for faults regardless of whether parts of the item are replaced. When each major inspection is performed, its cost is recognized in the carrying amount of the item of infrastructure assets as a replacement if the recognition criteria are satisfied and it meets the threshold of above USD 100,000. Any remaining carrying amount of the cost of a previous inspection (as distinct from physical parts) is derecognized. If necessary, the estimated cost of a future similar inspection may be used as an indication of what the cost of the existing inspection component was.

Example 1 – Major inspections

This is the first year that a waste water treatment infrastructure asset requires major inspections for faulty operation. The inspection activities consist of checking liquid levels, flow monitoring, visual inspection of treatment tanks, and sewer system inspections to evaluate the conditions of pipes.

The inspection costs amount to \$150,000 and will be recognized in the carrying amount of the waste water treatment system because it meets the recognition criteria outlined in section 5.1 and is above the \$100,000 threshold. Additionally, because this is the first year that a major inspection occurred, there are no costs of previous inspections to be derecognized. The \$150,000 of inspection costs will be depreciated over the shorter of the period until the next inspection or the remaining life of the waste water treatment infrastructure asset.

Example 2 – Major inspections

8 years have passed and the waste water treatment infrastructure asset per example 1 above is due for another inspection. At this time, the inspection will cost \$160,000. The inspection cost will be recognized in the carrying amount of the waste water treatment system because it meets the recognition criteria outlined in section 5.1 and is above the \$100,000 threshold. The carrying amount of the previous inspection is \$30,000 and will need to be derecognized.

As a result the UN will derecognize the \$30,000, resulting in a loss, in the statement of financial performance. The \$160,000 of inspection costs will be depreciated over the shorter of the period until the next inspection or the remaining life of the waste water treatment infrastructure asset.

6 Measurement of infrastructure assets

After initial recognition of infrastructure assets in the statement of financial position, all assets, including infrastructure assets, recognized in the financial statements of the United Nations should be measured at cost, referred to as the cost methodology, (defined under section 6.1.1) when first recognized, except for items donated to the United Nations. Such goods should be measured at fair value. However, due to system limitations with regards to capturing all infrastructure project costs, the United Nations has determined it appropriate to apply two approaches to valuing infrastructure assets in the years following initial

recognition. These two approaches will be in effect until the United Nations has fully transitioned onto Umoja. Until then, peacekeeping will use the replacement cost methodology to measure infrastructure assets and non-peacekeeping³ will measure infrastructure assets using the cost methodology.

Details on each aspect are as follows:

6.1 Initial measurement

As mentioned above, peacekeeping assets are recognized using the replacement cost methodology (pre-Umoja environment), and non-peacekeeping assets are recorded at cost, when first recognized in the financial statements with the exception of donated items, which are valued at fair value. Whether an infrastructure asset is self-constructed or an acquired asset does not impact the measurement methodology.

6.1.1 Replacement Cost

Peacekeeping will use **replacement cost** to measure infrastructure assets. Replacement cost can be calculated by collecting construction cost data, utilizing in-house cost data (if it exists), or using external cost estimators.

Replacement cost data has been derived for the opening statement of financial position, though as noted in section 3, replacement cost was adjusted downward to reflect the effects of depreciation on the asset. Initially the United Nations will use replacement cost data compiled for purposes of the opening statement of financial position, modified for factors, such as inflation, size, location, etc... to determine replacement cost for a particular infrastructure asset. Alternatively, if there is no similar infrastructure asset in the opening statement of financial position or it is determined replacement cost should be reassessed the United Nations will calculate replacement cost for a particular infrastructure asset constructed or acquired after the opening statement of financial position.

6.1.2 Cost measurement

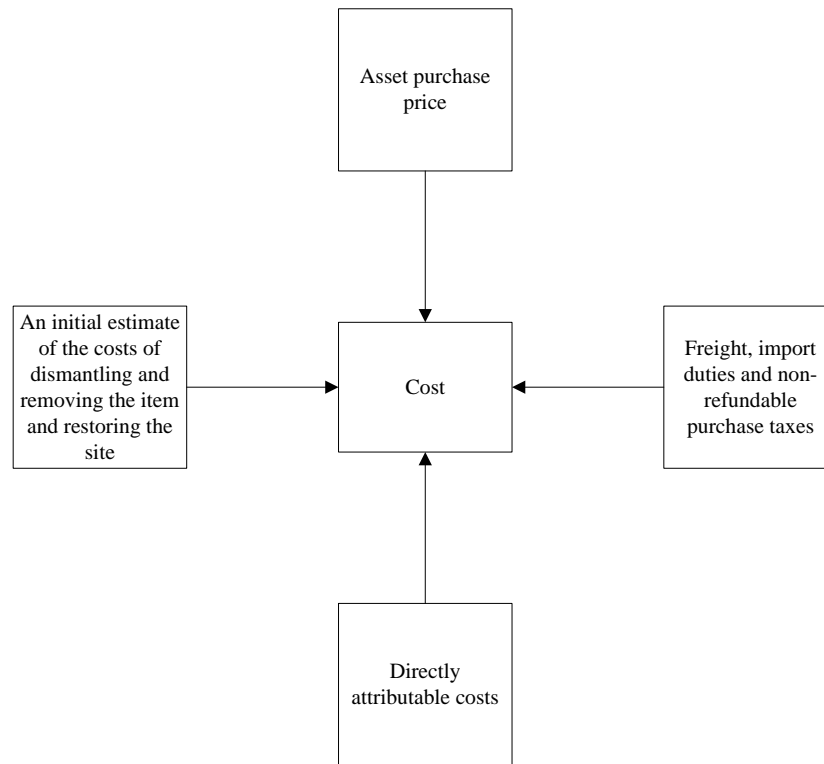
Costs used in the measurement of infrastructure assets include costs incurred to acquire or construct an infrastructure asset and costs incurred subsequently to add or replace part of it. When referring to the “cost methodology”, the following items are included:

- **Any directly attributable costs** to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management, including costs related to construction materials, and labor;
- The **purchase price**, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates;

³ Certain OAHs and RCs may not have systems in place to allow for application of the cost methodology. Those OAHs and RCs will also continue to use the replacement cost methodology.

- **The initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.**

Flowchart – Cost measurement



When determining the cost of an asset, **associated costs** such as freight, import duties, insurance and other may be determined by applying a standard cost to the cost of an acquired asset.

Peacekeeping operations will use 20% for the standard cost methodology. This percentage will be updated going forward. However, actual associated costs need to be captured in order to support the applied standard cost percentage which is reviewed on a yearly basis. Non peacekeeping operations will use actual associated costs; no standard cost percentage will be applied.

6.1.2.1 Directly attributable costs

The cost of a self-constructed asset and an acquired asset comprises **any costs directly attributable** to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

IPSAS 17 allows capitalization of costs to take place only in respect of the period in which the activities necessary to bring the asset to location and condition necessary for it to be capable of operating in the

manner intended by management are being undertaken. Thus capitalization should cease when substantially all of the activities necessary to get the asset “available for use” are complete, even if the asset has not yet been brought into use. “Available for use” means when the physical construction of the asset is complete even though routine administrative work might still continue.

Examples of **directly attributable costs** are:

- 1) Costs of employee benefits⁴ arising directly from the construction of the infrastructure asset;

IPSAS 17 is clear that only those directly attributable labor costs (employee benefits) that relate to the time spent by employees on constructing the specific asset should be capitalized. If a site engineer spends thirty percent of his time on a particular development project, then only thirty percent of his employee cost should be capitalized as part of the infrastructure asset’s cost. An appropriate time sheet system is essential in capturing the necessary data.

Employee benefits are defined in IPSAS 25 as all forms of consideration given by the United Nations in exchange for service rendered by employees. The types of benefit include:

- Short-term employee benefits;
- Post-employment benefits;
- Other long term benefits; and
- Termination benefits.

- 2) Direct material costs;
- 3) Costs of site preparation;
- 4) Initial delivery and handling costs;
- 5) Installation and assembly costs;
- 6) Costs of testing whether the asset is functioning properly; and
- 7) Professional fees.

Professional fees should only be capitalized as part of the cost of an asset when they relate directly to the construction of the asset. Therefore, costs of aborted plans should not be capitalized.

⁴ We refer to CG #8 Employee benefits for a detailed discussion of employee benefits.

6.1.2.2 Purchase price

Purchase price is the price paid, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.

6.1.2.3 Dismantling and removal costs

Dismantling and removal costs include the initial costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which the United Nations may incur either when the item is acquired. We refer to CG# 7 *Provisions* for the recognition criteria of provisions.

6.1.2.4 Costs not capitalized as part of an asset

Examples of costs that are not included in the measurement of an item of infrastructure assets are:

- Costs of conducting business in a new location (including costs of staff training);

IPSAS 17 does not permit capitalization of training costs as they are operating costs rather than directly attributable to an infrastructure asset. This is because as operatives may leave on short notice, their training costs would not meet the definition of an asset and, therefore, may not be capitalized since the future economic benefits/service potential is not controlled by the United Nations.

- Administration and other general overhead costs;

Only the costs that are directly attributable to the infrastructure asset, and not the general operating costs may be capitalized. This is different from IPSAS 12 which specifies that the cost of inventories include costs of conversion. Costs of conversion include a systematic allocation of fixed and variable production overheads. Fixed production overheads are indirect costs of production and include depreciation and maintenance of factory buildings and equipment and the cost of factor (but not office) management and administration.

It is not permitted to capitalize in infrastructure assets the general overheads where such costs would have been incurred whether the asset was constructed or not. As a general rule in such situations only incremental costs that would have been avoided had the asset not been constructed can really be directly and conclusively attributed to bringing the asset to its working condition. For example, the cost of a temporary office on the site of development, that would not have been incurred but for the project, should be capitalized because it is both an incremental and a direct cost that is attributable to bringing the asset to the condition necessary for it to operate in the manner intended by management.

- Day-to-day servicing of the infrastructure asset;
- Costs of relocating or reorganizing part or all of the United Nation's operations;
- Internal mark-ups (i.e. margin increases within the same reporting entity if this applies); and

- Cost of abnormal amounts of wasted material, labor, or other resources.

6.1.3 Donated goods – Fair value measurement

With regard to measuring the fair value of donated infrastructure assets⁵, the following procedures are recommended in **descending** order of best practice:

- The analyst should attempt to obtain a market price for similar asset;
- If market prices are not practically available, the analyst should reference recent acquisition costs for recent similar item;
- If prices cannot be obtained from the market or internal purchasing data, the analyst should solicit an indication of value or cost from donor. In this instance, the analyst needs to assess the reasonableness of the data provided and if deemed reasonable, use the provided value or cost as a representation of fair value;
- If none of the above methods can be relied upon, an alternative procedure to determine the best value to assign to the infrastructure asset needs to be identified. For example, inquire from other agencies with similar experience in valuing such in kind items donated to them and retain such inquiries as alternative proof of documentation for audit; and
- Lastly, if the infrastructure asset in question is thought to have significant values, solicit the services of a third party a valuation expert which may determine replacement cost is an appropriate valuation methodology.

6.2 Subsequent measurement

Infrastructure assets are subsequently depreciated and could be subject to impairment.

6.2.1 Depreciation

The depreciable amount of an asset is allocated on a straight line basis over its useful life (see section 6.2.1.1).

In accordance with IPSAS Policy Framework and as agreed with the BoA, depreciation of an asset **begins** when the UN has obtained control over the asset in accordance with Incoterms. The UN will depreciate the asset as of the 1st day of the month the control over the asset is obtained by the UN.

Depreciation of an asset **ceases** when the asset is fully depreciated or derecognized.

⁵ This is not referring to right to use arrangements, those arrangements are addressed in CG#1 *Leasing*.

Example – Depreciation applied on straight line basis

An infrastructure asset is constructed for \$124,000. The control of the infrastructure asset is obtained by the UN at the beginning of 2010. Its useful life is estimated to be 10 years. Its residual value is estimated to be \$0. The depreciation method to be used is straight-line. At the end of its useful life, it is donated to a local non-governmental organization (NGO).

Asset Record: Infrastructure assets		
Acquisition Date	2 January, 2010	
Acquisition Cost (USD)	124,000	
Useful Life (years)	10	
Residual Value (USD)	0	
Depreciation Method	SL	
Annual Depreciation (USD)	12,400	
Depreciation Charged:		End of Year Carrying Amount:
2010	12,400	111,600
2011	12,400	99,200
2012	12,400	86,800
2013	12,400	74,400
2014	12,400	62,000
2015	12,400	49,600
2016	12,400	37,200
2017	12,400	24,800
2018	12,400	12,400
2019	12,400	0
Impairments:		
Disposal:		
2020	0	Given to Agency XYZ

Example – Depreciation applied on straight line basis (middle of the year)

A transport infrastructure asset, retaining wall, is constructed for \$135,000. The control of the asset is obtained by the UN on July 20th, 2010. Its useful life is estimated to be 10 years and its residual value to be \$0. The depreciation method to be used is straight-line. At the end of its useful life, it is donated to a local non-governmental organization (NGO).

The depreciation of the retaining wall begins when the UN gains control over it (i.e. July 20th, 2010). As illustrated below, depreciation is charged on an annual basis and commences in the **month** of the transfer of control to the UN..

Asset Record: Infrastructure assets			
Acquisition Date	20 July, 2010		
Acquisition Cost (USD)	135,000		
Useful Life (years)	10		
Residual Value (USD)	0		
Depreciation Method	SL		
Annual Depreciation (USD)	13,500		
Depreciation Charged:	2010	6,750	End of Year Carrying Amount: 128,250
	2011	13,500	114,750
	2012	13,500	101,250
	2013	13,500	87,750
	2014	13,500	74,250
	2015	13,500	60,750
	2016	13,500	47,250
	2017	13,500	33,750
	2018	13,500	20,250
	2019	13,500	6,750
	2020	6,750	-
Impairments:			
Disposal:	2020	0	Given to Agency XYZ

Example – Depreciation charged from when an asset is ready for use

The United Nations constructs an infrastructure asset for its own use. Construction is completed on 1 November 20X6 but the United Nations does not begin using the machine until 1 March 20X7.

The United Nations should begin charging depreciation from the date the infrastructure asset is ready for use, as of 1 November 20X6. The fact that the infrastructure asset was not used for a period after it was ready to be used is not relevant in considering when to begin charging depreciation.

6.2.1.1 Useful life overview

Depreciation should be taken on a straight line basis over the useful life of the asset. Please find below an overview of applicable useful lives:

Asset Classes	Asset sub class	Estimated Useful Life (In Years)
Infrastructure assets	Telecommunication Energy Protection Transport Waste management Water management Recreation Landscaping	Set* (up to 50 years)
Assets under construction	Infrastructure assets under construction	No depreciation

Set* – Specific useful lives and residual values will be applied for high cost and/or specialized items of PP&E when application of the standard useful life for the class would result in non-compliance with IPSAS.

The residual value is deemed to be zero unless at the end of the asset's useful life the residual value is likely to be significant.

The useful life of an asset should be reviewed at least at each annual reporting date and modified if deemed necessary.

Example – Change in estimate of useful life

The United Nations constructed an asset on 1 January 20X0 for \$100,000 and the asset had a useful life of 10 years and a residual value of zero. The United Nations has charged depreciation using the straight-line method of \$10,000 per year. On 1 January 20X4, when the asset's net book value is \$60,000, the United Nations reviews the estimated useful life and decides that the asset will probably be useful for a further 4 years and, therefore, the useful life is revised to 8 years. The Organization should amend the annual depreciation to charge the undepreciated cost (namely, \$60,000) over the revised remaining useful life of four years. Consequently, it should charge depreciation for the next 4 years at \$15,000 per year.

6.2.2 Impairment

Impairment of an asset occurs when the recoverable amount of that asset is no longer representative of the carrying value in the financial statements. Specifically, when the recoverable amount of the asset is less

than the carrying amount, the United Nations should record an impairment loss. Refer to CG #3 *Impairment* for detailed guidance on this issue.

7 Derecognition

An infrastructure asset should be derecognized from the statement of financial position upon disposal of the asset. Upon disposal a gain or loss, representing the difference between the carrying amount of an asset and the proceeds from disposal of an asset, if any, should be recognized in the statement of financial performance as an item of revenue or expense.

There are various ways an asset may be disposed of. It may be due to the sale, transfer, or donation of the asset.

Example – Disposal

An infrastructure asset was constructed for \$124,000. The UN gains control of the infrastructure asset at the beginning of 2010. Its useful life was estimated to be 10 years. Its residual value is estimated to be \$0. The depreciation method to be used is straight-line. At the end of its useful life, it is donated to a local non-governmental organization (NGO). There will be no gain or loss on disposal because the infrastructure asset has been fully depreciated over its useful life. Below is the accounting treatment upon de-recognition.

Dr Accumulated depreciation (statement of financial position)	\$124,000
Cr Infrastructure asset (statement of financial position)	\$124,000

8 Disclosure requirements

IPSAS 17 *Property, Plant, and Equipment* require several **disclosures** in the footnotes of the financial statements. These include:

- Indication of the method of measurement (DRC) and the depreciation method used;
- Any contractual and capital commitments and restriction on titles. A number of United Nations-owned properties have servitudes, e.g. transferrable restrictions on use, that bar the construction of any buildings; such servitudes normally have no accounting impact under IPSAS but where significant will be disclosed in the notes to the IPSAS financial statements in the spirit of full disclosure; and
- The nature and effect of a change in an accounting estimate and impairment calculations (if any).

The financial statements shall disclose, for infrastructure assets recognized in the financial statements:

- The measurement bases used for determining the gross carrying amount;

- The depreciation methods used;
- The useful lives used;
- The gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period; and
- A reconciliation of the carrying amount at the beginning and end of the period showing:
 - Additions;
 - Disposals;
 - Impairment losses recognized in the statement of financial performance in accordance with IPSAS 21;
 - Impairment losses reversed in the statement of financial performance in accordance with IPSAS 21;
 - Depreciation; and
 - Other changes.

Example – Movement schedule

	Infrastructure assets	Total
At 1 January 20X1		
Cost or valuation		
Accumulated depreciation		
Net book amount		
Year ended 31 December 20X1		
Opening net book amount		
Additions		
Disposals		
Depreciation charge		
Closing net book amount		
At 31 December 20X1		
Cost or valuation		
Accumulated depreciation		
Net book amount		
Year ended 31 December 20X2		
Opening net book amount		
Additions		
Disposals		
Transfers		
Depreciation charge		
Closing net book amount		
At 31 December 20X2		
Cost or valuation		
Accumulated depreciation		
Net book amount		

The financial statements shall also disclose for infrastructure assets recognized in the financial statements:

- The existence and amounts of restrictions on title, and infrastructure assets pledged as securities for liabilities;
- The amount of expenditures recognized in the carrying amount of an infrastructure asset in the course of its construction;
- The amount of contractual commitments for the acquisition of infrastructure assets; and

- If it is not disclosed separately on the face of the statement of financial performance, the amount of compensation from third parties for infrastructure assets that were impaired, lost or given up that is included in statement of financial performance.

Capital commitments are future capital expenditures that the United Nations has committed to spend on long-term assets. In other words, the United Nations has launched a purchase order but transfer of ownership has not yet occurred. The United Nations should disclose capital commitments as required by IPSAS.

In order to collect and compile the necessary data to accurately disclose, the United Nations should look to the “unliquidated obligations” (UNSAS) regarding infrastructure assets. The “unliquidated obligation” is recognized under UNSAS when a purchase order is launched.

The “unliquidated obligations” (purchase orders launched) that do not qualify for liability recognition under IPSAS (we refer to CG #2 *The delivery principle*) (i.e. the infrastructure assets are not delivered yet in accordance with the applicable Incoterms) should be disclosed as capital commitments under IPSAS.

9 Case Study 1

Assume a well was recently constructed at a cost of \$100,000. At the date of the opening statement of financial position there is another similar well that has been owned for 15 years which needs to be recorded at fair value. Using the depreciated replacement cost method, the first step is to determine an estimate of the replacement cost of the subject well. The best indication of replacement is the \$100,000 cost of the recently acquired well. The next step is to calculate physical depreciation. Assuming that the well has a normal useful life of 25 years, depreciation is calculated by dividing the chronological age of the subject well (15 years) by the normal useful life of the well (25 years). The result is an estimate of physical depreciation of 60%. Upon review of the subject well, there is no indication of abnormal wear or physical damage and the subject well is expected to remain productive and useful for the foreseeable future. Therefore, it is concluded that no additional deductions for functional or economic obsolescence are necessary. The fair value of the subject well using the depreciated replacement cost method is:

<i>Depreciated replacement cost of a well</i>		
Replacement cost new		\$100,000
Less physical depreciation		
Chronological age	15 years	
Normal useful life	25 years	
Depreciation (as a % of RCN)		60%
Depreciation		<u>\$60,000</u>
Fair value using depreciated replacement cost		<u><u>\$40,000</u></u>

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