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**EPSAS issue paper on accounting treatment of intangible
assets**

*Paper by PwC on behalf of Eurostat
- for discussion*



**Accounting treatment of intangible
assets with a view to financial
reporting requirements under the
future European Public Sector
Accounting Standards (EPSAS)**

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1 Objectives of the issue paper

The aim of this issue paper is to summarise the approaches taken at the accounting standard level concerning the most important types of intangible assets in at least three Member States with high accounting maturity. It addresses the approaches which are being used under the existing international financial reporting frameworks - IPSAS, EU AR, IFRS and ESA 2010, including where relevant and applicable the Manual on Government Deficit and Debt(MGDD) - or are likely to be developed.

Based on the request from Eurostat, the issue paper addresses the following questions:

- What are the most important categories of intangible assets, and for which do problematic points/issues with regards to definition, recognition, measurement and presentation arise?
- Which accounting guidance is available for intangible assets in IPSAS, EU Accounting Rules, national accounting standards in three EU MSs, IFRS and ESA 2010 and, where relevant and applicable also MGDD?
- How do the analysed approaches in the three MSs differ from the treatment under IPSAS (please list the main elements/aspects)?
- For the main categories of intangible assets, what are the advantages and disadvantages of the existing approaches to recognition and measurement under the existing standards (IPSAS, EU AR, national accounting standards in EU MSs, IFRS and ESA 2010 and, where relevant and applicable, also MGDD)?
- What are the main difficulties/issues when accounting for the main categories of intangible assets?
- If/how a European harmonisation could be achieved in accounting for the main categories of intangible assets?
- Taking into account costs and benefits, what way forward in practice would PwC recommend for EPSAS on intangible assets?
- What were the consequences of the recommended way forward for a possible convergence between IPSAS/EPSAS and ESA 2010 (and where relevant and applicable, also MGDD)?

Based on the analysis performed, an approach for organising the future discussion on intangible assets with the EPSAS stakeholders is proposed.

2 Background of the issue

An intangible asset is by definition an asset without physical substance. In this respect, intangible assets differ from traditional 'physical' assets, as they cannot be held in the hand, or tagged with an inventory system. Under their current accounting practices, many public sector entities expense intangible items that would otherwise meet the definition of an asset. Starting to capitalise such assets is not easy, especially in view of their specific intangible nature. Because they have no physical substance, one of the key challenges is to identify the assets in the first place, and then maintain a detailed intangible assets register.

Intangible assets can either be acquired from third parties or generated internally. Typical examples of intangible assets include IT software and databases, trademarks and licenses, and certain development costs (e.g. the cost to develop an ERP system or a certain technology). Public sector entities currently mainly recognise intangible assets such as software, both acquired and internally developed, and may also recognise expenditure incurred on the development of military applications.

Intangible assets may not be one of the largest items on the government balance sheet, however they represent one of the categories of assets which bear public sector specificities. For example, the question arises whether a government may create assets as a result of its unique powers and rights, such the power to tax, the power to issue licenses or the power to regulate access to the benefits embodied in intangible resources like the electromagnetic spectrum. It is often difficult to determine when such powers give rise to a right that is a resource and asset of the entity. But the question is worth being asked. For example, European governments have recently collected relatively large revenues from sales of the mobile phone licenses. Among others, accounting for the emission trading scheme is a challenge too. This question - when related to the power to tax and collect compulsory social contributions - is also often debated in parallel with the recognition of certain obligations such as pensions for government employees and social benefits.

The Staff Working Document accompanying the report from the Commission to the Council and the European Parliament COM (2013) 114 assessing the suitability of IPSAS for the EU Member States, in Annex 7.1, points out that IPSAS 31 'Intangible assets' is among the standards that need adaptation, or for which a selective approach is needed.

The topic was subsequently analysed more in-depth in the 2014 PwC study¹. Member States have been asked to provide their comments on the application of IPSAS in an open way. The analysis of the comments made by Member States was targeted at assessing whether the accrual-basis IPSAS framework is a suitable reference point for the development of the accrual-basis EPSAS framework. Out of the 147 comments received from the Member States, three were related to intangible assets. Two of the three comments related to the complexity of implementation, and one comment mentioned that IPSAS 31 'Intangible assets' does not sufficiently address the specificities of a government. The PwC report does not see this concern as problematic for the development of EPSAS but recommends to treat it at a later stage of the EPSAS standard-setting process, leveraging from further discussions at IPSASB level and best accounting practices developed by certain

¹ See PwC, Collection of information related to the potential impact, including costs, of implementing accrual accounting in the public sector and technical analysis of the suitability of individual IPSAS standards, 2013/S 107-182395, 1 August 2014, p. 129.

Member States. Following this more in-depth study, IPSAS 31 'Intangible assets' is categorised among the standards that might be implemented with minor or no adaptation.

The question of the existence of sovereign powers and its impact on accounting will be further elaborated in Chapter 3 when assessing the elements included in the definition of an asset.

The measurement of certain intangible assets may also involve some difficulties. Intangible assets are measured initially at cost under IPSAS; the initial cost of the asset may be difficult to assess in certain circumstances. The ability to measure the cost of an internally developed intangible asset reliably is dependent on the existence of adequate administrative processes as well as a good cost accounting system. Another important element regarding measurement is the ability to demonstrate the probability to receive benefits from the use of the asset going forward, either under the form of service potential or economic benefits, in order to justify the amount that is recognised as an asset. Due to the immaterial character of intangible assets, this aspect should be looked at more strictly.

Finally, while the cost model is largely used for measuring intangible assets, it is interesting to analyse whether measurement at fair value would in certain cases provide more relevant information to the reader of financial statements.

Presentation and disclosures may also be discussed, especially in view of the comparability objective of the EPSAS project.

3 Description of accounting guidance available in international accounting frameworks and in statistical rules

Accounting guidance available is discussed below, successively for the following accounting and reporting frameworks: IPSAS, EU Accounting Rules, IFRS and ESA 2010 (including references to the MGDD).

IPSAS rules are explained more in-depth, because IPSAS has been viewed a reference framework for the future EPSAS, and IFRS rules are similar in many respects. Particular attention is devoted on the fundamental discussion in the IPSASB Conceptual Framework on the criteria to be considered to determine when an intangible asset should be recognised, taking into account the unique characteristics of governments.

3.1 International Public Sector Accounting Standards (IPSAS)

3.1.1 Applicable standards

Accounting rules relating to intangible assets can be found in IPSAS 31 ‘Intangible assets’, IPSAS 21 ‘Impairment of non-cash generating assets’, IPSAS 26 ‘Impairment of cash-generating assets’ and the recent IPSAS 40 ‘Public sector combinations’.

Whereas IPSAS 31 addresses the general accounting requirements for intangible assets and is the relevant standard to deal with most of the situations regarding intangibles, impairment rules are explained in detail in two standards covering separately non-cash generating assets and cash-generating assets. IPSAS 40 addresses the accounting for intangible assets in the specific context of an acquisition of a business. This type of transaction is rare in a public sector environment and certainly within the general government sector.

The IPSASB conceptual framework addresses in Chapter 5 ‘Elements in Financial Statements’ fundamental principles relating to the recognition of assets, including the issue of government rights arising from sovereign power.

Finally IPSAS 33 ‘First-time adoption of accrual basis IPSAS’ allows some relaxation in accounting for intangible assets by public sector entities that apply IPSAS for the first time.

3.1.2 Scope and definition of an intangible asset

An intangible asset is defined in IPSAS 31 as ‘an identifiable non-monetary asset without physical substance. Identifiable means that the asset:

- (a) is either separable, is capable of being separated or divided from the entity and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so (examples include brands, internally developed software, technology, customer lists, etc.);
- (b) or arises from binding arrangement (including rights from contracts or other legal rights), regardless of whether those rights are transferable or separable from the entity or from other rights and obligations’ (for example in the case of patents or licenses).

The asset classes for intangible assets are not predefined under IPSAS (nor under IFRS). In practice the definition and scope of IPSAS 31 leads to the recognition of intangible assets such as purchased software, internally developed software, capitalised product development costs, intellectual property rights such as patents, licenses, copyrights, etc. The standard does not require an entity to recognise intangible heritage assets.

IPSAS 31 excludes from its scope powers and rights conferred by legislation, a constitution or equivalent means, i.e. sovereign power.

Emissions Trading Schemes

In December 2016, the staff of the IPSASB issued a paper providing information on Emission Trading Schemes (ETSs) and other government interventions that reduce emissions of greenhouse gases¹.

This document is not a pronouncement of the IPSASB and does not represent the views of IPSASB members. The paper describes government policy objectives and their economic impacts so as to provide a good foundation for the development of accounting options on ETS in the future. It provides background information on ETSs and is therefore to be considered as an interim resource to support IPSASB's potential future development of rules relating to ETSs as well as national standard setters, users and preparers when they consider accounting for ETSs.

Public sector entities may be administrators of an ETS or participants in an ETS. The IPSASB had a project on accounting for ETS involvement, primarily from the perspective of administrators. The International Accounting Standards Board (IASB) has a research project, Pollutant Pricing Mechanisms (PPM) which considers accounting by ETS participants. IPSASB has deactivated its ETS project and removed it from the work programme because the IASB's project is currently in the research pipeline, rather on its active research agenda. The IPSASB does not think it appropriate to develop accounting approaches for administrators in isolation from the development of approaches for participants.

The 2016 IPSASB staff background paper identifies four broad types of government intervention to reduce emissions of greenhouse gases: regulation (regulations to reduce pollution e.g. requiring the use of filters in polluting industries), funding (funding provided for emission reductions e.g. subsidies), taxation (mandatory tax that applies, for example, to actual emissions) or trading ETSs (over-the counter market or organised market). It should be noted that governments have the option to exchange and trade unused emission allowances (EA's), which are traded on both over-the-counter and regulated markets.

3.1.3 Recognition

Notwithstanding their specific nature, intangible items can generate future economic benefits or contribute to the future service potential of an organisation. As such they can be recognised as an asset and amortised, provided that they meet certain recognition criteria. Given the inherent nature of intangible assets, such recognition criteria are typically much stricter than for physical assets.

Under IPSAS 31, an intangible item should be recognised as an intangible asset if, and only if, all of the following criteria are met:

- It is identifiable, i.e. either it is separable (i.e. it can be sold, transferred, rented, licensed or exchanged) or it arises from legal or contractual rights.
- The public sector entity has present control over it, i.e. it has the power to obtain the future economic benefits or service potential flowing from the underlying asset and to restrict access of others to such benefits or service potential.
- It is probable that the future economic benefits or service potential will flow to the entity.
- The cost of the asset can be measured reliably.

The probability of expected future economic benefits or service potential should be based on management's best estimate, using reasonable and supportable assumptions that will exist over the useful life of the asset. The ability to sell the asset can, among other things, be demonstrated by the existence of a market for the output of the intangible asset, while the ability to use it internally can be demonstrated by its usefulness for the entity.

For internally generated intangible assets, the future economic benefits or service potential must actively be demonstrated. Additional recognition criteria therefore apply: only costs incurred in the development phase of an asset and which meet strict criteria are capitalised; costs incurred in the research phase (prior to achieving the development phase) as well as in the maintenance phase (after the development is completed) must be expensed.

Costs incurred in the development phase can only be capitalised if the entity can demonstrate all of the following (IPSAS 31 paragraph 55):

- The technical feasibility of completing the intangible asset so that it will be available for use or sale.
- Its intention to complete the intangible asset and use or sell it.
- Its ability to use or sell the intangible asset.
- How the intangible asset will generate probable future economic benefits or service potential.
- The availability of adequate technical, financial and other resources to complete the development.
- Its ability to measure reliably the expenditure attributable to the intangible asset during its development.

Sovereign powers

The definition of an asset requires that a resource that an entity presently controls must have arisen from a past transaction or other past event. Entities can obtain assets by purchasing them in an exchange transaction or developing them. Assets may also arise through non-exchange transactions, including through the exercising of sovereign powers, and governments are unique in the way that they have a number of these sovereign powers.

The power to tax and issue licenses, and other powers to access or deny or restrict access to the benefits embodied in intangible resources like the electromagnetic spectrum, are examples of sovereign powers and rights that may give rise to assets. In assessing when an entity's control of rights to resources arise, the following should be considered:

- (a) a general ability to establish a power;
- (b) establishment of a power through a statute;
- (c) exercising the power to create a right;
- (d) the event which gives rise to the right to receive resources from an external party.

An asset arises when the power is exercised and the rights exist to receive resources (IPSASB Conceptual framework 5.13). The rationale is explained in the Basis for conclusion (IPSASB Conceptual framework BC 5.17, 5.18).

It is often difficult to determine whether such powers give rise to a right that is a resource and asset of the entity (IPSASB Conceptual framework BC 5.17). A government's power to establish a right to levy a tax or fee, for example, often begins a sequence of events that ultimately results in the flow of economic benefits to the government. The IPSASB considered two opposite views as to when an asset arises from the powers and rights of government to levy a tax or fee. Under the first view, the government has an inherent power to tax at every reporting date and, therefore, the general ability to levy taxes or fees is an asset. Proponents of this view accept that such an asset is unlikely to be capable of faithfully representative measurement, but this should not deflect from an acknowledgement that government has a perpetual asset. The contrary view is that the power to levy taxes and fees must be converted into a right by legal means, and that such a right must be exercised or exercisable in order for an asset to come into existence. Many respondents to the IPSASB Consultation paper and Exposure draft supported this latter view. The IPSASB concluded that a government's inherent powers do not give rise to assets until these powers are exercised and the rights exist to receive service potential or economic benefits (IPSASB Conceptual framework BC 5.18).

Intangible assets identified in an acquisition

In January 2017, the IPSAS Board published IPSAS 40 ‘Public sector combinations’. For combinations that are acquisitions, the standard is largely inspired by its IFRS equivalent, IFRS 3 ‘Business combinations’.

In the public sector, these transactions raise different accounting issues from those encountered in the private sector. The standard classifies public sector combinations as either amalgamations or acquisitions. Amalgamations are combinations in which no party takes control of one or more operations and there is evidence that the substance of the combination is that of an amalgamation. For amalgamations, the standard requires use of the “modified pooling of interests” method of accounting, which is a variation of the pooling of interests method of accounting (also referred to as “merger accounting”), in which the amalgamation is recognised on the date it takes place. The principle of accounting continuity applies, i.e. the carrying amounts of the operations that combine are used in the combined financial statements, but unlike the pooling of interests method, no comparative information prior amalgamation is required.

For acquisitions, i.e. for transactions where one entity takes control over another entity and whose economic substance is not that of an amalgamation, IPSAS 40 requires use of the “acquisition” method of accounting, applying the same approach as in IFRS 3 ‘Business Combinations’. Following this method, assets, liabilities and contingent liabilities of the acquiree are recognised at fair value in the consolidated balance sheet of the acquirer at the date of acquisition, together with any non-controlling interest, and the results of the acquiree are reported in the consolidated statement of financial performance as from that date.

This is supplemented in IPSAS 40 with additional guidance for public sector specific situations. Specifically, the standard provides guidance regarding the accounting treatment of assets (and liabilities) identified in an acquisition. Although the application of this standard is less common in the public sector space, it should be noted that specific intangible assets may arise on an acquisition which would not meet the recognition criteria if internally developed or separately acquired. This may be for example the case for intangibles such as customer relationships, internally generated brands, favourable contracts, etc. These intangibles are recognised as assets and measured at their acquisition date fair value. Goodwill is then the excess of the consideration transferred over the fair value of the identifiable assets, liabilities and contingent liabilities acquired (positive difference). Any negative difference is recognised as a gain in surplus or deficit,

It should be noted that acquisitions are not common in the general government sector but are expected to occur within the scope whole-of-government accounts with (consolidated) government business enterprises, as a commercial substance behind the transaction can be expected.

3.1.4 Measurement

Initial measurement

The cost of a separately acquired intangible asset comprises its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates, as well as any directly attributable cost of preparing the asset for its intended use (e.g. employee benefit costs).

The cost of an internally generated intangible asset is the total of directly attributable costs incurred since the point when all the criteria are met for capitalisation.

Costs that are strictly excluded from capitalisation as intangible assets include:

- Internally generated goodwill (it is e.g. not separately identifiable).
- Internally generated brands, mastheads, publishing titles, lists of users of a service, and items similar in substance.
- Start-up, training, relocation/reorganisation, advertising and promotional costs.

Subsequent measurement

IPSAS 31 paragraph 71 considers two subsequent measurement methods for intangible assets, the cost model and the revaluation model. Each public sector entity therefore has an accounting policy choice to make.

Cost model

As per IPSAS 31 paragraph 73, after initial recognition, an intangible asset should be carried at its cost less any accumulated amortisation and any accumulated impairment losses.

The cost of a separately acquired intangible asset comprises:

- Its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.
- Any directly attributable cost of preparing the asset for its intended use.

In practice, the cost model is applied nearly without exception for subsequent measurement by public sector entities reporting under IPSAS (and IFRS).

Revaluation model

If the revaluation model is chosen, an intangible asset should, after initial recognition, be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated amortisation. Fair value should be determined by reference to an active market². Revaluations should be made with such regularity that at reporting date the carrying amount of the asset does not differ materially from its fair value (IPSAS 31 paragraph 74).

Paragraph 77 of IPSAS 31 makes it clear that it is uncommon for an active market to exist for an intangible asset, although this may happen. Examples may include freely transferable homogeneous classes of licenses or production quotas the entity has acquired from another entity. However an active market cannot exist for brands, patents or trademarks because each such asset is unique.

² An active is a market in which all the following conditions exist (a) the items traded within the market are homogeneous (b) willing buyers and sellers can normally be found at any time (c) prices are available to the public.

Amortisation and impairment

Amortisation

Intangible assets may have either finite or indefinite useful lives.

Intangible assets with finite useful lives, similar to fixed assets, are amortised over their useful life, which should be estimated at the time of acquisition. Amortisation should start when the asset is available for use. The amortisation method used shall reflect the pattern in which the asset's future economic benefits or service potential are expected to be consumed by the entity. Generally, the straight-line method is used (IPSAS 31 paragraph 96).

In some unusual circumstances (this may for example happen for certain brands), it may not be possible to define the period over which the future economic benefits or service potential of an intangible asset will be consumed. These intangibles are deemed to have an indefinite useful life; they are not amortised but tested for impairment at least annually. Positive evidence supporting the continued assessment of an indefinite useful life must be obtained each period.

The useful life of the intangible assets are reviewed at least once annually at each reporting date. An impairment loss occurs when the carrying amount of the asset is no longer covered by its future service potential or the future economic benefits it expects from its use.

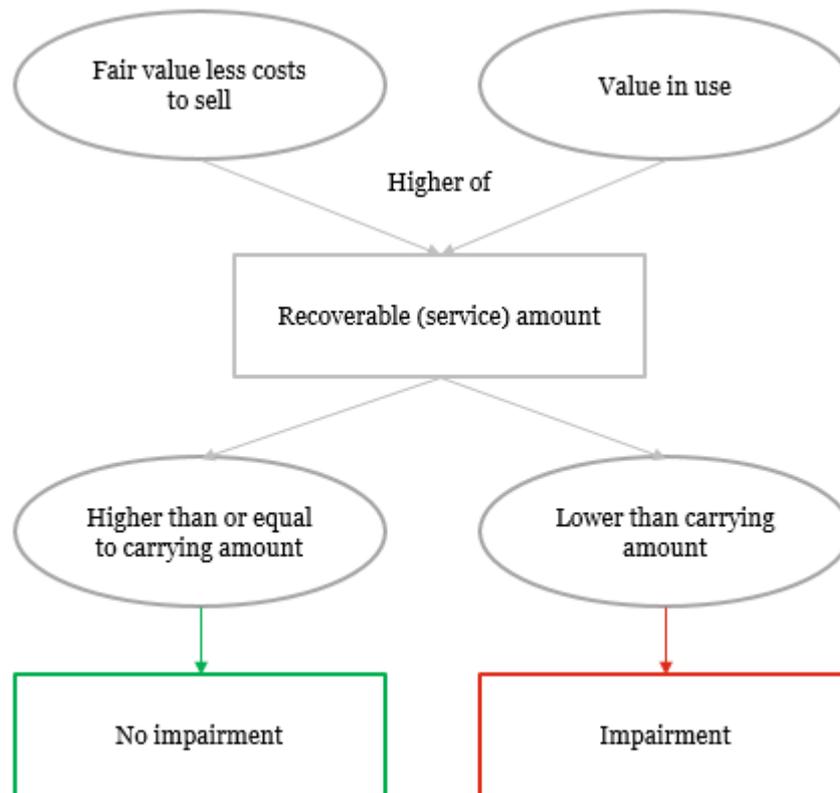
Impairment

Assets cannot be overstated in the statement of financial position. Consequently, an asset's carrying amount cannot exceed its recoverable (service) amount. If the systematic reduction in the asset's value through depreciation is not enough to bring the asset's value down to its recoverable (service) amount, an additional reduction in value should be recorded through the statement of financial performance.

Due to the inherent character of their activities, public sector entities mainly hold non-cash generating assets, but may also hold cash-generating assets. While cash-generating assets are generating measurable future economic benefits based on return from commercial transactions, the value of non-cash-generating assets is based on their service potential. Impairment rules are therefore included in two separate standards, IPSAS 21 and IPSAS 26. IPSAS 21 sets forth the guidance for the impairment of non-cash generating assets, whereby IPSAS 26 describes the impairment rules for cash-generating assets.

An asset is impaired when its carrying amount exceeds its recoverable service amount (for a non-cash-generating asset) or its recoverable amount (for a cash-generating asset). The recoverable (service) amount of an asset is defined as the higher of (1) its fair value less costs to sell and (2) its value in use. It is presumed that the entity will behave in a rational way: if the fair value less costs to sell is higher, the entity will sell the asset while, if it is the value in use which is higher, the entity will continue to use the asset.

Figure 1: The impairment logic



Indicators are used to define if a situation that may lead to an impairment has arisen. If any of those indicators is met, and only then, an estimation of the recoverable (service) amount needs to be made.

Intangible assets that are not subject to a systematic amortisation plan such as goodwill, intangible assets not yet available for use and intangible assets with an indefinite useful life are however tested for impairment annually (or more frequently if needed), irrespective of whether there is an indication that the asset might be impaired.

As the recoverable (service) amount of a long-term asset is the higher of the asset's fair value less costs to sell and value in use, let's look at each of the components of the definition.

- The fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable and willing parties, less the cost of disposal.
- Value in use represents the amount that the entity will receive if it continues to use the asset.

For a cash-generating asset, it is the present value of the estimated future cash flows, derived from the continuing use of the asset and its sale at the end of its useful life. Determining the value in use of a cash-generating asset therefore requires the entity to perform two main steps: estimating the future cash flows to be generated by the asset and discounting these cash flows by using an appropriate discount rate.

In practice, it is seldom possible to determine the cash flows generated by a single asset. Cash flows are therefore estimated for the lowest level of the entity for which cash flows can be determined independently of the cash flows generated by the other assets of the entity. That smallest identifiable group of assets held with the primary objective of generating a commercial return and capable of generating independent cash flows is called a cash-generating unit (CGU).

IPSAS 26 provides additional guidance on how to determine a CGU, how the future cash flows should be estimated and what discount rate should be used.

For a non-cash-generating asset, value in use is the present value of the asset's remaining service potential. Several options are available to define the value in use of a non-cash-generating asset:

1. Depreciated Replacement Cost (DRC) approach: this is the cost to replace the assets, depreciated to reflect the asset in its used condition. The replacement might be done through reproduction of the asset or replacement of its gross service potential, whichever cost is lower.
2. Restoration costs approach: this is the cost to restore the service potential of an asset to its pre-impairment level. The current cost of replacing the remaining service potential less estimated restoration of cost of the asset. The estimation of the remaining service potential is the lowest of the reproduction or replacement cost (see above).
3. Service units approach: The current cost of the remaining service potential of the asset before impairment is reduced to the number of service unit expected from the impaired asset.

3.1.5 Presentation and disclosures

Intangible assets should be presented on a separate line item on the statement of financial position. Further subclassification is not mandatory on that primary statement but is generally given in the notes in a way that is appropriate to the circumstances of the reporting public sector entity.

An entity reporting under IPSAS shall disclose specific information as defined in the standard IPSAS 31. Key disclosures include:

- The useful lives of the intangible assets.
- The amortisation methods used.
- The gross carrying amount and accumulated depreciation at the beginning and end of the period.
- A reconciliation of movements in the carrying value of assets over the accounting period.
- The aggregate amount of research and development expensed.
- The reasons supporting the assessment of an indefinite life (if applicable).

3.1.6 *First-time adoption of accrual basis IPSAS*

The standard IPSAS 33 'First-time adoption of accrual basis IPSAS' provides a number of transitional measures in order to facilitate the transition towards accruals accounting. In respect of intangible assets, a number of exemptions are provided during a relief period of three years:

- Should a first-time adopter not have recognised (certain) intangible assets under its previous basis of accounting, it is not required to recognise or measure these for reporting periods beginning on a date within three years following the date of adoption of IPSASs. Application of this exemption however affects the fair presentation and compliance with accrual basis IPSASs during the period of adoption. This means that the entity cannot claim IPSAS compliance as long as it does not fully comply, in all material respects, with IPSAS.
- A first-time adopter may elect to measure the identified intangible assets in the opening balance at fair value as deemed cost. This 'fair value as deemed cost' exemption does not affect fair presentation and compliance with accrual basis IPSASs during the period of adoption.

3.1.7 *IPSASB developments*

Accounting for natural resources has been identified as one of the topics to be addressed by the IPSASB during the 2019-2023 period. The draft Strategy and work plan 2019-2023 document presents the issue as follows:

“The issue of accounting for natural resources in the public sector is prevalent in many jurisdictions. Governments often have little idea of the value of natural resources until they are extracted. The rights to extract such resources are often granted to third parties who profit from their extraction. From a public interest perspective, this is an important issue, particularly in jurisdictions with resource-based economies because the recognition and measurement of these assets impacts their management and the benefits derived by constituents from their extraction. Lack of appropriate management of natural resources is a significant issue in some jurisdictions, that international accounting standards may help alleviate.”³

On the contrary, topics that were considered but not proposed for the IPSASB work plan 2019-2023 include the following⁴:

Public sector specific intangible assets

“Responses to the Consultation paper, IPSASs and government finance statistics (GFS) reporting guidelines, highlighted the view that differences remain between IPSASs and GFS with respect to the treatment of costs related to research and development (R&D). IPSAS 31 'Intangible assets' is based on IAS 38 'Intangible assets', and some constituents question if research has different objectives in the public sector giving rise to a need for a different accounting treatment - meaning that

³ Draft Strategy and work plan 2019-2023, IPSASB, page 13

⁴ Draft Strategy and work plan 2019-2023, IPSASB, pages 23-24

capitalization prior to development may be justifiable. Some also note that this project is related to project noted below on sovereign powers and their impact on financial reporting.”

Sovereign powers and their impact on financial reporting

“This potential project was identified during development of the public sector Conceptual framework project. Governments are unique in that they have a number of sovereign powers, for example, the power to issue permits, concessions and licenses or to impose taxation. Some constituents have raised the question of whether a government’s sovereign powers are intangible assets that should be measured and reported in the financial statements.“

3.2 European Union Accounting Rules (EAR)

European Union Accounting Rules constitute the accounting framework of the European Union institutions, including the European Commission (EC) and its agencies. EAR 6 ‘Intangible Assets’ retains the definitions and concepts of IPSAS 31 as regards the scope, recognition and measurement of intangible assets.

As these principles have already been explained under Section 3.1 International Public Sector Accounting Standards (IPSAS), they are not repeated here.

3.3 International Financial Reporting Standards (IFRS)

Under IFRS, three different standards should be considered in respect of the recognition of intangible assets: IAS 38 ‘Intangible assets’, IAS 36 ‘Impairment of assets’ and IFRS 3 ‘Business combinations’.

IAS 38 sets forth the general accounting principles for intangible assets, whereas IAS 36 details impairment rules applicable to long-term assets, including intangible assets and IFRS 3 defines the accounting treatment applicable to intangible assets acquired in a business combination.

The IFRS framework also includes one standard that deals with first-time adoption rules: IFRS 1 ‘First-time adoption of IFRS’.

IAS 38 Intangible assets

IPSAS 31 ‘Intangible assets’ is largely inspired by IAS 38 ‘Intangible assets’. Whether a public sector entity would apply IAS 38 or IPSAS 31 would have no significant impact on its financial statements. Apart from specific differences in terminology, both standards are largely identical in terms of scope, definition, recognition and measurement principles.

The main difference relates to the fact that the concept of service potential of an intangible resource is not retained under IAS 38 and is not one of the criteria that can justify asset recognition as this concept is specific to public sector entities.

As the IPSAS principles have already been explained under Section 3.1 and IFRS principles are similar, they are not repeated here.

IFRS 3 Business combinations

IFRS 3 provides detailed guidance on intangible assets acquired in a business combination. Under IFRS 3, all business combinations are acquisitions and the acquirer, i.e. the entity taking control over the other entity, recognises all identifiable assets, liabilities and contingent liabilities acquired at their fair value on its consolidated balance sheet.

This includes recognising, separately from goodwill, specific intangible assets such as customer-related intangible assets (customer relationships, brands, customer contracts), contract-based intangible assets and technology-based intangible assets (patented technology, computer software, database, etc.), including intangibles that would not meet the recognition criteria under IAS 38 but are identified specifically in the context of a business combination. Intangible assets acquired in a business combination are measured at their fair value determined at the date of acquisition.

IPSAS 40 'Public sector combinations' is largely inspired by IFRS 3 as regards acquisition accounting. As highlighted in section 3.1.3, acquisitions are rare in the public sector.

IFRIC 3 Emission rights

The IASB issued IFRIC 3 'Emission rights' in December 2004 but withdrew it in June 2005 with the intention to address the issue of emission rights and carbon reduction schemes in a broader way than the scope addressed under IFRIC 3.

Although this interpretation has been withdrawn, it may provide interesting information to governments that want to develop an accounting policy on emission rights. IFRIC 3 focused on the accounting to be adopted by participants in a 'cap and trade' scheme, although some of its requirements might be relevant to other schemes that are also designed to encourage reduced levels of emissions and share some of the features of a cap and trade scheme.

Typically in cap and trade schemes, a government (or government agency) issues rights (allowances) to participating entities to emit a specified level of emissions. The government may issue the allowances free of charge or the participant may be required to pay for them. Participants in the scheme are able to buy and sell allowances and therefore, in many schemes, there is an active market for the allowances. At the end of a specified period, participants are required to deliver allowances equal to their actual emissions.

The interpretation specified that:

- Rights (allowances) are intangible assets that should be recognised in the financial statements in accordance with IAS 38 'Intangible assets'.
- When allowances are issued to a participant by government (or government agency) for less than their fair value, the difference between the amount paid (if any) and their fair value is a government grant that is accounted for in accordance IAS 20 'Accounting for government grants and disclosure of government assistance'.

- As a participant produces emissions, it recognises a provision for its obligation to deliver allowances in accordance with IAS 37 'Provisions, contingent liabilities and contingent assets'. This provision is normally measured at the market value of the allowances needed to settle it.

It is worth noting that the EFRAG⁵ advised the European Commission not to adopt IFRIC 3 because of the undesired consequences of the accounting treatment proposed (accounting mismatches in terms of measurement - cost versus fair value - and in terms of presentation - gains and losses recognised in the income statement or in equity).

3.4 ESA 2010

3.4.1 Scope and definition

As explained in chapter 8 of the ESA 2010 methodology, the European sector accounts record flows and stocks in an ordered set of accounts describing the economic cycle from production and the generation of income, through its distribution and redistribution, and its use for final consumption. Finally the ESA records the use of what is left in the form of saving to provide for the accumulation of assets, both non-financial and financial⁶.

Chapter 7 of the ESA 2010 manual deals with balance sheets. Under ESA 2010 7.01, a balance sheet is a 'statement, drawn up for a particular point in time, of the values of assets economically owned and of liabilities owed by an institutional unit or group of units'.

Under ESA 2010 7.15, an economic asset is a store of value representing the benefits accruing to the economic owner by holding or using the entity over a period of time. It is a means of carrying forward value from one accounting period to another.

ESA 2010 makes a distinction between financial assets (denoted as AF) and non-financial assets (denoted as AN). Further a distinction is made between produced and non-produced non-financial assets. Produced non-financial assets (AN.1) are outputs from production processes. Non-produced non-financial assets (AN.2) are economic assets that come into existence other than through processes of production. They consist of natural assets, contracts, leases, licenses, permits, and goodwill and marketing assets (ESA 2010 7.24).

ESA 2010 identifies in Chapter 7 the following categories of assets that (may) have an intangible nature: intellectual property rights (AN 117), radio spectra (AN 2151), contracts, leases and licenses (AN 22) and purchases less sales of goodwill and marketing assets (AN 23).

⁵ European Financial Reporting Advisory Group.

⁶ See Regulation (EU) No 549/2013 of the European Parliament and of The Council of 21 May 2013 on the European system of national and regional accounts in the European Union, 26 June 2013, p.226

Figure 2: Categories of assets with an intangible nature under ESA 2010

Code	Non-financial asset
AN 117	Intellectual property rights
AN 1171	Research and development
AN 1172	Mineral exploration and evaluation
AN 1173	Computer software and databases
AN 17731	Computer software
AN 11732	Databases
AN 1174	Entertainment, literary or artistic originals
AN 1179	Other intellectual property products

Code	Non-financial asset
AN 21	Natural resources
AN 215	Other natural resources
AN 2151	Radio spectra
AN 2159	Other

Code	Non-financial asset
AN 22	Contracts, leases and licenses
AN 221	Marketable operating leases
AN 222	Permits to use natural resources
AN 223	Permits to undertake certain activities
AN 224	Entitlement to future goods and services on an exclusive basis

Code	Non-financial asset
AN 23	Purchases less sales of goodwill and marketing assets

The description of the categories and subcategories of assets above can be found in Annex 7.1 of the ESA 2010 manual and is presented in the table below.

Figure 3: Description of assets with an intangible nature under ESA 2010

Asset categories and subcategories	Code	Description of the categories and subcategories
Intellectual property rights	AN 117	Fixed assets that consist of the results of research and development, mineral exploration and evaluation, computer software and databases, entertainment, literary or artistic originals and other intellectual property products, as defined below, intended to be used for more than one year.
Research and development	AN 1171	Consists of the value of expenditure on creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and use of this stock of knowledge to devise new applications. The value is determined in terms of the economic benefits expected in the future. Unless the value can be reasonably estimated it is, by convention, valued as the sum of the costs, including those of unsuccessful research and development. Research and development that will not provide a benefit to the owner is not classified as an asset and is instead recorded as intermediate consumption.

<i>Mineral exploration and evaluation</i>	AN 1172	The value of expenditure on exploration for petroleum and natural gas and for non-petroleum deposits and subsequent evaluation of the discoveries made. This expenditure includes pre-licence costs, licence and acquisition costs, appraisal costs and the costs of actual test drilling and boring, as well as the costs of aerial and other surveys, transportation costs, etc. incurred to make it possible to carry out the tests.
<i>Computer software</i>	AN 11731	Computer programs, program descriptions and supporting materials for both systems and applications software. Included are the initial development and subsequent extensions of software as well as acquisition of copies that are classified as AN.11731 assets.
<i>Databases</i>	AN 11732	Files of data organised to permit resource-effective access and use of the data. For databases created exclusively for own use the valuation is estimated by costs, which should exclude those for the database management system and the acquisition of the data.
<i>Entertainment, literary or artistic originals</i>	AN 1174	Original films, sound recordings, manuscripts, tapes, models, etc., on which drama performances, radio and television programmes, musical performances, sporting events, literary and artistic output, etc. are recorded or embodied. Included are works produced on own-account. In some cases, such as films, there may be multiple originals.
<i>Other intellectual property products</i>	AN 1179	New information, specialised knowledge, etc., not elsewhere classified, whose use in production is restricted to the units that have established ownership rights over them or to other units licensed by such units.
<i>Natural resources</i>	AN 21	Non-produced assets that naturally occur and over which ownership may be enforced and transferred. Environmental assets over which ownership rights have not, or cannot, be enforced, such as open seas or air, are excluded. Consists of land, mineral and energy reserves, non-cultivated biological resources, water resources and other natural resources, as defined below.
<i>Other natural resources</i>	AN 215	This covers the electromagnetic radio spectrum (AN.2151) and other natural resources (AN.2159) not elsewhere classified.
<i>Radio spectra</i>	AN 2151	The electromagnetic spectrum. The leases or licences to use the spectrum are classified elsewhere (AN.222) if they meet the definition to be an asset.
<i>Other</i>	AN 2159	Other natural resources not elsewhere classified.
<i>Contracts, leases and licenses</i>	AN 22	Contractual agreements to undertake activities where the agreement confers economic benefits to the holder in excess of the fees payable and the holder can realise those benefits legally and practically. The asset recorded in category AN.22 represents the realisable potential holding gain value when the market price for the use of an asset or provision of a service exceeds the price prevailing in the contract, lease or licence, or the price that would be achieved in the absence of a contract, lease or licence. Contracts, leases and licences consist of assets that may arise from marketable operating leases, permits to use natural resources, permits to undertake specific activities, and entitlements to future goods and services on an exclusive basis.
<i>Marketable operating leases</i>	AN 221	Third-party property rights relating to non-financial assets other than natural resources, where the lease confers economic benefits to the holder in excess of the fees payable and the holder can realise those benefits legally and practically, through transferring them. The asset recorded in category AN.221 is the value to the holder of transferring the rights to use the underlying asset, i.e., the excess of the transfer price realisable over the amount payable to the permit issuer. Examples include where a tenant in a building has a fixed rental but the market rate of the rental is higher. If the tenant is able to realise the price difference through subletting, then the rights to realise the value represent a marketable operating lease asset.

<i>Permits to use natural resources</i>	AN 222	<p>Licences, permits and leases to use natural resources for a limited time that does not fully use up the economic value of the asset, where the agreement confers economic benefits to the holder in excess of the fees payable and the holder can realise those benefits legally and practically, for example through transferring them.</p> <p>The natural resource continues to be recorded on the balance sheet of the owner and a separate asset, representing the value to the holder of transferring the rights to use the resource, is recognised as a permit to use natural resources. The asset recorded is the value to the holder of transferring the rights to use, i.e., the excess of the transfer price above the amount payable to the permit issuer.</p> <p>Examples include where a tenant of land has a fixed rent but the market rate of the rent is higher. If the tenant is able to realise the price difference through subletting, then the rights to realise the value represents an asset.</p>
<i>Permits to undertake specific activities</i>	AN 223	<p>Transferable permits - other than to use natural resources or use an asset belonging to the permit issuer - that restrict the number of units engaging in an activity and allow the holders to earn near-monopoly profits.</p> <p>The asset recorded is the value to the holder of transferring the rights to use, i.e., the excess of the transfer price above the amount payable to the permit issuer. The permit holder must legally and in practice be able to transfer the permit rights to a third party.</p>
<i>Entitlement to future goods and services on an exclusive basis</i>	AN 224	<p>Transferable contractual rights to the exclusive use of goods or services. One party has a contract to purchase goods or services at a fixed price from a second party and is, legally and in practice, able to transfer the obligation of the second party to a third party.</p> <p>Examples include the transferable value of a football player under contract to a football club and the transferable value of exclusive rights to publishing literary works or musical performances.</p> <p>The asset recorded in AN.224 is the value to the holder of transferring the entitlement</p>
<i>Purchase less sales of goodwill and marketing assets</i>	AN 23	<p>The difference between the value paid for an institutional unit as a going concern and the sum of its assets, less the sum of its liabilities, for each item that has been separately identified and valued. The value of goodwill, therefore, includes anything of long-term benefit that has not been separately identified as an asset, as well as the value of the fact that the group of assets is used jointly and is not simply a collection of separable assets. Category AN.23 also includes identified marketing assets, such as brand names, mastheads, trademarks, logos and domain names, when sold individually and separately from a whole corporation.</p>

3.4.2 Recognition of non-financial assets

Stocks are the holdings of assets and liabilities at a point in time. Stocks are recorded at the beginning and end of each accounting period. The accounts that show stocks are called balance sheets (ESA 2010 1.85). The general principle is to record comprehensively all balance sheet items that are within the boundaries of the ESA system (ESA 2010 1.87).

Flows are recorded on an accrual basis; that is, when economic value is created, transformed or extinguished, or when claims and obligations arise, are transformed or are cancelled (ESA 2010 1.101). Following this general rule, fixed assets (including intangible assets) are recorded when they are acquired or developed.

However, following the ESA 2010 reporting logic, investments in non-financial assets such as intangible assets are also recorded as increases of government deficit (or reductions of government surplus).

3.4.3 *Measurement of non-financial assets*

Each item in the balance sheet is valued as if it were being acquired on the date to which the balance sheet relates. Assets and liabilities are valued at market prices on the date to which the balance sheet relates (ESA 2010 7.33).

The values recorded should reflect prices observable on the market on the date to which the balance sheet relates. When there are no observable market prices, which may be the case if there is a market but no assets have recently been sold on it, estimates should be made of what the price would be if the assets were acquired on the market on the date to which the balance sheet relates (ESA 2010 7.34).

Non-financial assets produced on own-account should be valued at basic prices or, if basic prices are not available, at the basic prices of similar goods, or, if this is not possible, at cost (ESA 2010 7.36). In addition to observed market prices, estimates based on observed prices or costs incurred, values of non-financial assets may be estimated by:

- (a) revaluing and accumulating acquisitions less disposals over the assets' lifetimes; or
- (b) the present value, i.e. the discounted value, of future economic benefits (ESA 2010 7.37).

Research and development costs

The value of research and development (AN 1171) is determined in terms of the economic benefits expected in the future. Unless the value can be reasonably estimated it is, by convention, valued as the sum of the costs, including those of unsuccessful research and development. Research and development that will not provide a benefit to the owner is not classified as an asset and is instead recorded as intermediate consumption.

While ESA 2010 requires that both research and development expenditure that bring economic benefits be capitalised, it does not require the capitalisation of marketing expenditure, trademarks and brand names.

Mineral exploration and evaluation

Mineral exploration and evaluation (AN 1172) are valued either on the basis of the accumulated amounts paid to other institutional units conducting the exploration and evaluation, or on the basis of the costs incurred for exploration undertaken on own-account. That part of exploration undertaken in the past that has not yet been fully reduced should be revalued at the prices and costs of the current period (ESA 2010 7.43).

Originals of intellectual property products

Originals of intellectual property products, such as computer software and entertainment, literary or artistic originals should be valued at the acquisition price when traded on markets. The initial value is estimated by summing their costs of production, appropriately revalued to the prices of the current period. If it is not possible to establish the value by this method, the present value of expected future receipts arising from using the asset is estimated (ESA 2010 7.44).

Other natural assets

Observed market prices for ... other natural resources (AN 215) are unlikely to be available, so they are usually valued at the present value of future returns expected from them (ESA 2010 7.54).

Contracts and licenses

Contracts, leases and licenses are recorded as assets when the following conditions are met:

- (a) the terms of the contract, lease or license specify a price for the use of an asset or provision of a service that differs from the prevailing market price; and
- (b) one party to the contract can realise the price difference.

The contracts and licenses can be valued by taking market information from the transfers of the instruments conferring the rights, or estimated as the present value of expected future returns at the balance sheet date compared to the situation when the legal agreement starts (ESA 2010 7.55).

The category covers assets that may arise from marketable operating leases, licenses to use natural resources, permits to undertake specific activities and entitlements to future goods and services on an exclusive basis (ESA 2010 7.56).

The value of the asset is equal to the net present value of the excess of the prevailing price over that fixed in the agreement. Other things being equal, this will decline as the period of the agreement expires. Changes in the value of the asset due to changes in the prevailing price are recorded as nominal holding gains and losses (ESA 2010 7.57).

Marketable operating lease assets are only recorded as assets when lessees exercise their rights to realise the price difference (ESA 2010 7.58).

Purchases less sales of goodwill and marketing assets

The balance sheet value of goodwill and marketing assets is the excess of the price paid at the time an institutional unit is sold, over the value recorded for its own funds, revalued for any subsequent reductions as the initial value is written down as an economic disappearance of non-produced assets (K.2). The rate of write down is in accordance with commercial accounting standards (ESA 2010 7.59).

3.4.4 Manual on government deficit and debt (MGDD)

Part IV of the MGDD provides additional guidance on the treatment of leases, licenses and concessions⁷

In particular the issue of the allocation of mobile phone licenses (VI.2) and the emission trading permits (VI.5) is explained in more detail. The MGDD addresses first the background to the issue and then explains the statistical treatment.

⁷ See Eurostat, Manual on Government Deficit and Debt, Part VI Leases, licenses and concessions, pages 309 to 366.

Mobile phone licenses

In most EU Member States, mobile phone licences (in most cases UMTS - Universal Mobile Telecommunications System, “3G”, then more recently “4G”) have been allocated to operators from 1999 onwards, through diverse methods according to country, including for free.

The electromagnetic spectrum (the radio waves) satisfies the definition of an asset in national accounts. Under ESA 2010, the radio spectrum is explicitly identified as a natural resource (AN 2151).

There is no specific mention for UMTS or mobile phone licences but chapter 15 (ESA 2010 15.23 to 15.30) covers leases on natural resources. If a government issues a permit which gives the control on the natural resource asset to its holder during an extended period, bearing associated risks and rewards, it may be recorded in the accounts of the license/permit holder (AN 222 “permits to use natural resources”) provided that “the transfer of risks and rewards results in a separate and transferable permit with a realisable value” (ESA 2010 15.28).

The licence must be transferable to a third party. Generally, these transactions have to follow a specific procedure. Similarly to other cases of licences, this may require a government authorisation, notably in order to assess the technical capacity of the acquirer to undertake the related activity, together with its financial strength. The contract may also foresee that the transaction must only take place through government and not directly between the agents involved in the transaction. Under these conditions, the licence could be considered transferable and an AN 22 asset is thus recognised in the accounts of the license/permit holder.

On the contrary, if the government has the right to oppose the transfer for any reason, or if the contract requires the permit holder to keep the licence until its extinction, no AN 22 asset is recognised in the accounts of the license/permit holder. Payments to government are recorded as rents (see ESA 2010 Table 15.3 - The recording of three different types of permits for the use of natural resources).

Figure 4: The recording of three different types of permits for the use of natural resources under ESA 2010

Table 15.3 — The recording of three different types of permits for the use of natural resources

Type of use	Method of recording
Permission for temporary use, possibly for a long time	Resource lease: rent (property income)
Control by user during an extended period, risks and rewards borne by the user, transferability of permit at a realisable value	Rent and creation of new asset for the right to use the natural resource
Use to extinction; permanent use (all risks and rewards borne by the user)	Sale of natural resource

Emission trading permits

Governments are increasingly turning to the issuing of emission allowances as a means of controlling total emissions. These allowances do not involve the use of a natural asset (there is no value placed on the atmosphere so it cannot be considered to be an economic asset) and are therefore classified as taxes even though the permitted “activity” is one of creating an externality. It is inherent in the concept that the allowances will be tradable and that there will be an active market

in them. The allowances therefore constitute assets and should be valued at the market price for which they can be sold.

The payments for emission allowances, issued by governments under cap and trade schemes, should be recorded at the time the emissions occur as taxes on an accrual basis. The timing difference between the payments received by government for the allowances and the time the emission occurs gives rise to a financial liability (accounts payable) for government and a financial asset (accounts receivable) for the holder. The difference between the pre-paid tax value of the permit and the market value of the permit represents a marketable contract (non-produced non-financial asset) for the holder. The creation and disappearance of the non-produced non-financial asset are recorded as another change in volume of assets in ESA reporting.

In practice, however, it can be assumed, for simplicity, that the time the permit is surrendered is the same as the time that emissions occur, as long as there is no significant lag between the two events and the lag is constant.

3.5 Comparison between the different accounting and reporting frameworks

The table below provides an overview of the main rules relating to intangible assets included in the accounting and reporting frameworks analysed.

Figure 5: Rules relating to intangible assets in the different accounting and reporting frameworks

	<i>IPSAS</i>	<i>EAR</i>	<i>IFRS</i>	<i>ESA 2010</i>
<i>Scope and definition</i>	Identifiable non-monetary asset without physical substance. Sovereign power in itself is not sufficient to demonstrate that an asset exists	Based on IPSAS 31	Similar to IPSAS, except for the concept of service potential	Categories of intangible assets defined
<i>Recognition</i>	Recognition criteria include identifiability of the asset, control over the asset, probability that the asset will generate future economic benefits or service potential and ability to measure the cost of the asset reliably	Based on IPSAS 31	Similar to IPSAS, except for the concept of service potential	Research and development costs are capitalised to the extent that economic benefits are expected in the future. Expenditures in intangible assets increase government deficit/reduce government surplus

<i>Measurement</i>	Initial measurement at cost. Subsequent measurement either using the cost model or the revaluation model (rare and possible only if an active market exists). Cumulative amortisation and, if any, impairment is deducted from the cost or revalued amount. Goodwill, assets not yet available for use and indefinite live intangible assets are not amortised but tested for impairment	Based on IPSAS 31	Similar to IPSAS, except that no standard exists for impairment of non-cash-generating assets	Assets are measured at current prices as if they were acquired at balance sheet date. No amortisation or impairment as such applies
<i>Presentation</i>	Presented separately on the face of the balance sheet	Based on IPSAS 31	Similar to IPSAS	N/A
<i>Disclosures</i>	Summary of accounting policies and details of balance sheet and profit or loss amounts or movements	Based on IPSAS 31	Similar to IPSAS	N/A

3.5.1 *Scope of the standard*

IPSAS, IFRS and EAR

The scope of IPSAS 31 ‘Intangible assets’ and IAS 38 ‘Intangible assets’ is similar. The scope of IPSAS 31 currently explicitly excludes the rights arising from sovereign power.

The scope of EAR 6 is based on the scope as defined under IPSAS 31.

ESA 2010 and IPSAS

ESA 2010 lists assets that (may) have an intangible nature (see 3.4.1). Many of these assets would also be considered intangible assets under IPSAS under either IPSAS 31 ‘Intangible assets’ or IPSAS 40 ‘Public sector combinations’, although the terminology might differ. In broad terms, the provisions of the respective frameworks would allow a pretty good alignment and limited scope differences between the EPSAS financial accounting based on IPSAS 31 and IPSAS 40 and the GFS reporting as defined by ESA 2010.

3.5.2 *Recognition and measurement*

IPSAS, IFRS and EAR

Under the respective frameworks (IPSAS, IFRS, EAR and ESA 2010), assets are recognised when (economic) ownership is transferred to the acquirer.

Additional specific requirements apply for the recognition of internally developed intangibles. Research costs are expensed while development costs that meet certain recognition criteria are capitalised. During the research phase, the probability that expenditures incurred will generate economic benefits (or service potential) is still too low; therefore such expenditures cannot be recognised as assets. Capitalisation only happens for expenditures incurred in the development phase when all the recognition criteria are met.

Under both IPSAS and IFRS intangible assets are measured initially at acquisition cost. Subsequently, both frameworks provide the choice between the cost model and the revaluation model. Both the concept of (acquisition) cost and revaluation are similar and would not lead to significant differences.

Revaluations are however possible only for assets for which an active market exists, which is expected to be rare. EAR only permit the use of the cost model.

IPSAS and ESA 2010

ESA 2010 requires capitalisation of both research and development costs to the extent that economic benefits are expected in the future. This is in contrast to IPSAS which only permits such an assessment to be made during the development phase of an intangible asset and requires all costs to be expensed during the research phase.

In terms of subsequent measurement, assets are measured at current prices as if they were acquired at the balance sheet date under ESA 2010. The measurement approach under ESA 2010 closely agrees with the revaluation method under IPSAS/IFRS when it is permitted (IPSAS and IFRS only permit the use of the revaluation model when an active market exists for the intangible asset, which is expected to be rare). However, as almost all reporting entities under both IFRS and IPSAS use the cost model for subsequent measurement, a difference can be expected in practice between the two sets of rules.

Under IPSAS/IFRS, any revaluation should be done at the individual asset level while more global evaluations can be used for the ESA 2010 reporting.

A possible convergence between IPSAS and ESA 2010 rules would be possible in rare cases only and would be valid for balance sheet measurement only.

A major difference between ESA 2010 and IPSAS stems from the calculation of their respective surplus/deficit calculations. Under ESA rules, acquisitions (or development) of intangible assets are recorded as capital expenditures within surplus/deficit in the period of acquisition. The full impact is taken in the year of acquisition. In contrast, under IPSAS, the impact on the statement of financial performance is taken over time through yearly depreciation expenses and/or impairments. Under ESA 2010 rules, the concept of impairment is not applied.

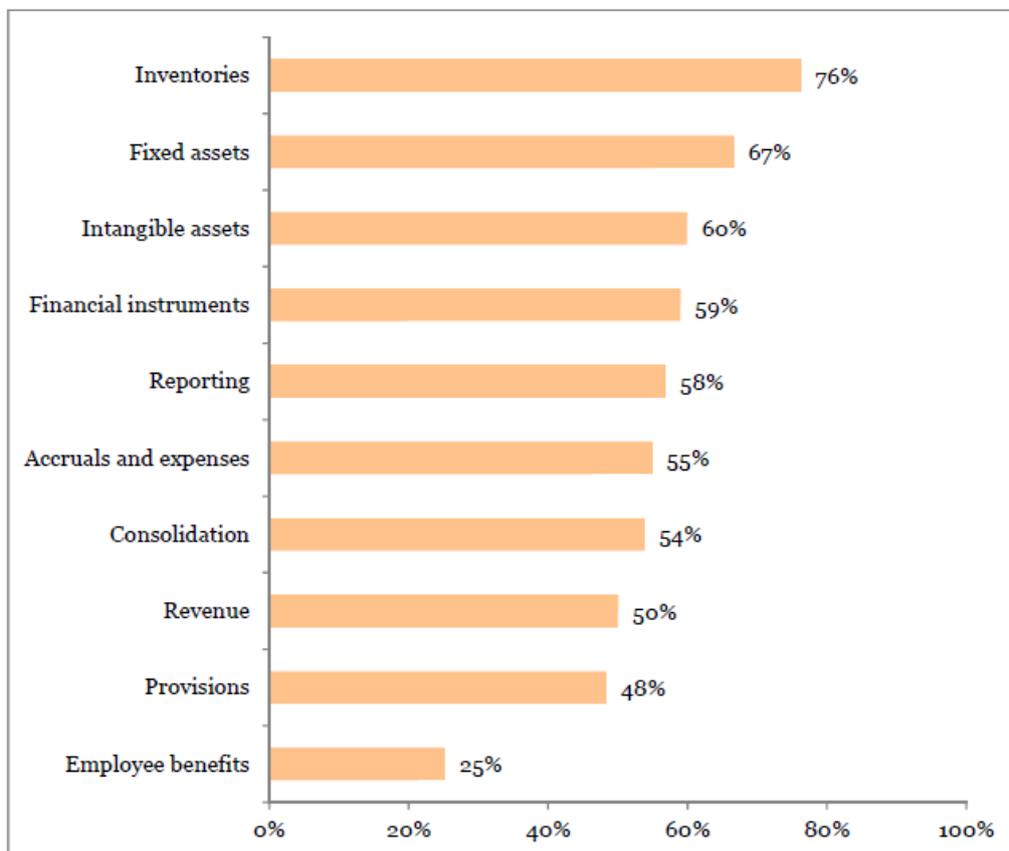
4 Description of the main types of intangible assets in selected EU Member States (United Kingdom, France, Sweden)

4.1 Overall accounting maturity for intangible assets in the EU

Figure 1 below is extracted from the 2014 PwC study. It gives an overview of the average accounting maturity score per accounting area across EU governments and highlights the areas which are more closely aligned with IPSAS requirements across the EU. It indicates an average maturity of 60% for the intangible assets, which puts it at the higher end together with the other non-monetary assets, such as fixed assets and inventories. The topics analysed in the impact assessment questionnaire were the treatment of internally developed intangible assets and of major licenses.

For the countries already reporting under accrual basis of accounting, the main challenge reported by the respondents is the treatment of costs incurred in respect of internal development.

Figure 6: Average accounting maturity per accounting area across the EU⁸



⁸ See PwC, Collection of information related to the potential impact, including costs, of implementing accrual accounting in the public sector and technical analysis of the suitability of individual IPSAS standards, 2013/S 107-182395, 1 August 2014, p. 96.

4.2 Selection of countries

Three different countries have been selected for a deeper analysis of the accounting treatment used for intangible assets. The table below gives an overview of the different categories of intangibles recognised by the selected countries and the importance of these assets in terms of value as compared to the balance sheet total.

For France and Sweden, the figures relate to the balance sheet of the central government as per 31 December 2016, whereas for the UK they relate to the consolidated balance sheet included in the whole-of-government accounts as per 31 March 2016. This difference in scope does not impact the relevance of our analysis.

Figure 7: Intangible assts in the balance sheet of the selected governments (UK, France, Sweden)

Asset category	United Kingdom		France		Sweden	
	Amount (in billion GBP)	% of balance sheet	Amount (in billion EUR)	% of balance sheet	Amount (in billion SEK)	% of balance sheet
Military development costs	27.1	1.6%	15.4	1.6%	-	-
Electromagnetic spectrum	-	0.0%	9.7	1.0%	-	-
Software, software development, licenses and other	5.9	0.3%	3.1	0.3%	0.9	0.6%
Total	33.0	1.9%	28.2	2.9%	0.9	0.6%

In general terms, the weight of the intangible assets in the balance sheet total is relatively limited (around 2 and 3% for the UK and France and below 1% for Sweden). The main difference is coming from military development costs which represents the biggest intangible asset for France and the UK. Sweden also capitalises military development costs but presents them as part of the tangible fixed assets together with military assets, including software systems relating to such assets⁹. The purpose is to present an aggregated view of assets related to defense equipment.

All three governments thus recognise military development costs (although classified in a different caption in Sweden) and software, both acquired and internally developed, whereas France is the only country that recognises intangible assets related to the electromagnetic spectrum.

4.3 Methodology

To analyse the approaches taken regarding the accounting treatment of intangible assets in selected Member States, PwC combined an analysis of publicly available information (financial statements, accounting policies) with responses obtained to a questionnaire addressed to government representatives. The first series of questions addresses the identification of intangible items and the related recognition criteria. The questionnaire then addresses the measurement of intangible assets with a view to financial reporting requirements for national purposes. The last questions focus on the challenges and approach in respect of first-time implementation of intangibles.

In the following pages, a summary of the results of our country-by-country analysis is presented.

⁹ No separate information on the amount of development costs related to military assets is available.

4.4 United Kingdom

Figure 8: Intangible assets of the UK government - Disclosure note 14¹⁰

Note 14. Intangible assets

Intangible assets 2015-16

	Military equipment £bn	Development expenditure £bn	Software £bn	Licences and other £bn	Total £bn
Cost or valuation:					
At 1 April 2015	30.3	11.0	7.7	11.0	60.0
Additions	1.8	0.7	0.2	0.9	3.6
Revaluations and impairments	0.3	-	0.1	-	0.4
Reclassifications	(0.1)	(0.1)	0.5	-	0.3
Disposals	(0.4)	(0.3)	(0.2)	(1.4)	(2.3)
At 31 March 2016	31.9	11.3	8.3	10.5	62.0
Amortisation:					
At 1 April 2015	(10.6)	(4.4)	(5.1)	(7.5)	(27.6)
Charged in year	(0.9)	(0.5)	(0.7)	(1.5)	(3.6)
Revaluations and impairments	(0.2)	-	(0.1)	(0.1)	(0.4)
Reclassifications	-	-	-	0.3	0.3
Disposals	0.3	0.2	0.2	1.6	2.3
At 31 March 2016	(11.4)	(4.7)	(5.7)	(7.2)	(29.0)
Carrying amount at 31 March 2015	19.7	6.6	2.6	3.5	32.4
Carrying amount at 31 March 2016	20.5	6.6	2.6	3.3	33.0

The intangible assets represent GBP 33 billion on a balance sheet total of GBP 1,742 billion for the financial year 2015- 2016, which is 1.9 % of the balance sheet total. Development expenditure on military equipment, which meets certain capitalisation criteria, is capitalised as an intangible asset. More than half of the amount (GBP 20.5 billion) consists of the capitalisation of development expenditure incurred in conjunction with the development of new military equipment and improvement of existing military equipment. Another 6.6 billion consists of development expenditure incurred which meets the IAS 38 recognition criteria and also includes the development of new military applications.

In general, the United Kingdom applies IFRS, adapted and interpreted for the public sector context, in its Whole-of-Governments accounts (WGA). The Financial Reporting Manual (FRM), which applies to all entities, and to funds, flows of income and expenditure and any other accounts that are

¹⁰ See UK Whole of Government Accounts year ended 31 March 2016, Note 14, HM Treasury

prepared on an accruals basis and consolidated in the scope of the WGA, set forth the accounting rules for intangible assets.

The UK broadly applies the IAS 38 (IPSAS 31) accounting rules for intangible assets. At initial recognition intangible assets are recognised at historical cost. Following initial recognition, i.e. for subsequent measurement, IAS 38 permits the use of either the cost or revaluation model for each class of intangible asset. Where an active (homogeneous) market exists, intangible assets other than those that are held for sale should be carried at current value in existing use at the reporting period date - that is, the cost option given in IAS 38 has been withdrawn and the current value should be based on the market value in existing use. Where no active market exists, entities should revalue the asset, using indices or some suitable model, to the lower of depreciated replacement cost and value in use where the asset is income generating. Where there is no value in use, the asset should be valued using depreciated replacement cost.

Expenditure on research and development is charged to the statement of revenue and expenditure in the year in which it is incurred, unless it meets the criteria set out under IAS 38 'Intangible Assets', in which case it is capitalised.

The UK government has recognised a deferred income liability for the 20 year contracts it has sold to companies for access to the spectrum (e.g. 3G and 4G licenses). These are included in trade and other payables in WGA and the income is released into the statement of revenue and expenditure on an annual basis.

Allowances from carbon reduction schemes are treated as intangible assets. Participation by reporting entities in the Carbon Reduction Commitment (CRC) Energy Efficient Scheme¹¹ gives rise to a liability related to emissions made. The liability is recognised for the obligation to deliver allowances to the CRC Registry equal to the emissions made. Purchased allowances give rise to an asset. Scheme assets are classified as either current or non-current intangible assets, or if held for the purpose of trading, as a current asset. The asset, whether classified as a current or as an intangible (current or non-current) asset is measured initially at cost. Scheme assets in respect of allowances are revalued at fair value where there is evidence of an active market. Until there is evidence of an active market, scheme assets in respect of allowances are measured at cost, as a proxy for fair value.¹²

The FReM therefore addresses the issue of emission trading schemes from the perspective of the participants, which can also be public entities, however not from the perspective of the scheme administrator.

The useful lives of intangible assets are assessed to be either finite or indefinite and are assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and method are reviewed at least at each financial year end.

¹¹ The CRC Energy Efficient Scheme (formerly CRC Scheme) is a mandatory carbon reduction emissions scheme in the UK that applies to large non-energy-intensive organisations in the public and private sector. Emission allowances are to be auctioned. Wikipedia.

¹² See The Financial Reporting Manual, HM Treasury, December 2016, p.46

4.5 France

The total carrying amount of the intangible assets of the French central government amounts to EUR 28 billion as per 31 December 2016, which represents 2.9% of the balance sheet total. A first category consists of development costs (EUR 15.4 billion). As for the UK, development costs mainly relate to the development of military equipment. It includes both costs incurred for finetuning the weapons as production related expenditure. A second category consists of concessions, licenses, brands, patents, software and similar rights and accounts for EUR 3.1 billion. Other intangibles amount to EUR 9.7 billion and relate to the electromagnetic spectrum.

The French central government makes a distinction between intangible assets which are specific to the central government (military development costs, terrestrial broadcasting spectrum and greenhouse gas emission rights) and intangible assets which are not specific (acquired software, internally developed software, etc.).

In respect of the non (public sector) specific intangible assets the accounting methodology is based on both IPSAS and IFRS. The intangible assets generally follow the same accounting principles as those applied by private sector entities, however taking into consideration the concept of service potential as mentioned in the French Conceptual Framework for Public Accounts.

Both the definition and the recognition criteria of the intangible assets as recognised by the French central government are similar to the definition ('an intangible fixed asset is an identifiable non-monetary asset without physical substance') and recognition criteria ('controlled by the government' and 'its cost or value can be estimated reliably') as applied under both IFRS and IPSAS. It is expected that application of these principles would broadly lead to similar results as the strict application of IPSAS.

In respect of internally developed intangible assets, such as internally developed military assets and internally developed software, the same recognition criteria apply as set forth for internally developed assets in the development phase in IPSAS 31 paragraph 55. As regards the second category (concessions, patents, licenses, brands, software, etc.), it mainly consists of internally developed software. Intangible assets are initially measured at cost and subsequently at cost less amortisation and impairment losses, which is the common approach under both IPSAS and IFRS.

For intangible assets which are public sector specific, the nature of certain activities of the government raises the question as to whether the embedded specific rights would not meet the recognition criteria of intangible assets. For instance, the exercise of its sovereign power enables the government to generate receipts under the form of different kind of taxes. The French central government considers in its accounting approach that the triggering event is a taxable activity performed by a third party (company, citizen). For instance income taxes depend on the taxable activities performed by citizens and companies. As the State does not control the occurrence of those activities nor the frequency, the French central government does not control resources from future taxable activities. For these reasons the French central government decided not to recognise any rights stemming from the levy of taxes in the future.

Military developments

A military development is a set of operations deployed in the context of a pre-defined project (during the initialisation, guidance and drafting phases) in order to prepare the production of

equipment ready for use or a weapons system satisfying military requirements expressed at the outset. Development costs are incurred throughout the production process in order to keep the military equipment to be produced at the highest technological level and upgrade equipment already produced. Costs incurred in the so-called “development” phase represent intangible assets as they contribute to an identifiable improvement in the capacities of the defence ministry and are therefore included in the central government balance sheet in intangible assets, which reflects investment efforts in intangible assets. Development costs incurred in subsequent years are capitalised in annual tranches and amortised over the residual period of the delivery cycle.

Terrestrial broadcasting spectrum

The terrestrial broadcasting spectrum covers all frequencies across which radio-communication systems can operate. These frequencies are allocated to different entities, including the Autorité de régulation des communications électroniques et des postes (ARCEP, Regulatory Authority for electronic and postal communications), which allocates frequencies to telecommunication operators in return for the payment of fees (particularly UMTS and GSM licenses). Other allocating entities include seven public authorities (civil aviation, defence, space, interior, meteorology, ports and maritime navigation and education, research and technology) as well as an independent authority, the CSA (‘Conseil Supérieur de l’Audiovisuel’, i.e. the Audiovisual Board).

The terrestrial broadcasting spectrum is part of the public domain controlled by central government. This asset has an indefinite life, is non-amortisable and could potentially be impaired as a result of changes in technology or other market conditions. The spectrum is valued at the present value of future fees receivable by ARCEP in respect of frequencies allocated to telecommunication operators. The valuation does not take account of frequencies held by other allocating entities as there is no reliable measurement basis for these. Indeed, these frequencies do not generate fees and any non-financial consideration resulting from the allocation of these frequencies cannot be reliably measured.

Accordingly, non-financial consideration received in respect of authorisations granted by the CSA mainly concerns national coverage (for example, 91% of the country for traditional free-to air broadcasters) and contributions to the development of audio-visual production (for example, obligation to broadcast 15% of European audio-visual works on free-to-air channels). With respect to the CSA in particular, the reliable measurement of non-financial consideration received for the allocation of frequencies would be cumbersome and complex and would not be comprehensive.

Greenhouse gas emission rights

Pursuant to the Kyoto protocol, France and the European Union have undertaken to reduce their greenhouse gas emissions (GGE). Allowances were granted free-of-charge to reporting parties for the period 2008-2012 under national allocation plans (NAP) and a European exchange system was set-up. National allocation plan allowances were recognised in the central government accounts as intangible assets. Other allowances were also granted outside the national allowance plans targeting diffuse emissions, not recognised in the accounts in the absence of a reliable valuation.

The principle of the Kyoto protocol was extended during the Doha conference on climate change to cover the period 2013-2020. The European Union and its Member States have nonetheless already committed to continuing efforts to reduce greenhouse gas emissions through the energy-climate package. Over the period 2013-2020, the number of allowances allocated free of charge to

industrial installations will progressively decrease at a rate depending on the activity sector. They will be required to purchase the allowances necessary to the continuation of their activities at auction or on the secondary market.

The terms and conditions governing the allocation of free allowances are determined at European level. Each Member State draws up a list of reporting parties in application of the European Directives. The validation of this list, at European level, results in the allocation of allowances to reporting parties (see Order of 24 January 2014 setting the list of operators receiving free allocations of greenhouse gas emission allowances for the period 2013-2020). In so far as the European Union is now responsible for the annual allocation of allowances and compliance obligations fall to reporting parties, the criteria requiring the control of the asset by the central government is no longer satisfied.

With respect to auctioned allowances, the central government receives a percentage of revenue from sales performed on the common European platform in accordance with Directive 2009/29/EC. In addition, article 43 of 2013 Finance Law no. 2012-1509 states that “revenue from the sale of carbon assets as defined in the Kyoto protocol to the United Nations framework convention on climate change, adopted on 11 December 1997 and signed on 29 April 1998 and revenue from auctioning greenhouse gas emission allowances as set out in Articles 3 (d) and 10 of Directive 2003/87/EC, is allocated to the Agence nationale de l’habitat (ANAH) indicated in Article L.321-1 of the French Construction and Habitation Code.”¹³ As the asset is not controlled in the accounting sense, auctioned allowances are not recognised in the balance sheet.

In addition, France will receive allowances to cover diffuse emissions for the period 2013-2020. For this new period, European Union Member States (plus Iceland, Liechtenstein and Norway) have implemented a system to share the emission reduction effort. This mechanism reflects the European desire to collectively reduce diffuse emissions by 10% by 2020 compared with the reference year of 1990. For France, this commitment should result in a 14% decrease. The European mechanism provides for the creation of a new allowance unit, the AEA (annual emission allowance), which may be freely traded between Member States.

The French government thus developed accounting rules for emission trading schemes from the perspective of the government acting as administrator of and participant to the schemes.

From the administrator’s perspective:

- Free allowances are not controlled by the administrator, hence they are not recognised in the Central government’s financial statements, but information is required to be disclosed.
- Auctioned allowances are not assets of the Central government, and revenue is earned at each auction.
- Diffuse emission allowances (ESD and allowances not covered by the EU ETS) are not assets of the Central government.

From the participant’s perspective:

- Emission allowances received for free by the State as a participant are initially recognised in inventory at nil value.
- Emission allowances auctioned are considered as inventory.

¹³ See Modernisation of the Public Accounting Systems in France, accounting scope, principles and methods, p.6

4.6 Sweden

Intangible fixed assets reported in the central government annual report are primarily produced and acquired computer software. The recognition criteria applicable for intangible assets can be found in the Ordinance on the Annual Report and Budget documentation. These set of rules are to a great extent based on the accounting rules for the private sector in Sweden, which in turn are based on the international accounting standards for private companies (IFRS), which IPSAS also are based on. The definition of an intangible asset according to The Ordinance on the Annual Report and Budget documentation is as follows: *“An intangible asset is an identifiable, non-monetary asset, without physical substance that is used for production or for the supply of goods or services or for administration purposes.”*

The recognition of an item as an intangible asset requires government entities (including agencies) to demonstrate that the item meets:

- (a) the definition of an intangible asset; and
- (b) the recognition criteria.

In addition to the above, intangible assets are also recognised if they generate future service potential for an agency. Therefore, it can be difficult to draw a clear line between an intangible asset and the costs of current operations. However, in the regulations to the Ordinance on the Annual Report and Budget documentation, there is a clarification that states that if an agency cannot distinguish development costs from current operations, these should be recognised as operating costs.

The main type of intangible assets in the annual report for the Swedish central government is capitalisation of development costs. These costs represent more than 85 % of the total item in the annual report and mainly consist of development costs for internally developed IT systems and applications. The Swedish central government has not recognised intangible assets in respect of rights arising from sovereign power.

When it comes to development costs, six criteria need to be fulfilled in order to recognise these costs as intangible assets, which are fully aligned with the recognition criteria under IPSAS 31/IAS 38.

- i. The technical feasibility of completing the intangible asset so that it will be available for use.
- ii. The intention to complete the intangible asset and use it.
- iii. The intention/premise to use the intangible asset.
- iv. How the intangible asset will generate probable future economic benefits or service potential and that this can be demonstrated with a high degree of security.
- v. The availability of adequate technical, financial and other resources to complete the development and to use intangible asset.
- vi. The ability to measure reliably the expenditure attributable to the intangible asset during its development.

Government accounting rules indicate that only expenses for development being of ‘considerable value’ for the operations of the agency should be accounted for as intangible asset. There is no

explicit criterion on materiality in this standard. If a materiality threshold is used, this is something that each agency manages and decides on its own.

As regards the rights arising on the exercise of sovereign power, the Swedish standard setter, ESV, considers that these rights do not meet the recognition criteria of an asset.

Sweden has not developed specific rules for rights arising from the electromagnetic spectrum (e.g. TV, radio and mobile licenses). Fees in respect of other spectra (e.g. the mobile network) are not material and are recognised in the statement of financial performance on a cash basis given the immaterial character of the amounts involved.

The emission rights relating to the period 2013-2020 are also not recognised as assets on the grounds that they are granted for one year at a time and sold in the same year. The rights arising from emission trading schemes are disclosed in the notes.

4.7 Comparison

The table below provides a high-level comparison of the main accounting principles related to intangible assets as applied by the three governments selected for our analysis.

Figure 9: Rules relating to intangible assets for governments in the UK, France and Sweden

	<i>UK</i>	<i>France</i>	<i>Sweden</i>
<i>Scope and definition</i>	Based on IAS 38. Similar to IPSAS 31	Based on IPSAS 31/IAS 38, includes concept of service potential. Distinction between public sector specific and non-public sector specific intangible assets	Based on national rules for the private sector (in turn based on IFRS and similar to IPSAS)
<i>Recognition</i>	Based on IAS 38. Similar to IPSAS 31	Based on IPSAS 31/IAS 38, includes concept of service potential	Based on national rules for the private sector (in turn based on IFRS and similar to IPSAS)

<i>Measurement</i>	Based on IAS 38. Similar to IPSAS 31, however the cost option given in IAS 38 is not permissible and the current value should be based on the market value in existing use. Where no active market exists, entities should revalue the asset, using indices or some suitable model, to the lower of depreciated replacement cost and value in use where the asset is income generating. Where there is no value in use, the asset should be valued using depreciated replacement cost	Cost model, based on IPSAS - the revaluation option has been withdrawn	The cost model is chosen based on national rules for the private sector (in turn based on IFRS and similar to IPSAS)
<i>Presentation</i>	Based on IAS 38. Similar to IPSAS 31	Distinction between public sector specific and non-public sector specific intangible assets	Based on national rules for the private sector (in turn based on IFRS and similar to IPSAS)
<i>Disclosures</i>	Based on IAS 38. Similar to IPSAS 31	Broadly consistent with IPSAS 31/IAS 38	Broadly consistent with IPSAS 31/IAS 38

5 Difficulties/issues when accounting for intangible assets

As a reminder, three comments were received from Member States in relation to intangible assets (out of a total of 147 comments received for all topics) at the time of the 2014 PwC study¹⁴. Two of the three comments related to the complexity of implementation (the main challenge reported by the respondents is the treatment of costs incurred in respect of internal development), and one comment was of a more conceptual nature, mentioning that IPSAS 31 'Intangible assets' does not sufficiently address the specificities of a government.

Based on this and the additional analysis performed in the context of this issue paper, the following are identified as the main difficulties/issues that arise when accounting for intangible assets:

- Information gathering and preparation of the opening balance sheet.
- Reliable measurement of internally developed assets.
- Identification and treatment of intangible assets related to rights arising from sovereign power, including emission rights and the rights arising from the electromagnetic spectrum.
- Accounting policy choice between the cost model and the revaluation model.

5.1 Information gathering and preparation of the opening balance sheet

Constituting a complete inventory of the intangible assets may constitute a particular challenge, especially for entities which transition from the cash basis accounting as the records may be incomplete or even inexistent. Starting to capitalise such assets is not easy, especially in view of their specific intangible nature. Because they have no physical substance, one of the key challenges is to identify the assets in the first place, and then maintain a detailed intangible assets register.

5.2 Reliable measurement of internally developed assets

The measurement of internally developed intangible assets requires the implementation of procedures which allow to capture the relevant accounting data throughout the administrative processes. It may for example be challenging to identify the cut-off point that distinguishes the research phase from the development phase of an internally developed project. Procedures (e.g. time sheets to apportion staff time worked on different projects), information flows as well as internal controls and systems may need to be adapted to gather information about the costs incurred in each phase.

Similarly, the ability to measure the cost of an internally developed intangible asset reliably is also dependent on the existence of an adequate cost accounting system. For example, not only external costs but also internal payroll costs of staff working on the development activities need to be considered and measured in accordance with the accounting principles laid down by the government entity. This may require the calculation of a unit cost (daily or hourly rate) to be used for the different levels of staff.

¹⁴ See PwC, Collection of information related to the potential impact, including costs, of implementing accrual accounting in the public sector and technical analysis of the suitability of individual IPSAS standards, 2013/S 107-182395, 1 August 2014, p. 129.

In addition to the ability to measure the cost reliably, the ability to demonstrate the probability to receive benefits from the use of the asset going forward, either under the form of service potential or economic benefits, in order to justify the amount that is recognised as an asset. Due to the immaterial character of intangible assets, this aspect should be looked at more strictly.

As most of the intangible assets which are currently recognised by governments relate to military development and internally developed software, proper application of these rules is important in order to achieve compliance with best international accounting practices. The UK has based its current accounting principles on IFRS (as adapted for the public sector), accounting standard 5 of the French central government refers to recognition criteria that are similar to the IPSAS or IFRS criteria, and Swedish government accounting rules relating to intangibles are to a great extent based on national rules for the private sector which are in turn based on IFRS (remembering that IFRS rules relating to intangible assets are similar to IPSAS).

5.3 Identification and treatment of intangible assets related to rights arising from sovereign power, including emission rights and the rights arising from the electromagnetic spectrum

For a number of asset types such as externally acquired and internally developed software, internal product development costs, intellectual property rights such as patents, a large consensus exists that these should be considered as intangible assets. This consensus is reflected in the current accounting practices of public sector entities referring to IPSAS or IFRS as accounting framework. It is also confirmed by the accounting practices of the governments that have been retained in our sample.

A conceptual debate exists on whether and how sovereign power should be considered to determine whether an intangible asset should be recognised. The power to levy taxes or fees, the power to issue licenses, and other powers to access or deny or restrict access to the benefits embodied in intangible resources like the electromagnetic spectrum, are examples of sovereign powers and the question as to under what circumstances these powers may give rise to assets is not always obvious.

A specific topic is the treatment of emission allowance schemes. In accordance with the withdrawn IFRIC 3 interpretation 'Emission rights' these allowances are accounted for by participants as intangible assets. In its accounting manual, the UK refers to this guidance for the accounting of carbon reduction commitments. The IPSASB has deactivated its project on the topic pending further progress at IASB level. Neither IPSAS nor IFRS currently do provide explicit guidance for the accounting of these rights. This is an issue for governments, which may be either administrators of emission trading schemes or participants in such schemes.

The absence of specific guidance on the above topics leads to diversity in accounting practices. Looking for example at the three countries selected in the present issue paper, France is the only country that recognises intangible assets related to the electromagnetic spectrum. France recognises free and auctioned allowances as inventory only for a public sector entity acting as a participant. In addition, France addresses the accounting treatment from the administrator's perspective for the three different types of allowances. The UK recognises intangible assets in relation to greenhouse gas emission schemes (the UK does it only for public entities that participate in emission trading schemes but does not address the treatment of the issue by the government as administrator of the scheme).

These aspects may be discussed during the EPSAS standard-setting process, keeping in mind the comparability objective of the future EPSAS financial statements. One difficulty might be to gather a wide consensus on the most appropriate treatment under EPSAS concerning topics for which no guidance exists under internationally recognised standards or even for which no wide consensus was reached when they were discussed in the past (e.g. IFRIC 3 which addressed the accounting of emission rights by participants in the emission trading scheme was criticised when it was issued).

5.4 Accounting policy choice between the cost model and the revaluation model

For many intangible assets that are currently recognised by governments, such as software licenses, internally developed software or development costs relating to military applications, the cost model is used in practice, and international accounting standards (IPSAS and IFRS) do not allow the use of the revaluation model in the absence of an active market for these intangibles.

In the UK however, the cost model is not permissible and the current value should be based on the market value in existing use. Where no active market exists, entities should revalue the asset, using indices or some suitable model, to the lower of depreciated replacement cost and value in use where the asset is income generating. Where there is no value in use, the asset should be valued using depreciated replacement cost. The UK government therefore applies the revaluation model more widely than under circumstances permitted by IPSAS (i.e. only when an active market exists). It has an objective to align its accounting and budgeting (which is based on ESA 2010), this is part of its policy to have consistent data flowing through its financial accounts and budgets to help decision makers and parliamentarians understand and interpret the data.

The question of the accounting policy choice between the cost model and the revaluation model therefore arises.

One option might be to envisage the revaluation model for EPSAS for specific types of intangible assets, such as freely transferable homogeneous classes of licenses or emission allowances in the context of an emission trading scheme (to the extent that an active market for the asset exists). The decision making process for the model to select may consider the relevance of the information provided, the cost and difficulty linked to its application as well as the impact on the harmonisation objective of the EPSAS project.

6 Discussion of matters relevant for a European harmonisation

In our opinion, the topics that are worth being discussed at a European level in the context of the EPSAS standard setting and that are relevant for a European harmonisation are the following:

- Preparation of the opening balance sheet and first-time application rules.
- Identification and treatment of intangible assets related to rights arising from sovereign power, including emission rights and the rights arising from the electromagnetic spectrum.
- Accounting policy choice between the cost model and the revaluation model.

In addition, and even if this has not been spotted as a key challenge/issue under Chapter 5, the need for a consistent presentation of the intangible assets may be discussed in order to enhance comparability of the reporting between EU Member States.

On the contrary, the necessity to put in place adequate administrative processes, including a reliable cost accounting system, to be able to generate cost information which is reliable enough to be used in the measurement of internally developed assets, does not, in our view, need to be discussed in the context of the EPSAS standard-setting process. Indeed, the applicable IPSAS rules in respect of internally developed intangibles are widely accepted and do not call for further debate. The challenge for governments is of an organisational nature.

6.1 Preparation of the opening balance sheet and first-time application rules

The challenge to find back historical cost information about intangible assets may exist both for separately acquired intangible assets and internally generated intangible assets, especially when intangible items were not recognised as assets under the previous government accounting rules, but is probably bigger for internally generated intangibles if adequate procedures to capture cost information did not exist at the time the costs were incurred.

IPSAS 33 ‘First-time adoption of accrual basis IPSAS’ addresses this practical issue by allowing first-time adopters to make use of an exemption in order to enable a smoother move towards IPSAS. This exemption consists in a three-year transitional relief period for the recognition and measurement intangible assets.

The question arises as to whether a three-year transitional relief period is sufficient.

6.2 Identification and treatment of intangible assets related to rights arising from sovereign power, including emission rights and the rights arising from the electromagnetic spectrum

As highlighted in the background of the issue paper, the topic is important because it covers transactions that may involve large amounts for certain governments (for example sales of mobile phone licenses) and transactions common to different governments (for example the administration of or participation in emission trading schemes).

Although the IPSASB Conceptual framework provides very useful guidance on the principles to follow for the recognition of assets, including intangible assets that may arise from sovereign powers, no specific guidance is provided in the standards on the accounting of intangible assets related to rights arising from sovereign power, including emission rights and the rights arising from the electromagnetic spectrum. The treatment of intangible assets that are specific to the public sector and of rights arising from sovereign powers are also not topics that will be proposed on the agenda of the IPSASB work plan for the period 2019-2023.

Accounting for natural resources is however a project that will be proposed for the IPSAS work plan 2019-2023. The electromagnetic spectrum is considered as an intangible natural resource in the context of the ESA reporting. In addition, accounting for emission rights from the perspective of participants has already been discussed at IASB level and resulted in the issuance of IFRIC 3 'Emission rights' before it was withdrawn.

High-level guiding principles that are applicable can be found in the IPSASB Conceptual framework. These principles would in our view provide a suitable framework for accounting treatment of all rights arising from sovereign powers.

In addition to this, providing specific guidance for the two main types of transactions that have been identified as the most relevant for European governments would also be useful. Therefore, in order to achieve comparable accounting treatment for similar transactions by governments in all EU Member States, the following topics may be discussed:

- Guidance relating to the accounting treatment of the specific rights arising from the electromagnetic spectrum.
- Guidance relating to the accounting treatment of the emission rights, both from the perspective of administrator and from the perspective of participants.

6.3 Accounting policy choice between the cost model and the revaluation model

Under internationally recognised accounting frameworks (IPSAS and IFRS), most of the intangible assets should be recognised using the cost model. The use of the cost model has the advantage of its relative simplicity versus the revaluation model. Adequate procedures should be implemented to capture reliable cost information but when the cost is determined, it is amortised over the useful life of the asset and tested for impairment if economic circumstances require it (for assets that have a finite useful life, i.e. the vast majority of the assets).

The cost model is the one that is most widely used in practice and also the one that is used by France and Sweden for most of their intangible assets, including purchase software, internally developed software and military development costs.

France has recognised as an intangible asset part of its electromagnetic spectrum, i.e. that part for which frequencies have been allocated to telecom operators in return for fees (particularly UMTS and GSM licenses) when the fee can be reliably measured. The value that has been attributed to the asset corresponds to the net present value of the fees to be received in respect of these licenses. Given that the government has not paid to acquire this right to allocate frequencies, the intangible resource is deemed to have been obtained for free. Given the resource meets the definition of an asset (identifiable, control over the resource, ability to generate future economic benefits and ability to measure the cost reliably), an intangible asset has been recognised. The value attributed to the intangible represents the future economic benefits expected to flow from the asset. This asset is deemed to have an indefinite useful life and is not amortised but tested for impairment.

Under the same internationally recognised accounting frameworks (IPSAS and IFRS), the revaluation model can only be used if there is an active market for the intangible asset, which is expected to be rare in practice.

The question may arise in respect of emission trading schemes. In the UK, scheme assets in respect of allowances are revalued at fair value where there is evidence of an active market. Until there is evidence of an active market, scheme assets in respect of allowances are measured at cost, as a proxy for fair value. France analysed the systems in place to grant allowances relating to the period 2013-2020. To the extent that the criteria for asset recognition are met, these would be recognised on the balance sheet as described under section 4.5. To the extent that emission allowances could be freely traded between Member States, the condition of active market would be met and the revaluation could be used.

In addition to the above, the UK also applies the revaluation model following initial recognition. Where an active market exists, intangible assets are carried at fair value. Where no active market exists, published indices may be used to assess the depreciated replacement cost as a proxy for fair value.

Using the revaluation model in the rare circumstances where an active market exists would tend to an alignment with the ESA 2010 numbers reported in the balance sheet (i.e. partial alignment only because the alignment would be for the assets concerned only) since ESA 2010 rules require assets to be reported at their current values.

As indicated under 6.2. using the same guidance for the accounting treatment of the specific rights arising from the electromagnetic spectrum and for the accounting treatment of the emission rights (both for the government acting as administrator of and participant in emission trading schemes) would help to achieve comparable accounting treatment for similar transactions by governments in all EU Member States.

6.4 Presentation of intangible assets

The need for a consistent presentation of the intangible assets may be discussed in order to enhance comparability of the reporting between EU Member States.

Both internationally recognised accounting frameworks (IPSAS and IFRS) require intangible assets to be presented on a separate line item on the statement of financial position. Further subclassification is generally given in the notes in a way that is appropriate to the circumstances of the reporting public sector entity. Such subclassification is useful when the line item 'Intangible assets' contains relatively significant items with very different nature.

Various subclassifications may be used, for example based on those types of intangible assets that are most frequently encountered in practice:

- Software and software development costs.
- Military development costs.
- Assets arising from the electromagnetic spectrum.
- Emission allowances.
- Other intangible assets.

France makes the distinction between non-public sector specific asset classes (acquired software, internally developed software) and public sector specific asset classes (military development costs, terrestrial broadcasting spectrum and greenhouse gas emission rights).

Finally the asset classification used in the ESA 2010 reporting (see section 3.4.1) may also be used a source of inspiration for determining the intangible asset subcategories to be used in the EPSAS reporting.

7 PwC's recommendations on the way forward

The 2014 PwC study highlighted two comments reported by Member States on the complexity of implementation and one comment relating to the fact that specific public sector issues are not sufficiently dealt with in the IPSAS 31 standard 'Intangible assets'. It also recommended to follow up on these comments during the EPSAS standard-setting process, leveraging from further discussions at IPSASB level and best accounting practices developed by certain Member States.

Based on the analyses carried out and summarised in the present issue paper, we do not see valid reasons for departing from IPSAS 31 'Intangible assets' which is the main reference point for the accounting of intangible assets by public sector entities. We however address the comments made by the Member States in providing the following recommendations regarding matters for discussion by Member States:

- Address the practical difficulties in implementing the standard by allowing Member States the option to take advantage of the three-year transitional relief period included in IPSAS 33 'First-time adoption of accrual basis IPSAS'. Furthermore, practical tips are provided which may facilitate the preparation of the opening balance sheet.
- Capitalising on the principles included in the IPSAS Conceptual framework regarding the circumstances under which rights arising from sovereign powers may be recognised as intangible assets, Member States could also develop specific guidance relating to the accounting treatment of the specific rights arising from the electromagnetic spectrum and the accounting treatment of the emission rights. This would complement the principles included in IPSAS 31 with accounting guidance that is relevant to the European context.
- Discuss the opportunity to require the use of one single accounting model (cost model versus revaluation model) where an active market exists for intangible assets. In making this determination, Member States should consider the relative importance of the comparability objective in EPSAS financial statements as opposed to the freedom left to Member States to make accounting policy choices.
- Define a subclassification of intangible assets which reflects the major types of intangibles that governments most usually have.

We present below our recommendations in the same order as the topics proposed for discussion for a European harmonisation under Chapter 6.

7.1 Preparation of the opening balance sheet and first-time application rules

As already highlighted, the challenge for governments is more of an organisational nature. A cost/benefit analysis should be performed in order to determine the optimal approach to implementation.

Our opinion is that the transitional provisions included in IPSAS 33 'First-time adoption of accrual basis IPSAS' properly address this problem. When the EPSAS standards are issued, a certain period will be allowed before mandatory adoption by the Member States. Allowing first-time adopters to make use of the three-year transitional relief period for the recognition and measurement intangible assets should give them sufficient time to implement the necessary procedures to get ready by the end of the three years. As an illustration, if EPSAS standards are issued in year t and EPSAS adoption is required by $t+5$, using the three-year transitional relief period under IPSAS 33 would give the option to governments using this exemption the possibility to report intangible assets in compliance with EPSAS only by $t+8$, so eight years after the issuance of the EPSAS standards.

We therefore do not believe that a longer transitional relief period is needed, especially in view of the rather limited scope and volume of the intangible assets in terms of data to be retrieved, analysed and measured.

This being said, a good balance should be found between the benefits associated with the recognition of intangible assets and the implementation costs. Depending on the size of the government entity, a threshold for capitalisation may be considered in order to avoid that immaterial elements be tracked, identified and captured in the intangible assets inventory. Some government entities may however want to organise a comprehensive inventory even for relatively small assets for internal control purposes.

A distinction should also be made between acquired intangible assets and internally developed intangible assets. Indeed, for externally acquired assets, the cost of the assets can easily be traced through the procurement flow. Internally developed assets require a much more cumbersome follow-up as costs incurred internally need to be identified, captured and measured. It is expected that it is difficult or even impracticable to retrieve reliable data in respect of internally generated intangibles prior the opening balance sheet date if the necessary administrative organisation was not yet in place. However appropriate procedures need to be implemented to capture the information needed by the new standards going forward. This requires the design of reliable processes and the implementation of specific tools to measure the cost of internal IT projects and other development projects.

For pragmatic reasons, it may also be considered appropriate to apply a higher asset recognition threshold for internally generated intangible assets so to avoid an unreasonable implementation cost. Furthermore immaterial balances and assets with a limited remaining useful life might be kept out of scope for the opening balance sheet.

In terms of entity scope, governments could also consider a phased approach, whereby at first central departments implement the new standards and decentralised (smaller) entities jump in later. Indeed, in order to ensure progression of the implementation, governments could decide to first address these departments with the most significant items and include smaller entities with less material balances at a later stage.

7.2 Identification and treatment of intangible assets related to rights arising from sovereign power, including emission rights and the rights arising from the electromagnetic spectrum

We agree with the analysis of the IPSASB and the Member States selected in the sample that sovereign powers do not as such give rise to assets. The general ability to levy taxes or fees is not in itself sufficient to warrant recognition of an asset, it should be combined with the actual exercise of this power by the government entity and the triggering event should have taken place, i.e. the event which gives rise to the right to receive taxes or fee from the external parties, has taken place. In order to recognise an asset, all asset recognition criteria should be met.

Because of their importance and relevance in the European context, we believe that the discussion should be organised in relation to two specific types of intangibles: the rights arising from the electromagnetic spectrum on the one hand and emission rights on the other hand.

This discussion should not only consider the characteristics of the European environment but also the specific legal and other circumstances of each country.

In order to achieve comparable accounting treatment for similar transactions by governments in all EU Member States, we therefore recommend to organise the discussion around the following topics:

- Need for specific guidance relating to the accounting treatment of the specific rights arising from the electromagnetic spectrum.
- Need for specific guidance relating to the accounting treatment of the emission rights, both from the perspective of the government acting as administrator of the emission trading scheme and from the perspective of the government participating in the scheme.

If guidance is developed on the above topics, it is advised to take advantage - as background information - of the discussions that will take place in the context of the future IPSAS developments and of the discussions that took place when IFRIC 3 was issued.

7.3 Accounting policy choice between the cost model and the revaluation model

IPSAS 31 'Intangible assets' and IAS 38 'Intangible assets' both allow to apply either the cost model or the revaluation model (in the rare cases where an active market exists).

In practice, the cost model is largely applied by government entities and entities reporting under IPSAS or IFRS. The UK is an exception since it applies the revaluation model for its intangible assets. This converges with the ESA 2010 measurement principles, which however are applied at a statistical level, whereas international accounting standards for intangible assets (e.g. IPSAS 31) require an individual asset-by-asset revaluation. An asset-by-asset exercise is time consuming and costly. Also, it may be difficult to find fair value information for intangible assets, as for instance internal (military) development costs are entity specific and no market data may be available.

Considering the elements above, selecting the cost model where an active market clearly does not exist may be advisable.

Where an active market is identified, the opportunity to use the revaluation model may be considered more easily. Specific attention should be devoted in this respect to the analysis of the characteristics of emission trading schemes in order to inform the decision as to the proper accounting treatment to be applied.

If the precedence is given to the comparability objective in EPSAS financial statements, it is recommended to permit only one accounting model to be used by all governments for similar transactions. If it is considered that governments should have the free choice of accounting policy, as long as it complies with internationally recognised standards, then the accounting policy choice available under IPSAS 31 may be retained.

Finally, we recommend to keep an eye on the discussions that are starting now in the context of the new project conducted at IPSASB level on public sector measurement and on the project on natural resources which is proposed to be on the agenda of the IPSASB work plan for the period 2019-2023 as some of these discussions may be useful for the topic under review here.

7.4 Presentation of intangible assets

In order to achieve consistency in the presentation and disclosure of the intangible assets across EU governments, we recommend to define a subclassification of intangible assets which reflects the major types of intangibles that governments most usually have. In making this determination, various sources of inspiration may exist. More information is given under section 6.4.