In depth
A look at current financial reporting issues

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Revenue from contracts with customers
The standard is final – A comprehensive look at the new revenue model

Technology industry supplement

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What's inside:

At a glance

On 28 May, the IASB and FASB issued their long-awaited converged standard on revenue recognition. Almost all entities will be affected to some extent by the significant increase in required disclosures. But the changes extend beyond disclosures, and the effect on entities will vary depending on industry and current accounting practices.

In depth 2014-02 is a comprehensive analysis of the new standard. This supplement highlights some of the areas that could create the most significant challenges for technology entities as they transition to the new standard.

Overview

The technology industry comprises numerous subsectors, including, but not limited to, computers and networking, semiconductors, software and internet, and clean technology. Each subsector has diverse product and service offerings and various revenue recognition issues. Determining how to allocate consideration among elements of an arrangement and when to recognise revenue can be extremely complex and, as a result, industry-specific revenue recognition models were previously developed. The new revenue standard replaces these multiple sets of guidance with a single revenue recognition model, regardless of industry.

While the new standard includes a number of specific factors to consider, it is a principles-based standard. Accordingly, companies should ensure that revenue recognition is ultimately consistent with the substance of the arrangement, and not just based on meeting the specified factors.

The following provides a summary of some of the areas within the technology industry that may be significantly affected by the new revenue standard and highlights the technology subsectors where these issues are most commonly seen.

The revenue standard is effective for entities that report under IFRS for annual periods beginning on or after 1 January 2017. Early adoption is permitted for IFRS reporters. The revenue standard is effective for the first interim period within annual reporting periods beginning after 15 December 2016 for US GAAP public reporting entities and early adoption is not permitted. It will be effective for annual reporting periods beginning after 15 December 2017 and interim periods within annual periods beginning after 15 December 2018 for US GAAP non-public entities. Earlier application is permitted for non-public entities; however, adoption can be no earlier than periods beginning after 15 December 2016.

Multiple-element arrangements

Many technology companies provide multiple products or services to their customers as part of a single arrangement. Hardware vendors sometimes sell extended maintenance contracts or other service elements along with the hardware, and vendors of intellectual property licences may provide professional services in addition to the licence. Management must identify the separate performance obligations in an arrangement based on the terms of the contract and the entity's customary business practices. A bundle of goods and services might be accounted for as a single performance obligation in certain fact patterns.

New standard	Current US GAAP	Current IFRS
A performance obligation is a promise in a contract to transfer to a customer either: • a good or service (or a bundle of goods or services) that is distinct; or • a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer. A good or service is distinct if both of the following criteria are met: • The customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer (for example, because the entity regularly sells the good or service separately). • The good or service is separately identifiable from other goods or services in the contract. Factors that indicate that a good or service in a contract is separately identifiable include, but are not limited to: • The entity is not using the good or service as an input to produce the combined output specified by the customer. • The good or service does not significantly modify or customise another good or service promised in the contract. • The good or service is not highly	The following criteria are applied to transactions other than those involving software (refer to separate discussion below related to software companies) to determine if elements included in a multiple-element arrangement should be accounted for separately: • The delivered item has value to the customer on a stand-alone basis. • If a general return right exists for the delivered item, delivery or performance of the undelivered item(s) is considered probable and substantially in the control of the vendor. *Expected impact*: Technology companies will need to assess whether contracts include multiple performance obligations. Management will need to evaluate whether to account for a bundle of goods or services as a single performance obligation, which may require judgement. Indicators provided in the standard will need to be applied to make this determination.	The revenue recognition criteria are usually applied separately to each transaction. It might be necessary to separate a transaction into identifiable components in order to reflect the substance of the transaction in certain circumstances. Two or more transactions might need to be grouped together when they are linked in such a way that the commercial effect cannot be understood without reference to the series of transactions as a whole. *Expected impact*: Technology companies will need to assess whether contracts include multiple performance obligations. Management will need to evaluate whether to account for a bundle of goods or services as a single performance obligation, which may require judgement. The guidance for identifying distinct goods and services in the new standard is more specific and may result in more (or, in some cases, fewer) performance obligations being identified.

New standard	Current US GAAP	Current IFRS
dependent on, or highly interrelated with, other promised goods or services.		

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔	✔	✔	✔	✔	✔

Example 1 – Sale of software and implementation services – separate performance obligations

Facts: Vendor licenses ERP software to Customer. Vendor also agrees to provide services to implement the software by performing set-up activities for Customer. Customer can use the Vendor for the implementation services or another service provider. Further, the implementation services are not considered to reflect a significant customisation or integration of the software.

How should Vendor account for the transaction?

Discussion: Vendor should account for the licence and services as separate performance obligations. Vendor is providing a licence to the ERP software and implementation services to Customer. Customer has the ability to obtain the implementation services from another vendor or do the work itself, and the implementation services do not reflect a significant customisation or integration of the software. The licence and implementation services are distinct because Customer can benefit from the ERP software on its own or together with readily available resources, and the promise to deliver the licence is separately identifiable from the promise to provide implementation services. Refer to the 'Consulting and manufacturing service contracts' and 'Intellectual property licences' sections later in this supplement for when revenue should be recognised.

Example 2 – Sale of software and customisation/integration services – single performance obligation

Facts: Vendor licenses customer relationship management software to Customer. Vendor also agrees to provide services to significantly customise the software to Customer's information technology environment. Only Vendor can provide this customisation and integration service.

How should Vendor account for the transaction?

Discussion: Vendor should account for the licence and services together as a single performance obligation. Vendor is providing a significant service of integrating the licence and the services into the combined item for which the customer has contracted (a customised customer relationship management system). The software is also significantly customised by the vendor in accordance with the specifications negotiated with Customer. The licence and services are not distinct, because Customer cannot benefit from the software on its own or together with readily available resources, and the promise to deliver the licence is not separately identifiable from the promise to provide implementation services. Refer to the 'Consulting and manufacturing service contracts' and 'Intellectual property licences' sections later in this supplement for when revenue should be recognised.

Example 3 – Sale of hardware and installation services – separate performance obligations

Facts: Vendor enters into a contract to provide hardware and installation services to Customer. Vendor always sells the hardware with the installation service, but Customer can perform the installation on its own or can use other third parties.

How should Vendor account for the transaction?

Discussion: Vendor should account for the hardware and installation services as separate performance obligations. The hardware and installation service are not sold separately by Vendor; therefore, management will need to evaluate whether the customer can benefit from the hardware on its own or together with readily available resources. Customer can either perform the installation itself or use another third party; thus, Customer can benefit from the hardware on its own. As the installation service does not significantly integrate, modify, or customise the equipment, the Vendor's promise to transfer the equipment is separately identifiable from the Vendor's promise to perform the installation service. Accordingly, the equipment and the installation are distinct and accounted for as separate performance obligations. Vendor would generally recognise revenue allocated to the hardware when it transfers control of the hardware to Customer. Refer to the ‘Consulting and manufacturing service contracts’ section later in this supplement for when revenue allocated to the installation service should be recognised.

Elimination of software-specific guidance

The new standard will replace all industry-specific revenue guidance, including software revenue recognition guidance under US GAAP. The elimination of existing guidance will have an especially significant impact on the accounting for software and software-related transactions.

New standard	Current US GAAP	Current IFRS
Software arrangements involving multiple elements		
As discussed above, the new standard requires entities to identify separate performance obligations in a contract. The transaction price is allocated to separate performance obligations based on their relative stand-alone selling prices. Management should estimate the stand-alone selling price if it does not separately sell a good or service on a stand-alone basis. The residual approach may be used for determining the stand-alone selling price of a good or service if the pricing of that good or service is highly variable or uncertain. A selling price is highly variable if an entity sells the same good or service to different customers at or near the same time for a broad range of amounts. A selling price is uncertain if an entity has not yet established a price for a good or service, and the good or service has not previously been sold. Any amount allocated under the residual approach should faithfully depict the amount of consideration to which an entity expects to be entitled for the good or service.	Contract consideration is allocated to the various elements of an arrangement based on vendor-specific objective evidence (VSOE) of fair value, if such evidence exists for all elements in the arrangement. Revenue is deferred when VSOE of fair value does not exist for undelivered elements until the earlier of: (a) when VSOE of fair value for the undelivered element does exist; or (b) all elements of the arrangement have been delivered. *Expected impact*: VSOE of fair value, which is a high hurdle, will no longer be required for undelivered items in order to separate and allocate contract consideration to the various promises in a contract. The elimination of the VSOE requirement for software-related transactions might significantly accelerate the timing of revenue recognition in situations where revenue was previously deferred due to a lack of VSOE of fair value. These changes could also result in the need for significant modifications to the information systems currently used to record revenue.	Revenue is allocated to individual elements of a contract, but specific guidance is not provided on how to allocate the consideration or for software arrangements. Separating the components of a contract might be necessary to reflect the economic substance of an arrangement. IFRS does not define identifiable components of a single transaction. The assessment of components and future obligations is a matter of judgement (regardless of whether the obligation is specifically stated in the contract or implied). While the application of IFRS implies that revenue should be allocated to individual components of a transaction, it does not provide any specific guidance on how that allocation should be determined, except that revenue should be measured at the fair value of the consideration received or receivable. In this context, as it relates to individual elements of a contract, the price regularly charged when an item is sold separately is typically the best evidence of the item’s fair value. Other approaches to estimating fair value and allocating the total arrangement consideration to the individual elements may be appropriate, including cost plus a reasonable margin, the residual method, and under rare circumstances, the reverse residual method. *Expected impact*: The principles in the new standard are similar to current IFRS guidance. However, the new standard includes specific requirements related to the

New standard	Current US GAAP	Current IFRS
		separation, allocation, and recognition of multiple-element transactions that management will need to consider in applying those principles.
Post-contract customer support (PCS) As discussed above, entities will allocate transaction price to separate performance obligations based on their relative stand-alone selling prices. PCS is typically a separate performance obligation and can include multiple services. Each service will need to be evaluated to determine whether the service is a separate performance obligation (such as telephone support, unspecified upgrades, and enhancements). Management should estimate the stand-alone selling price if it does not separately sell a good or service on a stand-alone basis. Software subscriptions will likely have two performance obligations, akin to a licence with PCS: one for the software available today, and another for the right to receive when-and-if available software developed in the future.	The VSOE of fair value of PCS is evidenced by its selling price when this element is sold separately. This might include the renewal rate written into the contract, provided the rate and the service term are substantive. The fees for PCS are combined with any licence fees and recognised on a straight-line basis over the PCS term if there is no VSOE of fair value for the PCS. There are also specific limitations on determining VSOE of fair value of PCS in certain situations. *Expected impact*: Management will need to estimate the stand-alone selling price of PCS when VSOE was not previously available. This could result in acceleration of revenue recognition for licence deliverables compared to today's guidance, since licence revenue will no longer need to be recognised over the PCS term. Refer to the 'Intellectual property licences' section later in this supplement for discussion related to revenue recognition for the licence deliverables.	The selling price of a product that includes an identifiable amount of subsequent servicing is deferred and recognised as revenue over the period during which the service is performed. The amount deferred is that which will cover the expected costs of the services under the agreement, together with a reasonable profit on those services. *Expected impact*: The principles in the new standard are similar to current IFRS guidance. However, the new standard includes specific requirements related to the separation, allocation, and recognition of multiple-element transactions that management will need to consider in applying those principles.
Specified upgrades and roadmaps As discussed above, entities will allocate transaction price to separate performance obligations based on their relative stand-alone selling prices. Management should estimate the stand-alone selling price if it does not separately sell a good or service on a stand-alone basis.	In a multiple-element software arrangement, VSOE of fair value for all of the elements in the transaction is needed to recognise revenue. VSOE of fair value is generally determined by reference to the price charged to other customers for the same element. Accordingly, it is generally not possible to establish VSOE of fair value for specified future upgrades or products that have not yet been developed since they are not yet being sold and prices do not yet exist. If a roadmap provided to a customer in the context of a current transaction implies a promise to deliver a specified upgrade, revenue is generally deferred until the specified upgrade is delivered.	Separating the components of a contract might be necessary to reflect the economic substance of an arrangement. IFRS does not define identifiable components of a single transaction. The assessment of components and future obligations is a matter of judgement (regardless of whether the obligation is specifically stated in the contract or to some extent implied). *Expected impact*: The principles in the new standard are similar to current IFRS guidance. However, the new standard includes specific requirements related to the separation, allocation, and recognition of multiple-element transactions that management will need to consider in

New standard	Current US GAAP	Current IFRS
	Expected impact: If specified upgrades (including those implied in a roadmap) represent separate performance obligations, management will need to estimate their stand-alone selling prices. This could result in a different timing of revenue recognition for licence deliverables as compared to today's guidance.	applying those principles.
Extended payment terms		
Management should determine if extended payment terms are reflective of a significant financing component. If so, the entity will present the effects of financing (that is, the time value of money) separately from revenue (as interest expense or interest income) in the statement of comprehensive income. Management should consider whether extended payment terms have an impact on the assessment of collectability and defer revenue as necessary. Management should also consider whether the potential for future price concessions affects the estimate of the transaction price (refer to the 'Variable consideration' section below).	The software revenue recognition guidance imposes a rebuttable presumption that fees due more than a year after delivery are not fixed or determinable, and thus may be recognised only as payment becomes due. To overcome this presumption, the vendor must have a history of successfully collecting under the original payment terms of comparable arrangements without making concessions. *Expected impact*: The new standard does not include the concept of presumed deferral of revenue for arrangements with extended payment terms that exists under current US GAAP. Therefore, revenue recognition for deliverables with extended payment terms may be accelerated. Additionally, management will need to assess whether a significant financing component exists when there are extended payment terms.	Receivables generated from arrangements with extended payment terms are subject to the financial instruments guidance, and the effect of the time value of money should be reflected, when material. *Expected impact*: The new standard is similar to current IFRS guidance.

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔					

Example 4 – Sale of licence and PCS – separate performance obligations

Facts: Software Vendor sells Customer a perpetual software licence and PCS for a period of five years once the software is activated. None of the goods and services are sold on a stand-alone basis, and there is no stated renewal fee for the PCS services.

How should Software Vendor account for the transaction?

Discussion: Software Vendor should account for the licence and PCS as separate performance obligations. Software Vendor will need to estimate the stand-alone selling prices because the licence and PCS are not sold separately. No estimation method is prescribed in the new standard. The need to estimate stand-alone selling prices might create practical challenges for some software companies.

Variable consideration

The transaction price is the consideration a vendor expects to be entitled to in exchange for satisfying its performance obligations in an arrangement. Determining the transaction price is straightforward when the contract price is fixed, but is more complex when the arrangement includes a variable amount of consideration. Consideration that is variable includes, but is not limited to, discounts, rebates, price concessions, refunds, credits, incentives, performance bonuses, and royalties. Management must estimate the consideration it expects to be entitled to in order to determine the transaction price and to allocate consideration to performance obligations. Variable consideration is only included in the estimate of transaction price up to an amount that is highly probable (IFRS) or probable (US GAAP) of not resulting in a significant reversal of cumulative revenue in the future.

New standard	Current US GAAP	Current IFRS
An entity needs to determine the transaction price, which is the amount of consideration it expects to be entitled to in exchange for transferring promised goods or services to a customer, including an estimate of variable consideration. The estimate of variable consideration should be based on the expected value or most likely amount approach (whichever is more predictive). Variable consideration included in the transaction price is subject to a constraint. The objective of the constraint is that an entity should recognise revenue as performance obligations are satisfied to the extent that a significant revenue reversal will not occur. An entity will meet this objective if it is highly probable (IFRS) or probable (US GAAP) that there will not be a significant downward adjustment of the cumulative amount of revenue recognised for that performance obligation. Management will need to determine if there is a portion of the variable consideration (that is, a 'minimum amount') that would not result in a significant revenue reversal and should be included in the transaction price. Management will reassess its estimate of the transaction price each reporting period, including any estimated minimum amount of variable consideration it expects to receive. An entity that licenses intellectual property to a customer in exchange for consideration that varies based on the customer's subsequent sales or usage of a good or service (a sales- or usage-based royalty) should not recognise revenue for the variable consideration	The seller's price must be fixed or determinable for revenue to be recognised. Revenue related to variable consideration generally is not recognised until the uncertainty is resolved. It is not appropriate to recognise revenue based on a probability assessment. *Expected impact*: The guidance on variable consideration might significantly affect the timing of recognition compared to today. Technology companies often enter into arrangements with variable amounts, such as milestone payments, service level guarantees with penalties, and refund rights, due to their focus on customer adoption of cutting-edge products. Judgement will be needed to determine when variable consideration should be included in the transaction price. Technology companies might recognise revenue earlier than they do currently in many circumstances.	Revenue is measured at the fair value of the consideration received or receivable. Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Trade discounts, volume rebates, and other incentives (such as cash settlement discounts) are taken into account in measuring the fair value of the consideration to be received. Revenue related to variable consideration is recognised when it is probable that the economic benefits will flow to the entity and the amount is reliably measurable, assuming all other revenue recognition criteria are met. *Expected impact*: Variable consideration could be recognised under current IFRS prior to the contingency being resolved if certain criteria are met; however, the guidance on variable consideration under the new standard could affect the timing of recognition compared to today. Technology companies often enter into arrangements with variable amounts, such as milestone payments, service level guarantees with penalties, and refund rights, due to their focus on customer adoption of cutting-edge products. Judgement will be needed to determine when variable consideration should be included in the transaction price.

New standard	Current US GAAP	Current IFRS
until the uncertainty is resolved (that is, when the customer's subsequent sales or usages occur).		

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔	✔	✔	✔	✔	✔

Example 5 – Variable consideration – performance bonus

Facts: Contract Manufacturer enters into a contract with Customer to build an asset for C100,000. The contract contains a C50,000 performance bonus paid based on timing of completion, with a 10% decrease in the bonus for every week completion extends beyond the agreed-upon completion date. Management estimates a 60% probability of on-time completion, 30% probability of one week late, and 10% probability of two weeks late. The entity has relevant experience with similar contracts.

How much of the performance bonus should Contract Manufacturer include in the transaction price?

Discussion: Management concludes that the most likely amount method is the most predictive approach for estimating the performance bonus. Management believes that C45,000 (the bonus that will be earned with a one-week delay; the likelihood of not achieving this level of bonus is only 10%) should be included in the transaction price as it is probable that including this amount in the transaction price will not result in a significant revenue reversal. Management should update its estimate at each reporting date.

Sell-through approach

The sell-through approach is used for some arrangements with distributors, such that revenue is not recognised until the product is sold to the end customer. This approach might be used because the distributor is thinly capitalised, does not have a high-grade credit rating, or has the ability to return the unsold product, rotate older stock, or receive price concessions (and therefore the risks and rewards of ownership have not transferred), or because the entity cannot reasonably estimate returns or concessions. These arrangements are commonly seen in technology companies.

New standard	Current US GAAP	Current IFRS
Revenue is recognised when control of a good or service is transferred to the customer. A customer obtains control of a good or service if it has the ability to direct the use of and receive the benefit from the good or service. Indicators that the customer has obtained control of the good or service include: • The entity has a right to payment for the asset. • The entity transferred legal title to the asset. • The entity transferred physical possession of the asset. • The customer has significant risks and rewards of ownership.	The sell-through approach is common in arrangements that include dealers or distributors. Revenue is recognised once the risks and rewards of ownership have transferred to the end consumer under the sell-through approach. For example, if the customer is involved with assisting the distributor with sales to end customers, there might be an indication that the risk and rewards of ownership have not transferred upon delivery to the distributor. Additionally, if the amount of returns, refunds, or concessions cannot be reasonably estimated, revenue cannot be recognised until such rights lapse.	A contract for the sale of goods normally gives rise to revenue recognition at the time of delivery, when the following conditions are satisfied: • The risks and rewards of ownership have transferred. • The seller does not retain managerial involvement to the extent normally associated with ownership nor retain effective control. • The amount of revenue can be reliably measured. • It is probable that the economic benefit will flow to the customer. • The costs incurred can be measured reliably.

<table>
<tr><th>New standard</th><th>Current US GAAP</th><th>Current IFRS</th></tr>
<tr><td>• The customer provided evidence of acceptance.

The impact of rights of return is reflected in the estimate of transaction price, as described in a later section.</td><td></td><td>If the above criteria are not met, revenue is recognised once the risks and rewards of ownership have transferred, which may be upon sale to an end consumer.</td></tr>
<tr><td></td><td colspan="2">Expected impact:
The effect of the standard on the sell-through approach will depend on the terms of the arrangement and why sell-through accounting was applied historically. The standard requires management to determine when control of the product has transferred to the customer. If the customer or distributor has control of the product, including a right of return at its discretion, control transfers when the product is delivered to the customer or distributor. Any amounts related to expected sales returns or price concessions affect the amount of revenue recognised (that is, the estimate of transaction price), but not when revenue is recognised.

The timing of revenue recognition could change (and be accelerated) for some entities compared to current guidance, which is more focused on the transfer of risks and rewards than the transfer of control. The transfer of risks and rewards is an indicator of whether control has transferred under the new standard, but additional indicators will need to be considered. If the entity is able to require the customer or distributor to return the product (that is, it has a call right), control likely has not transferred to the customer or distributor.

An entity that is not able to estimate returns, but is able to estimate the maximum amount of returns, should recognise revenue for the amount that it does not expect to be returned at the time of sell-in, provided that control of the products has transferred. Refer to the 'Rights of return' section later in this supplement.

Many distributors are thinly capitalised. The entity would still need to assess whether collectability is probable before it recognises revenue.

For arrangements where revenue is deferred for one of the above reasons, Management should re-evaluate the appropriateness of the deferral each reporting period based on when the revenue recognition criteria are met, not just upon sell-through of the product to the end customer.</td></tr>
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Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔			✔	✔	✔

Example 6 – Sale of product to a distributor with ongoing involvement

Facts: Manufacturer uses a distributor network to supply its product to final customers. The distributor may return unsold product at the end of the contract term. Once the products are sold to the end customer, Manufacturer has no further obligations related to the product and the distributor has no further return rights. Because of the complexity of the products and the varied nature of how they may be incorporated by end users into their final products, Manufacturer supports the distributor with technical sales support, including sending engineers on sales calls with the distributor.

When should Manufacturer recognise revenue?

Discussion: Manufacturer should recognise revenue upon transfer of control of the product to the customer. A distributor that takes control of the products and can decide whether to return the goods, has legal title to the goods, and can re-sell or pledge them is the customer of Manufacturer. The technical sales support provided by Manufacturer could be a separate performance obligation. Assuming the sale of the product and the sales support are separate performance obligations, Manufacturer should recognise revenue allocated to the products when control of the goods transfers to the distributor, subject to any anticipated returns, and provided collectability of the consideration from the distributor is probable. Manufacturer should recognise revenue allocated to the support obligation as the support is provided.

Example 7 – Sale of product to a distributor with price protection clause

Facts: Manufacturer sells product into its distribution channel. In the distribution contract, Manufacturer provides price protection by reimbursing its distribution partner for any difference between the price charged to the distributor and the lowest price offered to any customer during the following six months.

When should Manufacturer recognise revenue?

Discussion: Manufacturer should recognise revenue upon transfer of control of the product to the distributor. The price protection clause creates variable consideration. Manufacturer should estimate the transaction price using either the expected value approach or most likely amount, whichever is more predictive. The estimate of variable consideration is constrained to the amount that is highly probable (IFRS) or probable (US GAAP) of not reversing if estimates of the variable consideration change. Relevant experience with similar arrangements that allow Manufacturer to estimate the transaction price, taking into account the expected effect of the price protection provision, could result in earlier revenue recognition as compared to current practice.

Allocation of transaction price

Technology companies may provide multiple products or services to their customers as part of a single arrangement. Entities will allocate the transaction price to the separate performance obligations in a contract based on the relative stand-alone selling price of each of the separate performance obligations in the arrangement.

New standard	Current US GAAP	Current IFRS
The transaction price is allocated to separate performance obligations based on the relative stand-alone selling price of the performance obligations in the contract. The stand-alone selling price for items not sold separately should be estimated. A residual approach may be used as a method to estimate the stand-alone selling price in certain situations when the selling price for a good or service is highly variable or uncertain. Some elements of the transaction price, such as variable consideration or discounts, might affect only one performance obligation rather than all performance obligations in the contract. Variable consideration can be allocated to specific performance obligations if certain conditions are met, namely that the terms of the variable consideration relate specifically to the entity's efforts to satisfy the performance obligation or transfer the distinct good or service (or to a specific outcome from satisfying the performance obligation	The consideration in an arrangement is allocated to the elements of a transaction based on the relative stand-alone selling price. The residual value method cannot be used (except as described above for software companies). Allocation to a delivered item is limited to the consideration that is not contingent on providing an undelivered item or meeting future performance obligations. *Expected impact*: Allocation guidance in the new standard might affect the price allocated to the identified performance obligations, and thus the timing of revenue recognition, due to the following: • There is no definitive limitation for cash contingent on satisfying a future performance obligation, although such contingent amounts must meet the criteria described above of not being probable of being subject to a significant revenue reversal.	Consideration is generally allocated to the separate components in the arrangement based on a relative fair value or cost plus a reasonable margin approach. A residual or reverse residual approach could also be used. *Expected impact*: The basic allocation principle has not changed under the new guidance. However, the required use of relative stand-alone selling prices will affect those companies that have historically used the residual or reverse residual method, or applied an approach similar to US GAAP whereby the allocation to a delivered item is limited to the consideration that is not contingent on providing an undelivered item or meeting future performance obligations. Further, allocation guidance in the new standard could affect the price allocated to the identified performance obligations due to the ability to allocate discounts and variable consideration amounts to specific performance obligations if certain conditions are met.

New standard	Current US GAAP	Current IFRS
or transferring the distinct good or service). A discount is allocated to a specific performance obligation if the following criteria are met: • The entity regularly sells each distinct good or service in the contract on a stand-alone basis. • The entity regularly sells, on a stand-alone basis, a bundle of some of those distinct goods or services at a discount. • The discount attributable to the bundle of distinct goods or services is substantially the same as the discount in the contract and an analysis of the goods or services in each bundle provides observable evidence of the performance obligation to which the entire discount in the contract belongs.	• An entity can allocate discounts and variable consideration amounts to specific performance obligations if certain conditions are met.	

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔	✔	✔	✔	✔	✔

Consulting and manufacturing service contracts

Many technology companies provide consulting and manufacturing services, including business strategy services, supply-chain management, system implementation, outsourcing services, and control and system reliance. Technology service contracts are typically customer-specific, and revenue recognition is therefore dependent on the facts and circumstances of each arrangement.

Accounting for service revenues may change under the new standard, as management must determine whether the performance obligation is satisfied at a point in time or over time.

New standard	Current US GAAP	Current IFRS
Revenue is recognised upon the satisfaction of performance obligations, which occurs when control of the good or service transfers to the customer. Control can transfer at a point in time or over time. ***Over time*** A performance obligation is satisfied over time if any of the following criteria are met:	US GAAP permits the proportional performance method for recognising revenue for service arrangements not within the scope of guidance for construction or certain production-type contracts. However, there is no clear guidance for assessing whether revenue should be recognised over time following the proportional performance method or upon completion of the service.	IFRS requires that service transactions be accounted for by reference to the stage of completion of the transaction. This method is often referred to as the percentage-of-completion method. The stage of completion may be determined by a variety of methods (including the 'cost-to-cost' method). Revenue may be recognised on a straight-line basis if the services are performed by an indeterminate

<table>
<tr><th>New standard</th><th>Current US GAAP</th><th>Current IFRS</th></tr>
<tr><td rowspan="2">• The customer receives and consumes the benefits of the entity's performance as the entity performs.

• The entity's performance creates or enhances an asset (work-in-process) that the customer controls as the asset is created or enhanced.

• The entity's performance does not create an asset with an alternative use to the entity and the customer does not have control over the asset created, but the entity has a right to payment for performance completed to date.

An entity should recognise revenue over time only if the entity can reasonably measure its progress towards complete satisfaction of the performance obligation.

Point in time
An entity will recognise revenue at a point in time (when control transfers) if performance obligations in a contract do not meet the criteria for recognition of revenue over time.</td><td>Input measures, with the exception of cost measures, that approximate progression toward completion can be used when output measures do not exist or are not available to an entity without undue cost.

Revenue is recognised based on a discernible pattern of benefit. If none exists, a straight-line approach may be appropriate.</td><td>number of acts over a specified period of time and no other method better represents the stage of completion.

Revenue could be deferred in instances where a specific act is much more significant than any other acts to be performed as part of the service.</td></tr>
<tr><td colspan="2">Expected impact: Entities will need to first determine whether a performance obligation is satisfied over time, which may require judgement. We do not expect a significant change in practice for most performance obligations satisfied over time, although management may need to revisit contractual payment terms in some cases to assess whether the 'right to payment' criterion is met. Additionally, there may be certain performance obligations previously recognised at a point in time on final delivery that will be recognised over time under the new standard.

Entities will use the method to measure progress toward satisfaction of a performance obligation that best depicts transfer of control to the customer, which could be an output or an input method.</td></tr>
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Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✓	✓		✓	✓	

Example 8 – Consulting services – performance obligation satisfied over time

Facts: Computer Consultant enters into a three-month, fixed-price contract to track Customer's software usage to help Customer decide which software packages it should upgrade to in the future. Computer Consultant will share findings on a monthly basis, or more frequently if requested. Computer Consultant will provide a summary report of the findings at the end of three months. Customer will pay Computer Consultant C2,000 per month and Customer can direct Computer Consultant to focus on the usage of any systems it wishes to throughout the contract.

How should Computer Consultant account for the transaction?

Discussion: Computer Consultant should recognise revenue over time as it performs the services. Customer receives a benefit from the consulting services as they are performed during the three-month contract; therefore, it is a performance obligation satisfied over time.

Example 9 – Sale of specialised equipment – performance obligation satisfied over time

Facts: Contract Manufacturer enters into a six-month, fixed-price contract with Customer for the production of highly customised equipment. Customer does not control the equipment until title transfers at the end of the six-month contract term. Customer will pay Contract Manufacturer a non-refundable progress payment of C10,000 per month for the equipment, which is commensurate with the performance completed to date.

How should Contract Manufacturer account for the transaction?

Discussion: Contract Manufacturer should recognise revenue over time as it manufactures the equipment. Given the highly customised nature of the equipment, Contract Manufacturer's performance does not create an asset with an alternative use to Contract Manufacturer. Further, Contract Manufacturer has a right to payment from Customer for the performance completed to date, as evidenced by the non-refundable progress payments. The performance obligation therefore meets the criteria for recognition over time.

Intellectual property licences

A licence is a right to use intellectual property ('IP') owned by another entity. The licensor often receives fees upfront for licences, and there may also be ongoing royalties. Licence arrangements frequently include other obligations, such as ongoing support, professional services, etc. Licences of IP include, among others: software and technology; media and entertainment rights; franchises; patents; trademarks; and copyrights.

Licences can include various features and economic characteristics, which can lead to significant differences in the rights provided by a licence. Licences might also be perpetual or granted for a defined period of time. An entity should first consider the guidance for identifying performance obligations to determine if the licence is distinct from other goods or services in the arrangement. For licences that are not distinct, an entity will combine the licence with other goods and services in the contract and recognise revenue when it satisfies the combined performance obligation.

<table>
<tr><th>New standard</th><th>Current US GAAP</th><th>Current IFRS</th></tr>
<tr>
<td rowspan="2">The nature of rights provided by the licence in some arrangements is to allow access to the entity's evolving IP. A licence that is transferred over time provides a customer access to the entity's IP as it exists throughout the licence period. Licences that are transferred at a point in time provide the customer the right to use the entity's IP as it exists when the licence is granted. The customer must be able to direct the use of and obtain substantially all of the remaining benefits from the licensed IP to recognise revenue when the licence is granted, although the licensor may periodically provide updates to that IP as a separate performance obligation.

There are three criteria used to determine whether a licence provides access to IP and revenue should therefore be recognised over time:

• The licensor will undertake (either contractually or based on customary business practices) activities that significantly affect the IP to which the customer has rights.

• The licensor's activities do not otherwise transfer a good or service to the customer as they occur.

• The rights granted by the licence directly expose the customer to any</td>
<td>Revenue from licences of intellectual property is recognised in accordance with the substance of the agreement.

There is no specific guidance for revenue recognition on licences outside of software licences.

Revenue might be recognised on a straight-line basis over the life of the agreement, for example, when a licensee has the right to use the technology for a specified period of time, by analogy to the leasing model. Revenue could also be recognised upfront similar to the model used for software licences in certain situations.

Judgement is required to determine the most appropriate treatment.</td>
<td>Existing revenue guidance requires fees and royalties paid for the use of an entity's assets to be recognised in accordance with the substance of the agreement. This might be on a straight-line basis over the life of the agreement, for example, when a licensee has the right to use certain technology for a specified period of time. It might also be recognised upfront if the substance is similar to a sale.

An assignment of rights for a fixed fee or a non-refundable guarantee under a non-cancellable contract that permits the licensee to exploit those rights freely when the licensor has no remaining obligations to perform is, in substance, a sale.

Judgement is required to determine the most appropriate treatment.</td>
</tr>
<tr>
<td colspan="2">Expected impact: The new standard requires revenue to be recognised when the customer obtains control of the rights to use the intellectual property. This is a judgement based on the factors provided in the standard. An entity will need to determine the type of licence it is providing, and this could result in a different timing of revenue recognition compared to today, depending on the entity's current accounting (recognition over time or upfront).</td>
</tr>
</table>

New standard	Current US GAAP	Current IFRS
effects (both positive and negative) of those activities on the IP. If all three of these factors are not met, the licence revenue should be recognised at a point in time. The following factors are not considered in this assessment: • Restrictions of time, geography, or use. • Guarantees that the licensor has a valid patent and will defend the licensed IP from infringement. The standard includes an exception for sales- or usage-based royalties from licences of intellectual property. Revenue from those arrangements is not included in the transaction price until the customer's subsequent sales or usages occur. This exception does not apply to an outright sale of IP.		

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔	✔		✔	✔	✔

Example 10 – Licence to IP with a sales-based royalty

Facts: Vendor licenses patented technology in a handheld device for no upfront fee and 1% of future product sales. The licence term is equal to the remaining patent term of 3 years. Technology in this area is changing rapidly so the possible consideration ranges from C0 to C50,000,000 depending on whether new technology is developed.

How should Vendor account for the transaction?

Discussion: Royalties from licences of IP are not included in the transaction price until the customer's subsequent sales or usages occur. Royalty revenue is recognised when Vendor is entitled to those amounts, which in the case of a licence with a sales-based royalty is when those future product sales occur.

Example 11 – Licence to IP with a sales-based royalty and guaranteed minimum

Facts: Vendor licenses patented technology in a handheld device for no upfront fee and 1% of future product sales. The licence term is equal to the remaining patent term of 3 years. Technology in this area is changing rapidly so the possible consideration from product sales ranges from C0 to C50,000,000 depending on whether new technology is developed. However, the vendor is entitled to at least C5,000,000 at the end of each year regardless of the actual sales. Management has concluded that the licence transfers at a point in time when the licence period commences. Management has also concluded that it is probable it will collect the consideration to which it is entitled and there are no further obligations remaining after the licence is transferred.

How should Vendor account for the transaction?

Discussion: As discussed above, Vendor will recognise royalty revenue when the future product sales occur. However, since Vendor is entitled to at least C5,000,000 at the end of each year, this amount of consideration is not variable. Therefore, Vendor should recognise at licence inception the present value of the future minimum payments as revenue. Any consideration from royalties in excess of C5,000,000 in any given year will be recognised as those sales occur.

Rights of return

Return rights are common in sales involving various technology products. Return rights may also take on various forms, such as product obsolescence protection and trade-in agreements. These rights generally result from the buyer's desire to mitigate the risk related to the products purchased and the seller's desire to promote goodwill with its customers.

New standard	Current US GAAP	Current IFRS
Revenue is only recognised for goods that the entity reasonably expects will not be returned and a liability is recognised for the expected amount of refunds to customers. The refund liability is updated for changes in expected refunds. An asset and corresponding adjustment to cost of sales is recognised for the right to recover goods from customers on settling the refund liability, with the asset initially measured at the original cost of the goods (that is, the carrying amount in inventory), less any expected costs to recover those products. The asset is assessed for impairment if indicators of impairment exist. Rights of return are considered a form of variable consideration, as they affect the total amount of fees that a customer will pay. Therefore, revenue recognition follows a similar model as described above for variable consideration, with amounts included in the transaction price if it is highly probable (IFRS) or probable (US GAAP) that a significant reversal of cumulative revenue will not occur.	Returns are estimated based on historical experience with an allowance recorded against sales. Revenue is not recognised until the return rights lapse if the entity is unable to reasonably estimate potential returns. *Expected impact*: There could be a change in timing of revenue recognition if an entity defers the entire amount of revenue under current US GAAP due to its inability to estimate returns, especially if there is a cap on returns that would provide a basis to record a minimum amount under the variable consideration guidance. The balance sheet will be ‘grossed-up’ to include the refund obligation and the asset for the right to the returned goods. The asset is assessed for impairment if indicators of impairment exist.	Returns are estimated based on historical experience with an allowance recorded against sales. Revenue is not recognised until the return rights lapse if the entity is unable to reasonably estimate potential returns. *Expected impact*: There is not expected to be a significant change from current IFRS, except to the extent that an entity needs to ‘gross-up’ the balance sheet to include the refund obligation and the asset for the right to the returned goods. The asset is assessed for impairment if indicators of impairment exist.

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
✔			✔	✔	✔

Example 12 – Sale of product with a return right

Facts: Vendor sells and ships 10,000 gaming systems to Customer, a reseller, on the same day. Customer may return the gaming systems to Vendor within 12 months of purchase. Vendor has historically experienced a 10% return rate from Customer.

How should Vendor account for the transaction?

Discussion: Vendor should not record revenue for the gaming systems that are anticipated to be returned (that is, 1,000 or 10%). Vendor should record a contract liability for 1,000 gaming systems and record an asset for the right to the gaming system assets expected to be returned. The asset should be recorded at the original cost of the gaming systems. Vendor will not derecognise the refund liability and related asset until the refund occurs or the refund right lapses (although Vendor should adjust these amounts as it revises its estimate of returns over time). The asset will need to be assessed for impairment until derecognition. The transaction price for the 9,000 gaming systems that Vendor believes will not be returned is recorded as revenue when control transfers to the customer, assuming Vendor concludes it is highly probable (IFRS) or probable (US GAAP) that a significant reversal of cumulative revenue will not occur.

Product warranties

It is common for technology companies to provide a product warranty in connection with the sale of a product. The nature of a product warranty can vary significantly. Some warranties provide a customer with assurance that the related product complies with agreed-upon specifications (assurance-type or 'standard' warranties). Other warranties provide the customer with a service in addition to the assurance that the product complies with agreed-upon specifications. The new standard draws a distinction between product warranties that the customer has the option to purchase separately (for example, warranties that are negotiated or priced separately) and product warranties that the customer does not have the option to purchase separately. Many of the warranties offered by technology companies could fall in either or both categories. Management will need to exercise judgement when assessing a warranty not sold separately to determine if there is a service component that is a separate performance obligation.

New standard	Current US GAAP	Current IFRS
An entity should account for a warranty that the customer has the option to purchase separately as a separate performance obligation that is satisfied over the warranty period. A warranty that the customer does not have the option to purchase separately should be accounted for in accordance with existing guidance on product warranties. A warranty, or a part of the warranty, that is not sold separately but that provides the customer with a service in addition to the assurance that product complies with agreed-upon specifications, creates a performance obligation for the promised service. An entity that cannot reasonably separate the service component from a standard warranty should account for both together as a single performance obligation.	Warranties that a customer can purchase separately are typically similar to extended warranty contracts. Revenue from extended warranties is deferred and recognised over the life of the contract. Extended warranties that a customer can purchase separately are accounted for as a separate deliverable in an arrangement. A warranty that is separately priced in a multiple-element arrangement is allocated consideration based on the contractually stated price. Product warranties that provide coverage for latent defects are typically accounted for in accordance with loss contingency guidance, resulting in recognition of an expense and a warranty liability when the good is sold. *Expected impact*: Similar to existing guidance, warranties sold separately give rise to a separate performance obligation under the new standard and, therefore, revenue is recognised over the warranty period. Warranties that are separately priced may be affected as the arrangement consideration will be allocated on a relative stand-alone selling price basis under the new standard rather than based on the contractual price as under current US GAAP. Product warranties that are not sold separately and provide for defects that	Warranties that a customer can purchase separately are typically similar to extended warranty contracts. Revenue from extended warranties is deferred and recognised over the life of the contract. Warranties that are not sold separately are accounted for in accordance with provisions guidance, resulting in recognition of an expense and a warranty liability when the good is sold. *Expected impact*: Similar to existing guidance, warranties sold separately give rise to a separate performance obligation under the new standard and, therefore, revenue is recognised over the warranty period. There is not expected to be a significant change in accounting compared to current guidance.

New standard	Current US GAAP	Current IFRS
	exist when a product is shipped will result in a cost accrual similar to today's guidance.	

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
			✔	✔	✔

Example 13 – Product sale with optional warranty

Facts: Vendor sells a hard drive, keyboard, monitor, and a 12-month warranty that the customer has the option to purchase.

How should Vendor account for the optional warranty?

Discussion: The new standard requires Vendor to account for the 12-month optional warranty as a separate performance obligation. A portion of the transaction price is allocated to the warranty based on its relative stand-alone selling price and is recognised as revenue as the warranty obligation is satisfied. Vendor will need to assess the pattern of warranty satisfaction to determine when revenue is recognised (that is, rateable or some other pattern).

FOB synthetic destination shipping

Products entities often have a customary practice of replacing or crediting lost or damaged shipments, even when sales contracts contain 'free on board' (FOB) shipping point terms, and it is clear that title legally transfers at the time of shipment. The customer is therefore protected from some losses in the same way as if the shipping terms were FOB destination (this is also known as 'FOB synthetic destination'). Revenue for shipments is typically deferred until the product has been received by the customer under today's guidance, because the risks and rewards of ownership have not been substantively transferred to the customer at the point of shipment. The timing of revenue recognition for these types of arrangements might change under the new standard.

New standard	Current US GAAP	Current IFRS
Revenue is recognised upon the satisfaction of performance obligations, which occurs when control of the good or service transfers to the customer. Factors to consider in assessing control transfer include, but are not limited to: • The customer has an unconditional obligation to pay. • The customer has legal title. • The customer has physical possession. • The customer has the significant risks and rewards of ownership. • The customer has accepted the asset. Situations where an entity transfers a good but retains the risk of loss based	The risks and rewards of ownership in the goods need to substantively transfer to the customer. Revenue is deferred until the goods have been delivered to the end customer if the vendor has established a practice of covering risk of loss in transit.	A contract for the sale of goods normally gives rise to revenue recognition at the time of delivery, when the following conditions are satisfied: • The risks and rewards of ownership have transferred. • The seller does not retain managerial involvement. • The amount of revenue can be reliably measured. • It is probable that the economic benefit will flow to the customer. • The costs incurred can be measured reliably. Revenue is typically recognised once the goods reach the buyer when there are FOB synthetic destination terms,

New standard	Current US GAAP	Current IFRS
on shipping terms could be indicative of an additional performance obligation for the in-transit risk of loss. In this case, revenue should be allocated between the performance obligations (transfer of the good and the in-transit risk of loss).		as risks and rewards of ownership typically transfer at that time.
	Expected impact: The timing of revenue recognition could change significantly under the new model, as the focus shifts from transfer of risks and rewards to transfer of control of the goods. Management will need to assess whether contract terms or business practices create an additional performance obligation under the new guidance. An example of this could be in-transit risk of loss coverage. Control of the underlying goods transfers and revenue for the product is recognised when the product leaves the seller's location, depending on the contract terms, but there might be a second performance obligation for in-transit risk of loss. Management will need to allocate the transaction price to each of the performance obligations, and revenue would be recognised when each performance obligation is satisfied, which might be at different times.	

Sectors in technology most impacted

Software	Cloud Computing	Internet	Semi-conductors	Hardware / Equipment	Clean-tech
			✔	✔	✔

Example 14 – FOB synthetic destination

Facts: Vendor enters into a contract to sell chipsets to a handset manufacturer. The delivery terms are free on board (FOB) shipping point (the legal title passes to the handset manufacturer when the chipsets are handed over to the carrier). A third-party carrier is used to deliver the chipsets. Vendor has a past business practice of providing replacements to the handset manufacturer at no additional cost if the chipsets are damaged during transit.

The handset manufacturer does not have physical possession of the chipsets during transit, but the handset manufacturer has legal title at shipment and therefore can sell the chipsets to another party. Vendor is also precluded from selling the chipsets to another customer after shipment.

How should Vendor account for this arrangement?

Discussion: Vendor might conclude that it has two performance obligations: one for fulfilling the order for the chipsets and a second for covering the risk of loss during transit of the chipsets based on its past business practice. Vendor has not satisfied its performance obligation regarding risk of loss coverage at the point of shipment. The transaction price should be allocated to the chipsets and to the service that covers the risk of loss. Revenue for the chipsets is recognised at the time of shipment, as the handset manufacturer has control of the chipsets at that time. Revenue relating to covering the risk of loss is recognised as the goods are transported

About PwC's Technology practice

PwC's Technology practice provides audit and assurance, business advisory, and tax services to technology entities around the globe in the networking and computers, software & internet, semiconductors and clean technology space. We support our clients through industry restructurings, regulatory transformations, technological advances, and changes in financial reporting and corporate governance requirements.

PwC helps organisations and individuals create the value they're looking for. We're a network of firms in 157 countries with more than 184,000 people who are committed to delivering quality in assurance, tax, and advisory services.

For more information, please contact:

Raman Chitkara
Global Technology Industry Leader
Phone: 1-408-817-3746
Email: raman.chitkara@us.pwc.com

Mark McCaffrey
Global Software Leader
Phone: 1-408-817-4199
Email: mark.mccaffrey@us.pwc.com

Pierre Marty
European Software Leader
Phone: +33 1 56 57 58 15
Email: pierre.marty@fr.pwc.com

Cory Starr
US Technology Assurance Leader
Phone: 1-408-817-1215
Email: cory.j.starr@us.pwc.com

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