

Communication

NewsFlash



Emerging mHealth: Paths for growth

Increasingly ubiquitous and powerful mobile technology holds the potential to address long-standing issues in healthcare provision. However, such effervescence in a field with few proven business models suggests that, yet again, technology-driven hype may lead to expensive failures.

PwC commissioned an Economist Intelligence Unit report which examined the current state and potential of mHealth in developed and emerging markets, the ongoing barriers to its adoption and the implications for companies in the field. The following summarises the key findings:

Expectations are high for mHealth.

Roughly half of the patients surveyed for this report predict that mHealth will improve the convenience, cost and quality of their healthcare in the next three years. Meanwhile, six in ten doctors and payers believe that its widespread adoption in their countries is inevitable in the near future. Yet most experts interviewed for this study, while also convinced that mHealth will eventually become an important part of care provision, expect that adoption will take time.

Healthcare's strong resistance to change will slow adoption of innovative mHealth.

New technology is not enough. Widespread adoption of mHealth will require changes in behaviour of actors who are trying to protect their interests. The challenge will be even greater for innovators because the improvements that mHealth can bring—such as patient-centred care and a greater focus on prevention—will involve disruption of how healthcare is provided. To succeed, innovators must manoeuvre through culturally conservative, highly regulated and fragmented yet often monopolistic systems that often provide contradictory incentives.

The diversity of interests at play makes an evolving landscape even more complex.

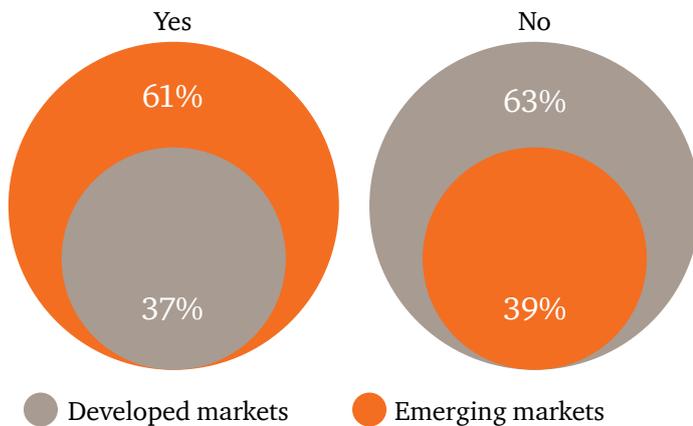
Patients want more convenient provision of healthcare, but they also want greater control. For doctors, mHealth can help provide better patient care and ease their administrative headaches, but they are likely to resist the loss of power implicit in greater patient control. Payers already display interest in mHealth, and the economic pressure for more patient-centred, preventive care is likely to drive them further towards the patient’s viewpoint.

Emerging markets are the trailblazers in mHealth.

Patients in these markets are much more likely to use mHealth applications or services than those in developed countries (see chart 1). Similarly, more emerging-market doctors offer mHealth services than colleagues in developed countries, and more payers cover these costs. The ability of these countries to leap ahead lies in the paucity of existing healthcare: there is greater demand for change and, just as important, there are fewer entrenched interests to impede the adoption of new approaches.

Patient are more aware of mHealth in emerging markets

% of patients who are familiar with the terms “mobile health” or “mHealth”



Source: Economist Intelligence Unit, 2012

Solutions, not technology, are the key to success.

Widespread mHealth adoption requires services and products that appeal to current payers because patients, highly sensitive to price, will provide little income. Consumers’ sense of entitlement with regard to healthcare aggravates this price sensitivity. Accordingly, vendors must concentrate on solving payers’ problems. Technology is an essential, but not sufficient, tool in this endeavour.

PwC firms perspective: What this means for your business

The growing pervasiveness of technology is enabling the emergence of a new, more patient-centric healthcare value chain. As a result, conventional business models, which typically place consumers at the periphery, may soon no longer apply.

To lead, all stakeholders—physicians, hospitals, health insurers, pharmaceuticals, medical device companies and government—will likely shift their practices toward patient/consumer models that will focus on clinical outcomes, value, and patient satisfaction.

One needs to look no further than other industries (e.g., media, retail and travel/tourism) that provide value-added online services—many of which are free of charge—in order to generate a competitive advantage. As in these other industries, business models that will likely get the most traction will be based on payment schemes that leverage retailers, product companies and other business partners to absorb any additional costs with minimal reliance on consumer payments.

PwC firms perspective: Ingredients for successful mHealth models

PwC firms research has found that mHealth solutions have begun to embrace the following six principles:

Interoperability – interoperable with sensors and other mobile/non-mobile devices to share vast amounts of data with other applications, such as electronic health records and existing healthcare plans.

Integration – integrated into existing activities and workflows of providers and patients to provide the support needed for new behaviours.

Intelligence – offer problem-solving ability to provide real-time, qualitative solutions based on existing data in order to realise productivity gains.

Socialisation – act as a hub by sharing information across a broad community to provide support, coaching, recommendations and other forms of assistance.

Outcomes – provide a return on investment in terms of cost, access and quality of care based on healthcare objectives.

Engagement – enable patient involvement and the provision of ubiquitous and instant feedback in order to realise new behaviours and/or sustain desired performance.



Practical guide to IFRS

Revenue recognition re-exposed ED – implications for the telecoms industry

Overview

The telecoms industry comprises several subsectors, including wireless and fixed line. Wireless telecom entities provide voice and data products and wireless broadband. Fixed line telecom entities provide voice services (local and long-distance), internet access, broadband video, and data and network access together with outsourcing and networked IT services. Service revenues are primarily earned from providing access to, and usage of, the telecom entities' network and facilities.

Telecom entities also provide enhanced services such as caller identification, call waiting, call forwarding, voicemail, text and multimedia messaging, as well as downloadable wireless data applications, including ringtones, music, games and other data content. These enhanced features and data applications generate additional service revenues through monthly subscription fees or increased usage through utilisation of these features. Some telecom entities also sell equipment such as handsets, modems, dongles (a wireless broadband service connector), customer premises equipment (CPE) and a variety of accessories.

This discussion addresses how the revised exposure draft, 'Revenue from contracts with customers', issued on November 14, 2011 (the '2011 ED' or 'proposed standard'), could affect businesses operating in the telecom industry. The proposed guidance is subject to change until a final standard is issued. The examples included in this paper reflect potential effects based on the proposed standard; any conclusions are subject to further interpretation and assessment based on the final standard.



Accounting for multiple performance obligations

Proposed standard	Current IFRS
<p>The proposed standard requires entities to identify all promised goods or services in a contract and determine whether to account for each promised good or service as a separate performance obligation. A performance obligation is a promise in a contract to transfer a good or service to the customer.</p> <p>A promised bundle of goods or services is combined into one separate performance obligation if:</p> <ul style="list-style-type: none"> the goods or services are highly interrelated and providing them requires the entity to also provide a significant service of integrating the goods or services into the combined item(s) for which the customer has contracted; and the entity is contracted by the customer to significantly modify or customise the goods or services. <p>Performance obligations that are delivered at different times are accounted for separately if they are ‘distinct’. A good or service is distinct, and is accounted for separately if:</p> <ul style="list-style-type: none"> the entity regularly sells the good or service separately; or where not sold separately, the customer can benefit from the good or service on its own or together with resources readily available to the customer. 	<p>The revenue recognition criteria are usually applied separately to each transaction. It might be necessary to separate a transaction into identifiable components to reflect the substance of the transaction in certain circumstances. Separation is appropriate when identifiable components have standalone value and their fair value can be measured reliably.</p> <p>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.</p>

Potential impact

Management will need financial processes that identify the different performance obligations in each telecom contract and pinpoint when and how those obligations are fulfilled. Telecom entities will have to carefully consider outsourcing and network IT contracts, various types of activation/connection services and other upfront services (for example, connecting customers to their network or laying a physical line to the customers’ premises) to determine if these services meet the definition of a separate performance obligation. The timing of recognition of revenue for telecom entities that currently do not account for equipment (for example, handsets) separately from the telecom services will be significantly affected if the performance obligations in their bundled offerings meet the proposed standard’s definition of distinct performance obligations.

Variable consideration/determining the transaction price

Proposed standard	Current IFRS
<p>An entity estimates the total amount of consideration it is entitled to when a contract includes variable consideration. An entity should use one of the following approaches to estimate variable consideration depending on which is the most predictive:</p> <ul style="list-style-type: none"> • The expected value, being the sum of probability-weighted amounts; or • The most likely outcome, being the most likely amount in a range of possible outcomes. <p>The estimate should be updated at each reporting period.</p> <p>The amount of variable consideration included in the transaction price and allocated to a satisfied performance obligation should be recognised as revenue only when the entity is reasonably assured to be entitled to that amount.</p> <p>If an entity receives consideration from a customer and expects to refund some or all of that consideration to the customer, the entity recognises a refund liability. The amount of the refund liability depends on the amount of consideration to which the entity is reasonably assured to be entitled.</p> <p>Customers may not exercise all of their contractual rights related to, for example, mail-in rebates and other incentive offers. If an entity is reasonably assured of a breakage amount, the entity should recognise the effects of the expected breakage as revenue in proportion to the pattern of rights exercised by the customer.</p> <p>If an entity is not reasonably assured of a breakage amount, the entity should recognise the effects of the expected breakage when the likelihood of the customer exercising its remaining rights becomes remote (that is, a liability is recognised in full for the entire amount of the rebate or other potential refund on the transaction date).</p> <p>The estimate of breakage is updated at each reporting period for changes in circumstances. Management should consider several factors in assessing whether the entity is reasonably assured to be entitled to breakage amounts, including:</p> <ul style="list-style-type: none"> • the impact of external factors; • the time until the uncertainty is expected to be resolved; • the extent of experience; and • the variability in the range of possible outcomes. 	<p>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’.</p> <p>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.</p> <p>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.</p> <p>A liability is recognised based on the expected levels of rebates and other incentives that will be claimed. The liability should reflect the maximum potential amount if no reliable estimate can be made.</p>

Potential impact

Some entities will recognise revenue earlier under the proposed guidance because variable consideration is included in the transaction price prior to the date on which all contingencies are resolved. For example, telecom entities that offer discounts under minimum purchase commitment arrangements and determine they are reasonably assured to receive penalties or additional payments because customers will fail to meet the specified usage volumes could recognise revenue earlier than under current guidance.

Management will also have to assess whether the entity is reasonably assured of breakage amounts related to incentives. Management should consider its experience with existing incentives, discounts, take-rates, and other external factors when determining when to recognise breakage amounts.

The proposed standard requires entities to adjust the promised amount of consideration to reflect the time value of money if the contract has a financing component that is significant to the contract (and not to a portfolio of contracts). Factors to consider when determining whether a contract has a significant financing component include, but are not limited to, the following: (a) the expected length of time between when the entity transfers the promised goods or services to the customer and when the customer pays for those goods or services, (b) whether the amount of consideration would differ substantially if the customer paid in cash promptly in accordance with typical credit terms in the industry and jurisdiction, and (c) the interest rate in the contract and prevailing interest rates in the relevant market.

The financing impact of transferring the handset to the customer at the initiation of the contract and collecting the customer’s monthly payment for the handset over the contract period is likely to be insignificant.

Collectability

Proposed standard	Current IFRS
<p>Collectability will no longer be a recognition threshold. An entity will recognise an impairment loss for the customer's credit risk (the customer's ability to pay the amount of promised consideration) on receivables and contract assets, if any, as at the transaction date. The impairment loss will be presented in a separate line item adjacent to revenue.</p> <p>Once the impairment loss has been recorded, the effects of changes in the assessment of credit risk associated with that right to consideration are recognised in the same line.</p>	<p>Entities must establish that it is probable that economic benefits will flow before revenue can be recognised.</p> <p>Provision for bad debts (incurred losses on financial assets including accounts receivable) is recognised in a two-step process: first, objective evidence of impairment must be present; second, the amount of the impairment is measured based on the present value of expected cash flows.</p>

Potential impact

Collectability is no longer a criterion for revenue recognition. Revenue may be recognised earlier than in current practice, which may affect key metrics used by management and investors in the telecom industry (such as average revenue per user (ARPU)). The impairment of receivables will also be recorded earlier than in current practice because an expected loss might be recorded when revenue is recognised under the proposed standard.

Telecom entities currently record an impairment loss when receivables either age or become delinquent. Management will have to determine a practical method to measure and update the expected impairment loss amounts when revenue is recognised and, consistent with today's practice, management will need to regularly update its assessments to reflect subsequent changes to customers' credit risk - likely on a portfolio basis.



Allocation of the transaction price and establishing standalone selling prices

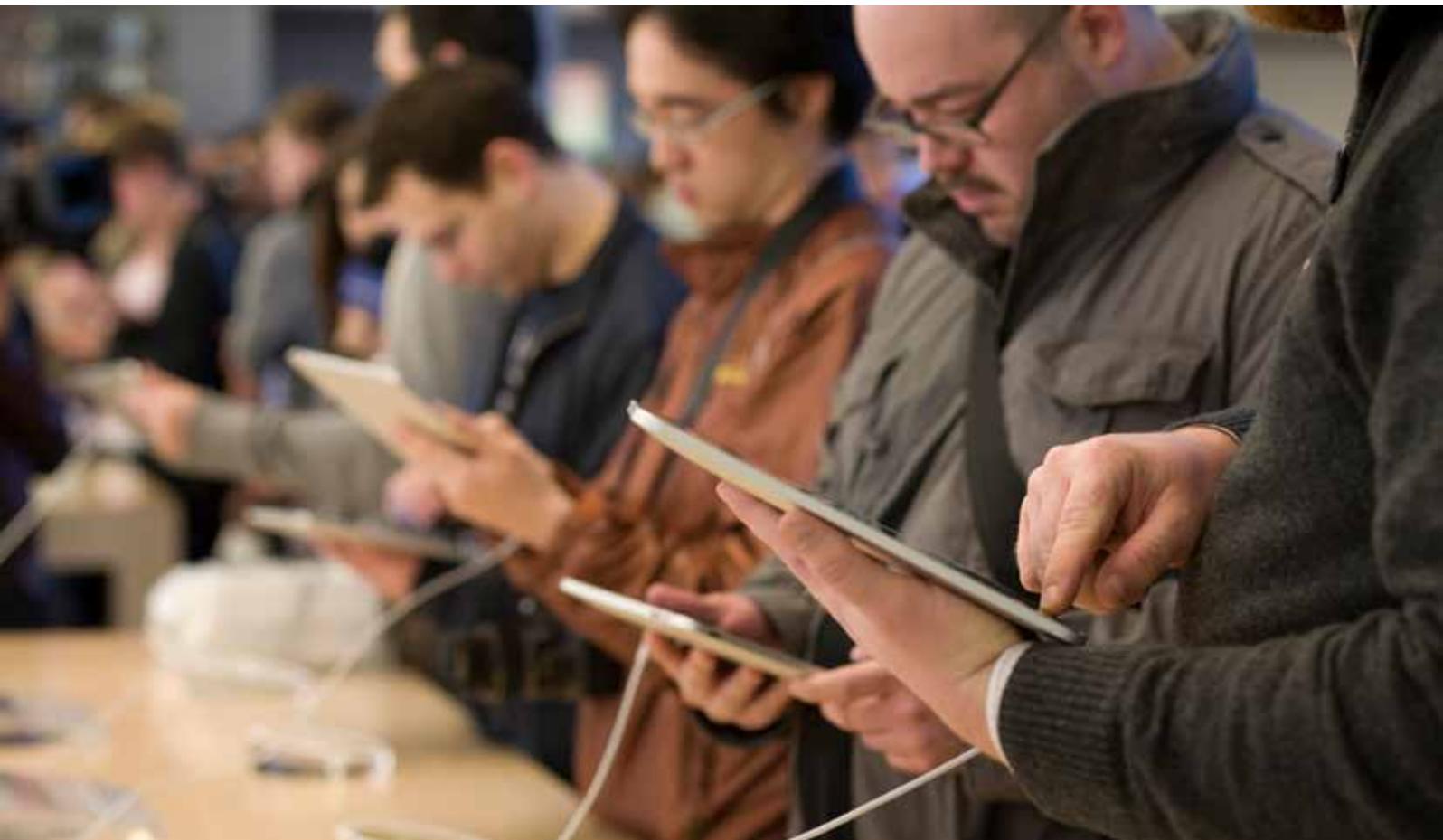
Proposed standard	Current IFRS
<p>The transaction price is allocated to separate performance obligations in a contract based on relative standalone selling prices. The standalone selling price is the price at which the entity would sell a good or service separately to the customer. The best evidence of standalone selling price is the observable price of a good or service when the entity sells that good or service separately. Management estimates the selling price if a standalone selling price is not available. In doing so, the use of observable inputs is maximised.</p> <p>Possible estimation methods include:</p> <ul style="list-style-type: none"> • Expected cost plus reasonable margin; • Assessment of market price for similar goods or services; and • Residual approach, in certain circumstances. <p>A residual approach may be used as a method to estimate the standalone selling price when the selling price of a good or service is highly variable or uncertain. A selling price is highly variable when 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 when an entity has not yet established a price for a good or service and the good or service has not previously been sold.</p>	<p>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’.</p> <p>IFRS does not mandate how consideration is allocated and permits the use of the residual method, where the consideration for the undelivered element of the arrangement (normally service or tariff) is deferred until the service is provided, when this reflects the economics of the transaction. Any revenue allocated to the delivered items is recognised at the point of sale.</p>
<p>Potential impact</p> <p><i>Management will need to exercise judgement to determine the standalone selling price for each separate performance obligation in a customer contract (the telecom services and equipment). There is good visibility into the pricing of telecom equipment and the associated telecom service in some markets. However, in many markets, telecom entities charge customers little, if anything, for the equipment and only sell equipment bundled with the telecom services. If telecom entities do not separately sell equipment, management may have to use judgement to estimate the standalone selling price by applying various estimation methods, including, but not limited to a market assessment approach or a cost plus margin approach.</i></p> <p><i>The proposed standard includes a residual approach as a suitable estimation method; however, overcoming the threshold requirements (that is, where the selling price is highly variable or uncertain) to use this approach may be challenging for telecom entities. Some software entities are more likely to meet the threshold requirements to use the residual approach. These entities provide customised contracts that include multiple, separate performance obligations. The customisation of customer contracts means pricing of the various performance obligations may differ significantly between contracts, which may allow the software entity to conclude the selling prices for certain performance obligations are highly variable. Software entities that develop new or enhanced products or services (not developed by other entities; for example, intellectual property and other intangible products) may be able to conclude the selling price for the new or enhanced product or service is uncertain. Management considering the use of the residual approach for telecom entities will have to apply judgement to assess whether the selling prices of their goods and services are highly variable or uncertain.</i></p> <p><i>The proposal’s allocation requirements will likely result in greater portions of the transaction price being allocated to the equipment than under the current guidance, which causes earlier recognition of revenue at the inception of the contract. Recognising more revenue than consideration received at the inception of a contract also results in the recognition of a contract asset, which will need to be monitored for impairment.</i></p> <p><i>Determining the estimated standalone selling prices of each performance obligation and the relative allocation of the transaction price for millions of customer contracts that have variations in telecom service plans/tariffs, customer types, contract lengths, and equipment will be complex and will require management judgement. The large number of customer contracts means the estimated selling prices and allocations may require assessments to be performed on a portfolio basis. A similar approach may be necessary when monitoring contract assets for impairment.</i></p> <p><i>Changes to systems may also be required to reflect the obligations arising from contracts and allocate the transaction price. Management should consider whether they need to modify existing systems or develop new systems to gather reliable information on customer contracts and understand the impact on the timing of revenue recognition.</i></p>	

Equipment installation revenues

Proposed standard	Current IFRS
<p>Transfer at a point in time Revenue is recognised on the satisfaction of a performance obligation, which occurs when the customer obtains control of the good or service. Control can transfer at a point in time or over time. Determining when control transfers might require a significant amount of judgement. Factors to consider include, but are not limited to:</p> <ul style="list-style-type: none"> • The entity has a right to payment; • The customer has legal title; • The customer has physical possession; • The customer has risks and rewards of ownership; and • The customer has accepted the asset. <p>Transfer over time An entity must first determine whether a performance obligation is satisfied over time. If so, an entity must select a method for measuring progress in satisfying that performance obligation. An entity should recognise revenue for a service only if the entity can reasonably measure its progress toward completion of the service.</p> <p>A performance obligation is satisfied over time if (a) the entity’s performance creates or enhances an asset that the customer controls, or (b) the entity’s performance does not create an asset with alternative use to the entity and at least one of the following criteria are met:</p> <ul style="list-style-type: none"> • The customer simultaneously receives and consumes the benefits of the entity’s performance as it performs; • Another entity would not need to substantially re-perform the task(s) if that other entity were required to fulfil the remaining obligation to the customer; or • The entity has a right to payment to date and it expects to fulfil the contract. <p>Measurement of progress An entity recognises revenue by measuring the progress towards complete satisfaction of the performance obligation for a performance obligation satisfied over time. The objective when measuring progress is to depict the transfer of control of the promised goods or services to the customer. Methods for measuring progress include: Output methods that recognise revenue on the basis of units produced, units delivered, contract milestones, or surveys of work performed; and Input methods that recognise revenue on the basis of costs incurred, labour hours expended, time lapsed, or machine hours used.</p>	<p>Revenue is recognised for installation contracts using the percentage-of-completion (stage of completion) method when reliable estimates are available.</p> <p>Where the outcome of a contract can be reliably estimated, contract costs and revenue are recognised by reference to the percentage-of-completion of the contract. Where the outcome of a contract cannot be reliably estimated, contract costs are recognised as an expense when incurred and revenue is recognised only to the extent of the contract costs incurred, provided it is probable the revenue will be recoverable. Any expected contract loss is recognised immediately.</p>
<p>Potential impact</p> <p><i>The change to a control transfer model will require careful assessment as to when revenue is recognised, specifically when control of the goods and services transfers. Management will have to carefully consider the contract terms, including the level of customisation, payment terms, units produced and costs incurred, units delivered, and the customer’s rights to the goods and services over the contract period to determine the method (output method or the input method) that most faithfully depicts the pattern of transfer of the goods or services. The method used under the proposal may cause differences in comparison to current guidance.</i></p>	

Fulfilment costs

Proposed standard	Current IFRS
<p>Direct costs incurred to fulfil a contract are first assessed to determine if they are within the scope of other standards (for example, inventory, property, plant and equipment of intangible assets), in which case the entity accounts for such costs in accordance with those standards.</p> <p>Costs that are not in the scope of another standard are evaluated under the revenue standard. An entity recognises an asset only if the costs:</p> <ul style="list-style-type: none">• relate directly to a contract;• generate or enhance resources that will be used in satisfying future performance obligations (that is, they relate to future performance); and• are expected to be recovered. <p>These costs are then amortised, as control of the goods or services to which the asset relates is transferred to the customer.</p>	<p>Many of the costs of connecting customers form part of the operator's network and the costs are capitalised as property, plant and equipment.</p> <p>Potential impact</p> <p>Telecom entities that currently expense all contract fulfilment costs as incurred might be affected by the proposed guidance since costs are required to be capitalised when the criteria are met. Fulfilment costs that are likely to be in the scope of this guidance include, among others, set-up costs for service providers and costs incurred in the design phase of construction projects.</p>



Contract acquisition costs

Proposed standard	Current IFRS
<p>Entities will recognise as an asset the incremental costs of obtaining a contract with a customer if the entity expects to recover those costs.</p> <p>The incremental costs of obtaining a contract are those costs that an entity would not have incurred if the contract had not been obtained. All other contract acquisition costs incurred regardless of whether a contract was obtained are recognised as an expense.</p> <p>The proposal permits entities to expense incremental costs of obtaining a contract when incurred if the amortisation period would be one year or less, as a practical expedient.</p> <p>Contract costs recognised as an asset are amortised on a systematic basis consistent with the pattern of transfer of the goods or services to which the asset relates. In some cases, the asset might relate to goods or services to be provided in future anticipated contracts (for example, service to be provided to a customer in the future if the customer chooses to renew an existing contract).</p> <p>An impairment loss is recognised to the extent that the carrying amount of an asset exceeds:</p> <ul style="list-style-type: none"> (a) the amount of consideration to which an entity expects to be entitled in exchange for the goods or services to which the asset relates; less (b) the remaining costs that relate directly to providing those goods or services. <p>Entities may reverse impairments, under IFRS, when costs become recoverable; however, the reversal is limited to an amount that does not result in the carrying amount of the capitalised acquisition cost exceeding the depreciated historical cost.</p>	<p>Costs of acquiring customer contacts have been capitalised by some telecom entities as intangible assets and amortised over the customer contract period, while other telecom entities expense the costs when incurred.</p>
<p>Potential impact</p> <p><i>Telecom entities will need to capitalise these contract acquisition costs as an asset if they are recoverable and amortise them over the expected period consistent with the pattern of when telecom services are provided to the customer. Management will need to use judgement to determine the amortisation period as the proposed standard requires entities to consider periods beyond the initial contract period; for example, the renewal of existing contracts and anticipated contracts. Management may determine contract acquisition costs are recovered from the initial two-year contract and a two-year contract renewal. Management may therefore amortise the contract acquisition cost over a four-year period if this period is consistent with the pattern of telecom services to which the costs relate. The FASB and IASB have concluded this approach is consistent with the existing requirements for amortising other assets such as property, plant and equipment, and intangibles.</i></p> <p><i>Management will have to develop a systematic and reasonable approach, considering the number of customers and contract offerings, to impair these contractual assets (for example, a portfolio approach) when the estimated amount of consideration to be received from a customer is less than the outstanding contract asset.</i></p> <p><i>Spreading these costs over the amortisation period will significantly affect operating margins and minimise the seasonal fluctuation in EBITDA. Wireless entities, for example, often incur significant contract acquisition costs in the holiday seasons through promotional offers on handsets.</i></p>	

Tax Updates

Mutual Agreement Procedure for resolving tax disputes on cross-border related party transactions

Previously (under DGT Regulation PER-48), a Mutual Agreement Procedure (MAP) could be applied to reach a mutual agreement to resolve tax disputes regarding cross-border related party transactions. The main issue from PER-48 that relates to tax administrative procedures is the limitation on taxpayers choosing between applying for a MAP or continuing the dispute resolution process through a tax objection or appeal in Indonesia. The processes cannot be carried out simultaneously.

However, Government Regulation No.-74/2012 provides flexibility for taxpayers to apply for a MAP and to continue local dispute resolution at the same time. The local dispute resolution includes applying for a tax objection, appealing to the Tax Court and requesting a reduction or cancellation of administrative sanctions. However, GR-74 includes the restriction that a MAP application shall be discontinued if an appeal decision is declared by the Tax Court prior to the finalisation of the MAP. If one of the parties is not satisfied with the Tax Court decision, a judicial review by the Supreme Court is still allowed.

More taxpayers can maintain bookkeeping in English and USD currency

Under Ministry of Finance (MoF) Regulation No.24/PMK.011/2012 (PMK-24), the MoF has added a list of taxpayers eligible to maintain bookkeeping in English and USD currency, i.e., taxpayers presenting their financial statements in their functional currency of USD in accordance with the Financial Accounting Standards (Standar Akuntansi Keuangan/SAK) applicable in Indonesia. This resolves previous concerns in cases where a company with USD as its functional currency and thus required to maintain bookkeeping in USD from 2012 for accounting purposes (that is not included in the list of eligible taxpayers under the old MoF Regulation i.e. PMK-196), would still need to present its fiscal bookkeeping in Rupiah as PMK-196 did not accommodate this.



An issue may still remain for companies whose functional currency is neither Rupiah nor USD as the article in PMK-24 only covers the use of English and USD currency.

Ex-officio assessments

Under Government Regulation (GR) No.74/2011, corporate taxpayers now can be issued with an ex-officio assessment (*secara jabatan*) if the taxpayer does not meet the following obligations (during a tax audit) which results in the taxable income not being able to be calculated correctly based on the prevailing regulations:

- showing and/or lending books or records, or other documents related to the taxable income;
- providing opportunity for entering places or rooms deemed necessary and providing assistance to ensure the execution of an audit; and/or
- providing other required information.

Should this be the case, the Indonesian tax office (ITO) must notify and invite the taxpayer to attend a closing conference. During the closing conference, the taxpayer still has an opportunity to submit documents to be considered by the ITO, limited to those documents relevant to the calculation of gross revenue and withholding tax slips relating to tax credits claimed.

GR-80 previously stipulated that taxpayers who cannot meet their obligations during a tax audit would be subject to an audit for preliminary evidence, instead of an ex-officio assessment.

Cybercrime – is it a growing problem?

Introduction

Cybercrime - there is currently no globally accepted definition. That said, it is a term regularly used during business discussions, so what does it actually mean? Consider the following option:

“An economic crime committed using computers and the internet. It includes distributing viruses, illegally downloading files, phishing and pharming, and stealing personal information such as bank account details. It should only be deemed a cybercrime if a computer, or computers, and the internet play a central role in the crime, and not an incidental one.”

Phishing occurs when a fraudster sends out legitimate-looking emails in an attempt to gather personal and financial information. Pharming refers to the redirection of website traffic by hackers, with the aim of obtaining personal and financial information.

Main types of cyber attack

PwC firms’ “Delusions of Safety?” – The Cyber Savvy CEO Report, 2011 identified five main types of cyber attack. Clearly some will be more relevant to corporate operations than others.

Economic Crime – involving criminals, often highly organised and well funded, hacking into systems and using technology as a tool to commit fraud.

Espionage – an organisation’s valuable intellectual property (“IP”) includes electronic communications and files as well as traditional IP such as research and development (“R&D”). IP theft is a constant threat, and the victims may not even know it has happened until the evidence is “in front of them” (perhaps sales and marketing plans have been passed to a competitor, or confidential oil and gas drilling maps are leaked on the internet).

Activism – attacks are carried out by supporters of an idealistic cause, often under the guise of a “Denial of Service”.



Terrorism – terrorist groups might attack state or private assets, often critical national infrastructure.

Warfare – states attacking state or private sector organizations.

So, should cybercrime be considered simply as a means by which a fraudster commits an illegal act, or is it an economic crime in its own right, and how do you measure the cost of a cybercrime attack? There are really three areas of potential loss:

- “Direct” - losses suffered through fraud;
- “Reputational” - losses suffered as a result of damage to image/standing (difficult to effectively quantify); and
- “Remedial” - losses suffered as a result of implementing reactive preventative controls.

Some examples of such cybercrime attacks that causes the above-mentioned potential losses include:

- Direct losses - An employee gets hold of information from the accounts payable department, sets up dummy suppliers (using their own bank account) and subsequently processes unauthorised invoices for payment.
- Reputational losses - A disgruntled employee accesses the company payroll system and gains access to confidential employee records (pay, bonuses, home addresses etc) and publishes the information online.
- Remedial losses - An employee accesses a colleague’s personal email account and sends malicious/unauthorised messages (this is also known as “cyber-bullying”)

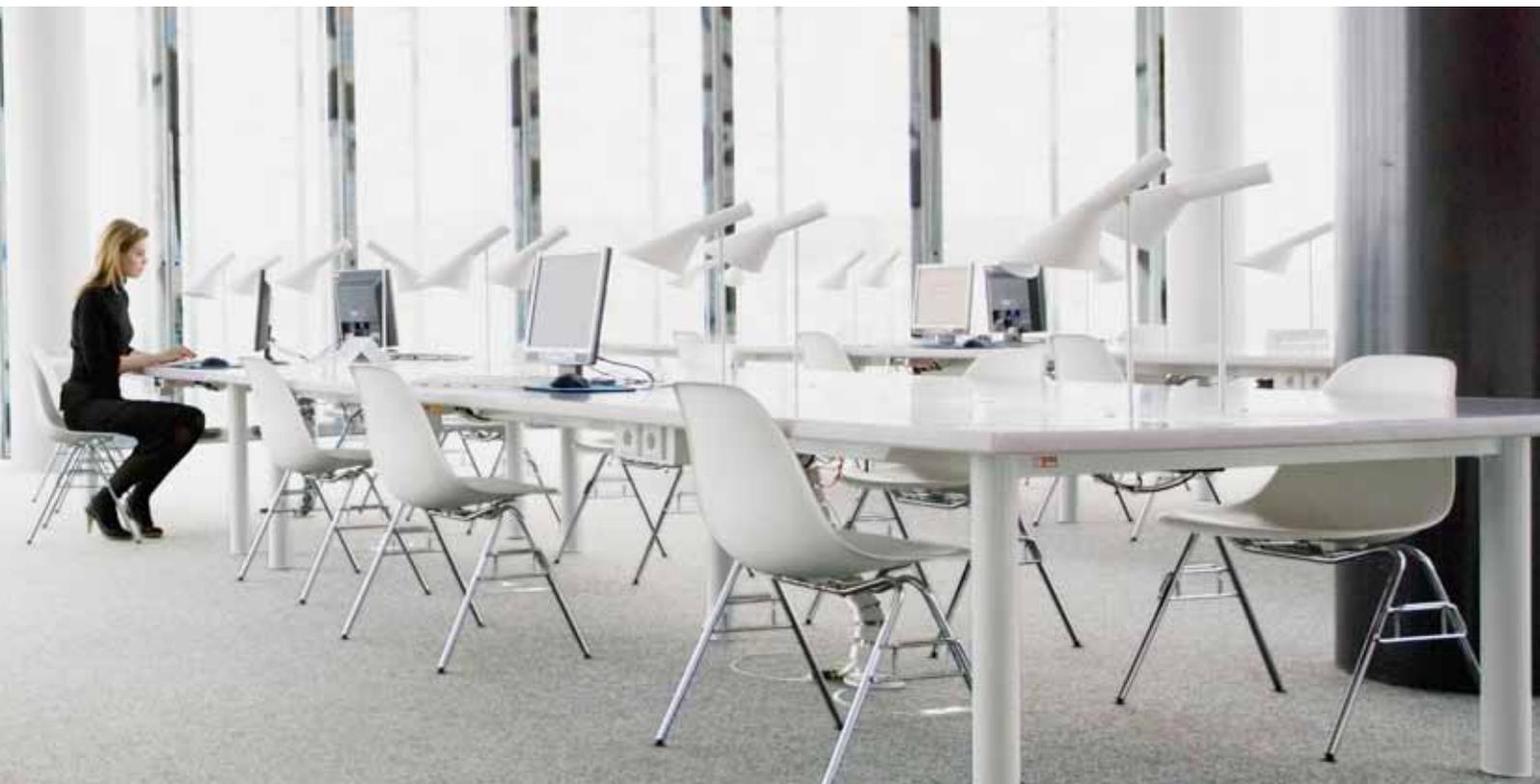
Low risks...high reward?

What is the attraction of cybercrime? Well, it presents different risks and rewards to more conventional crimes.

As an example, a cybercriminal infiltrates a banking system remotely to steal money or personal information. There are fewer risks when compared with physically stealing assets from an organization:

- The fraudster is not present at the location in person, so there is less chance of getting caught in the act.
- There is less chance of law enforcement being able to identify the perpetrator or find out where they were based when they committed the crime (they may even be in a different jurisdiction). Current laws may also not be mature enough to prosecute cyber criminals with any impact.
- There is a risk that the complexity and time required in order to gather sufficient evidence for a prosecution may actually reduce the likelihood of an organisation taking the decision to prosecute.

Of course organisations can put preventative measures in place to reduce the risk of traditional economic crimes (asset misappropriation, accounting fraud, bribery and corruption), but with cybercrime it is much harder to put the right preventative measures.



The Global Economic Crime Survey 2011

Every two years PwC firms globally conduct an Economic Crime Survey. In 2011, the survey was completed by 3, 877 respondents from 78 countries. 84 Indonesian organisations contributed. The report includes a specific focus on cybercrime; its impact on organisations, their awareness of the crime and what they are doing to combat the risks.

Key global findings were as follows:

- Cybercrime now ranks as one of the top four economic crimes.
- Reputational damage is the biggest fear for 40% of respondents.
- 60% said their organisation does not keep an eye on social media sites.
- Two in five respondents had not received any cyber security training.
- A quarter of respondents said there is no regular formal review of cybercrime threats by the CEO and the Board.
- The majority of respondents do not have, or are not aware of having, a cyber crisis response plan in place.

Why is it that cybercrime has emerged as one of the top types of fraud? The survey findings suggest:

- Increased media attention around recent cybercrime cases may have heightened corporate awareness, resulting in extra controls to detect and report.
- Because there is ambiguity around the definition of cybercrime and what it constitutes (respondents may have reclassified more traditional crimes as cybercrime, because a computer was involved).
- Regulators are focusing on it more.
- Advances in technology make it easier to commit cybercrime.

About 48% of respondents (who had suffered economic crime in the past 12 months) said they perceived the risk of cybercrime to be on the rise, and only 4% perceived it to be falling. The remainder believed it would stay the same. In Indonesia the figure was 30%, however a further 57% believe that the risk remains the same, and only 13% believe it to be reducing.

Globally, although aware of the risks, organisations are doing little about it, and continue to be reactive rather than proactive in fighting cybercrime. In Indonesia the same picture is being painted:

- 67% (61% globally) said they do not have, or are not aware of having, access to forensic technology investigators.
- 55% (60%) said they do not have, or are not aware of having, the in-house capability to investigate cybercrime.

- 52% (56%) said they do not have, or are not aware of having, a media and public relations plan in place.
- 49%(46%) said they do not have, or are not aware of having, controlled emergency network shutdown procedures.
- 45% (40%) said they do not have, or are not aware of having, the in-house capability to prevent and detect cybercrime.

Given the perceived and/or real increase in the risk of cybercrime, how best can organisations protect and defend themselves against cyber security attacks? There is no absolute guarantee of success however the following activities can assist (and they are also in line with the type of strategies utilised to protect and prevent economic crime in general):

- Ensure there is CEO/board level awareness of the risks faced, and that they “buy in” to proactive management strategies.
- Assess the preparedness of the organisation to deal with cybercrime. Over time the risks change; and there is a need for continual monitoring and assessment.
- Set up and implement a cyber incident response team, who are able to act promptly. This can enable an organisation to assess the risk and deal with an incident as soon as it is spotted anywhere in the business activities.
- Recruit people with the relevant skills and experience to manage the risk of cybercrime. This will assist in creating a “cyber-aware” organisation, with better ability to protect itself.
- Be overt in the management of cybercrime; let the business know what you are doing about threats and incidents (as with economic crime, perpetrators are less likely to target an organisation with recognised and robust cybercrime prevention strategies).

In summary, although traditional fraud, such as asset misappropriation, accounting fraud, bribery and corruption remain the most likely, cybercrime is new and emerging. As technology advances and improves, so too do the ways of committing cybercrime. Organisations should be aware of this and adapt accordingly.

This article is based on PwC's 2011 Global Economic Crime Survey.

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In this issue

- Cloud computing
- Financial landscape of telecommunication operators
- Telecoms
- Telephony Strategy



Cloud Computing

One of the drivers for the future

Cloud computing is the next step in the evolution of information technology. It offers a wide range of services and applications that can be accessed from any device, anywhere, at any time. This is a significant change in the way we use technology, and it has the potential to revolutionize the way we do business.

Cloud computing is one of the latest technology trends to capture the attention of business, investors, and consumers alike.

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#0 and beyond... Preparing for the future in a different world

Joint arrangements: a significant issue for the telecommunications industry

In this issue

- Joint arrangements & joint ventures in the telecoms industry
- Financial reporting
- Telecoms
- The Telecoms Industry
- Telephony Strategy

What is the issue?

The International Accounting Standards Board (IASB) issued IFRS 11, Joint Arrangements, in May 2011, which overhauled the existing accounting for joint arrangements.

IFRS 11 provides a framework for joint arrangements, which is a significant change in the way we account for joint arrangements. It is a significant change in the way we account for joint arrangements, and it has the potential to revolutionize the way we do business.

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no. 1/2011

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Telecommunications

New guidance on the recognition of revenue - a big issue for the telecommunications industry

In this issue

- New guidance on the recognition of revenue
- Financial reporting
- Telecoms
- Telephony Strategy
- Telephony Strategy
- Telephony Strategy

What is the issue?

The International Accounting Standards Board (IASB) issued IFRS 15, Revenue from Contracts with Customers, in May 2014, which overhauled the existing accounting for revenue recognition.

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Tower Sharing

Tower Sharing - Maximise the use of your resources

Tower sharing is a significant trend in the telecommunications industry. It allows operators to share their tower infrastructure, which can lead to significant cost savings and improved efficiency. This is a significant change in the way we do business, and it has the potential to revolutionize the way we do business.

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What are the most prevalent sources of revenue fraud within a telecommunication operator, and how can these risks be managed?

In this issue

- Revenue fraud in the telecoms industry
- Financial reporting
- Telecoms
- Telephony Strategy
- Telephony Strategy

What is the issue?

Revenue fraud is a significant risk in the telecommunications industry. It can lead to significant financial losses and damage to the operator's reputation. This is a significant change in the way we do business, and it has the potential to revolutionize the way we do business.

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IFRS 8 Operating Segments

In this issue

- IFRS 8
- Financial reporting
- Telecoms
- Telephony Strategy
- Telephony Strategy

What is the issue?

IFRS 8, Operating Segments, was issued in January 2009. It provides a framework for the reporting of operating segments, which is a significant change in the way we account for operating segments. It is a significant change in the way we account for operating segments, and it has the potential to revolutionize the way we do business.

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