

Industry Views

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A journal for telecom, cable, satellite, and Internet executives

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Weathering the Storm



*connectedthinking

PRICEWATERHOUSECOOPERS 

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Communications Review

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While just how long the economic downturn will last remains uncertain, it is clear that the eventual recovery will see a very different set of market dynamics in place across the communications industry. Tactical cost-cutting measures may help companies survive the savage, short-term effects of this financial crisis. But in the longer term, winning businesses will use this period of crisis to leapfrog the competition by introducing deeper organizational and strategic change initiatives.

by Rolf Meakin

20 A Case for Collaboration

Managing sourcing effectively in a downturn is not about beating suppliers down on price, but rather about focusing on risk and risk management. The chief procurement office (CPO) needs to balance the conflicting pressures to cut costs and meet business needs with the equally pressing requirement to manage and improve the supply chain and operations in a way that will sustain the business in the future. The current economic climate presents communications companies with an opportunity to transform the role and the capabilities of the CPO to contribute effectively in creating value for shareholders.

by Ian Corden, Bijan Koehler-Zolfaghari, and Bernhard Raschke

30 Focusing on the Details

Communications businesses have become increasingly complex over the last decade, creating an ongoing challenge for operators trying to maintain value for money, specifically in relation to services or construction of capital assets. Understanding how the contracts work in actual practice is the key to determining how the various levers in the contractual arrangement can be manipulated to drive cost and cash benefits. Effective contract management can help operators identify, assess, and recover what is typically 5% to 10% of a contract's value in leakage.

by Qadir Marikar and Paul Townley-Jones

38 Timing is Everything

Providers of wireless services will have greater access to the airwaves as new spectrum capacity is released on the switch to digital broadcasting and the award of the 3G expansion band. However, given the current economic climate, it is even more important for potential bidders to think hard about the value of spectrum, in terms of the direct value from delivering new services, the opportunity cost of not acquiring spectrum, and the impact on their overall competitive position.

*by Simon Harris, Darren Waterman, David Lancefield,
and Alastair Macpherson*

46 The Speed of Life

Today's economy poses many uncertainties for communications companies. But here's one bright spot: Consumers say they're not about to give up their must-haves—chiefly, their Internet access and cell phones. That means there is still ample opportunity to grow and build loyalty, especially if companies focus on providing the services consumers want most: cost savings, excellent customer service, and customized plans and features. This summary of findings from a recent PricewaterhouseCoopers' online community discussion reveals how consumers feel about the economic downturn and its effect on their media habits, usage, and attitudes.

by Deborah Bothun

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Si la durée du ralentissement économique demeure incertaine, il est évident que la reprise s'opèrera dans un contexte où la dynamique du marché sera profondément modifiée dans le secteur des télécommunications. Les mesures de réduction des coûts tactiques peuvent aider les entreprises à supporter le violent impact à court terme de la crise financière actuelle. Mais à long terme, les entreprises gagnantes s'appuieront sur cette période de crise pour prendre le pas sur la concurrence en mettant en place des changements organisationnels et stratégiques décisifs.

par Rolf Meakin

20 La nécessité d'une collaboration

La gestion efficace des achats en période de récession ne repose pas sur l'obtention de baisses des prix auprès des fournisseurs, mais plutôt sur la priorité donnée à la gestion des risques. La direction des achats doit trouver le juste équilibre entre des pressions contradictoires, d'une part de baisser les coûts tout en répondant aux besoins de l'entreprise, et d'autre part de satisfaire à la nécessité tout aussi impérieuse de gérer et d'améliorer la chaîne d'approvisionnement dans un souci de pérennité des activités. Le climat économique actuel offre aux entreprises de télécommunications l'opportunité de transformer le rôle et les capacités des directions des achats afin qu'elles contribuent efficacement à la création de valeur au profit des actionnaires.

par Ian Corden, Bijan Koehler-Zolfaghari, and Bernhard Raschke

30 N'oublions pas les détails

Depuis une décennie, la complexité croissante des entreprises de télécommunications représente un défi constant pour les opérateurs qui tentent de préserver la valeur, plus précisément dans le contexte des services ou de la construction d'actifs financiers. Comprendre les aspects concrets d'un contrat représente un facteur déterminant pour identifier la façon dont les différents leviers d'un accord contractuel peuvent être exploités pour contrôler les coûts et les entrées de trésorerie. Une gestion efficace des contrats peut aider les opérateurs à identifier, évaluer et recouvrer généralement 5 à 10% de la valeur d'un contrat qui est sinon perdue.

par Qadir Marikar and Paul Townley-Jones

38 Tout est dans le timing

Les fournisseurs de services sans fil disposeront d'une plus grande quantité de fréquences avec le réaménagement du spectre lié au basculement à la diffusion numérique et à l'attribution de la bande d'extension 3G. Toutefois, compte tenu du climat économique actuel, il est encore plus important pour les candidats potentiels de réfléchir à la valeur du spectre en termes de valeur directe liée à la fourniture de nouveaux services, de manque à gagner faute d'acquérir le spectre et d'impact sur leur position globale vis-à-vis de la concurrence.

*par Simon Harris, Darren Waterman, David Lancefield,
and Alastair Macpherson*

46 Le tourbillon de la vie

La conjoncture économique actuelle est source de nombreuses incertitudes pour les entreprises de télécommunications. Mais, point positif, les consommateurs déclarent ne pas être prêts à renoncer à ce dont ils ne peuvent plus se passer : l'accès Internet et le téléphone mobile. Autrement dit, il existe des opportunités importantes de développement et de renforcement de la fidélisation des clients, particulièrement si les entreprises donnent la priorité aux services les plus chers aux consommateurs : les économies de coûts, une excellente qualité de service à la clientèle et des plans et des caractéristiques personnalisés. Cette synthèse des résultats d'un récent forum en ligne animé par PricewaterhouseCoopers met au jour la perception qu'ont les consommateurs du ralentissement économique et de son impact sur leurs habitudes, leurs attitudes vis-à-vis des médias et de la façon dont ils les utilisent.

par Deborah Bothun

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12 Abrazar el desequilibrio

Si bien de desconoce durante cuánto perdurará la crisis económica, es evidente que la recuperación será testigo de la llegada de un conjunto de dinámicas de mercado muy distintas en todo el sector de comunicaciones. Es posible que las medidas tácticas de recorte de costes ayuden a las compañías a sobrevivir a los efectos devastadores a corto plazo de esta crisis financiera; sin embargo, a más largo plazo, las compañías victoriosas serán las que utilicen el periodo de crisis para dar un salto y dejar atrás a la competencia, mediante la incorporación de iniciativas de cambio organizativas y estratégicas de mayor calado.

por Rolf Meakin

20 En defensa de la colaboración

La gestión eficaz de los proveedores en una etapa de crisis económica no consiste en presionarles para que recorten sus tarifas, sino en centrarse en el riesgo y la gestión de riesgos. El departamento de compras necesita equilibrar las presiones en conflicto para recortar costes y responder a las necesidades de la empresa con la necesidad, igualmente apremiante, de gestionar y mejorar la cadena de suministro y las operaciones de un modo que permita sustentar el negocio en el futuro. El clima económico actual presenta a las compañías de comunicación la oportunidad de transformar el papel y las competencias del departamento de compras con vistas a contribuir eficazmente a crear valor para los accionistas.

por Ian Corden, Bijan Koehler-Zolfaghari, and Bernhard Raschke

30 Observar los detalles

Las compañías de comunicación se han tornado más complejas en la última década, y han creado un reto permanente para los operadores que intentan mantener la relación calidad precio, concretamente en los servicios o la construcción de bienes de capital. Entender el funcionamiento de los contratos en la práctica es fundamental para determinar cómo pueden manipularse las distintas palancas de la maquinaria contractual con vistas a generar ventajas en costes y tesorería. Una gestión de contratos eficaz puede ayudar a los operadores a identificar, evaluar y recuperar el porcentaje de fuga habitual en el valor de un contrato, de un 5% a un 10%.

por Qadir Marikar and Paul Townley-Jones

38 El momento lo es todo

Los proveedores de servicios inalámbricos tendrán un mayor acceso a las ondas cuando se libere nueva capacidad de espectro en la transición a la difusión digital y con la concesión de la banda de expansión de la red 3G. Sin embargo, dado el actual clima económico, para los licitadores es aun más importante que reflexionen detenidamente sobre el valor del espectro, en términos de valor directo derivado de la prestación de servicios nuevos, el coste de oportunidad de no adquirir espectro y la repercusión en su posición competitiva global.

*por Simon Harris, Darren Waterman, David Lancefield,
and Alastair Macpherson*

46 La velocidad de la vida

La economía actual plantea muchas incertidumbres para las compañías de comunicación. Ahí tienen, no obstante, un foco de claridad: los consumidores afirman que no van a renunciar a los servicios que hay que tener, principalmente su acceso a Internet y la telefonía móvil. Esto significa que todavía gozamos de una oportunidad amplia para crecer y consolidar la fidelidad de los clientes, sobre todo si las compañías se centran en prestar aquellos servicios que los consumidores más desean: ahorros en costes, un servicio de atención al cliente de calidad, y planes y opciones personalizados. Este resumen de las conclusiones obtenidas en un debate reciente on-line organizado por PricewaterhouseCoopers pone de manifiesto qué piensan los consumidores acerca del empeoramiento económico y el efecto que este tiene sobre sus hábitos, utilización y actitudes ante las tecnologías y medios de comunicación.

por Deborah Bothun

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Noch ist unklar, wie lange sich der wirtschaftliche Abschwung noch hinziehen wird. Sicher ist aber, dass danach eine ganz andere Marktdynamik im Telekommunikationsmarkt einsetzen wird. Kluge Kostensenkungsmaßnahmen helfen Unternehmen zwar kurzfristig, die größten Auswirkungen der Finanzkrise abzufedern. Langfristig werden aber jene Unternehmen gestärkt aus der Krise hervorgehen und ihre Wettbewerber überholen, die diese Zeit nutzen, um tiefe organisatorische und strategische Initiativen einzuleiten.

von Rolf Meakin

20 Ein Fall für Zusammenarbeit

Den Einkauf im wirtschaftlichen Abschwung effektiv zu gestalten, bedeutet nicht, den Preis der Zulieferer zu drücken. Denn der Einkauf (chief procurement office, CPO) muss den gegensätzlichen Strömungen, Kosten zu senken und die Betriebsbedürfnisse zu erfüllen, Rechnung tragen und dabei gleichzeitig die Beschaffungskette und die betrieblichen Abläufe verbessern, um den Geschäftsbetrieb auch in Zukunft aufrechterhalten zu können. Das derzeitige wirtschaftliche Umfeld eröffnet Telekommunikationsunternehmen die einzigartige Möglichkeit, die Funktionen und Einsatzmöglichkeiten der Einkaufsabteilung neu auszurichten und ihr eine strategische Rolle zuzuweisen. Als Wächter über Qualität und Kosten.

von Ian Corden, Bijan Koehler-Zolfaghari, and Bernhard Raschke

30 Konzentration auf Details

Während der zehnjährigen Wachstumsphase ist die Komplexität in Telekommunikationsunternehmen stetig gestiegen. Mit dem Effekt, dass sich Ineffizienzen und zweideutige Aussagen in vertraglich fixierten Vereinbarungen über die Jahre manifestiert haben. Daher ist es in Zeiten des Kostendrucks besonders wichtig, ein tiefgehendes Verständnis darüber zu entwickeln, wo Nutzen und tatsächliche Kosten durch die vertraglichen Vereinbarungen entstehen. Durch ein effektives Vertragsmanagement können Netzbetreibern fünf bis zehn Prozent des Vertragswerts zurückgewinnen, die andernfalls entgangen wären.

von Qadir Marikar and Paul Townley-Jones

38 Timing ist alles

Mobilfunknetzbetreibern eröffnet sich in Kürze der Zugang zu mehr Frequenzspektrum. Einerseits sollen die Frequenzen aufgrund der Digitalisierung des terrestrischen Fernsehens neu vergeben werden, andererseits stehen erweiterte Kapazitäten für UMTS (UMTS-Erweiterungsband) zur Verfügung. Im derzeitigen wirtschaftlichen Umfeld ist es für potenzielle Bieter von besonderer Bedeutung, den Wert des Spektrums zu kennen, hinsichtlich ihres direkten Werts aufgrund des Angebots neuer Dienste, hinsichtlich der Opportunitätskosten, kein Spektrum zu erwerben, und hinsichtlich des Einflusses des Spektrums auf die Marktstellung.

von Simon Harris, Darren Waterman, David Lancefield, and Alastair Macpherson

46 Die Geschwindigkeit des Lebens

Das aktuelle wirtschaftliche Umfeld bringt viele Unsicherheiten für Telekommunikationsunternehmen mit sich. Doch es gibt Hoffnung, denn die Konsumenten sind nicht bereit ihre "Must-Haves", und dazu zählen auch Internetzugang und Mobiltelefon, aufzugeben. Das bedeutet, dass es noch immer viele Möglichkeiten gibt zu wachsen und Loyalität aufzubauen, vor allem wenn Unternehmen sich auf das Angebot jener Leistungen konzentrieren, die Konsumenten sich am meisten wünschen: Kosteneinsparungen, herausragender Kundendienst und individualisierte Modelle und Features. Das ist das Ergebnis einer aktuellen Online-Diskussion, die PricewaterhouseCoopers durchgeführt hat. Die Diskussion zeigt, wie Konsumenten das wirtschaftliche Umfeld einschätzen und wie es ihren Medienkonsum, ihr Mediennutzung und ihr Medienverhalten beeinflusst.

von Deborah Bothun



Message from the Editor

The current global economic crisis is so pervasive that it is now a given in every business conversation. While its precise effects vary among sectors and geographies, we are all undeniably facing one of the most challenging business environments the world has seen in decades, if not centuries. For the leaders in every organization and every industry, the challenge is to identify and execute the best way to manage through the downturn while simultaneously positioning the business to capitalize fully on the recovery when it comes.

Most analysts believe the communications sector will be affected less than many others because of such recession-resistant characteristics as its increasingly pivotal role in customers' lives and its proven ability to generate cash. Communications businesses, though, are taking steps to contain and reduce costs, while also managing consumers' expectations for new product offerings, pricing, and customer service. Many of these initiatives already are producing benefits. Although many operators have now done the basics—reducing head count, outsourcing noncore competencies, cutting capex and opex—the most forward looking are also identifying innovative new ways to build value through greater operational and cost efficiency.

This search for new solutions leads to opportunities opened by the current downturn. Communications companies navigating the economic maelstrom should remember that cost-cutting programs often provide the chance to make longer-term changes that will transform their business for the recovery. How best to exploit this opportunity is the focus of all the articles in this issue of *Communications Review*.

In our first article, “Embracing Disruption,” author Rolf Meakin examines the opportunity to cut costs as a way of transforming operating models and making businesses more competitive. As he points out, many of the cost containment and cost reduction programs under way throughout the industry will do little to improve operators' real edge in the marketplace. What will deliver is a more holistic, future-focused perspective—and the required radical action will be easier to sell and execute during the downturn, when sticking with the status quo is not an option and disruptive change is inevitable.

In our second article, “A Case for Collaboration,” authors Ian Corden, Bijan Koehler-Zolfaghari, and Bernhard Raschke explore a function critical in making any cost-cutting program sustainable: procurement. The downturn-

inspired need to reduce the cost base—both capex and opex—has thrown the spotlight onto procurement, creating pressure to squeeze suppliers and achieve better terms. As well as posing challenges for the CPO, the intense focus on costs is creating a one-time opportunity to define a more strategic role for the CPO within the organization. Ultimately, the authors maintain, the CPO can establish itself as the key “watchdog” over cost and quality across an operator’s entire organization, and they describe how it can achieve and retain that role.

As operators seek to transform their cost base for the future, one of the most intractable challenges they face is the complexity that 10 years of growth and diversification have embedded in their operations. In the third article, “Focusing on the Details,” Qadir Marikar and Paul Townley-Jones examine the value leakage that this complexity can cause and highlight ways to regain the lost value through more effectively and proactively managing contracts. In the authors’ experience, a risk-based approach to contract management—with management intervention focused rigorously on the drivers of value leakage—usually can recover up to 10% of a contract’s value.

Our fourth article shifts the focus from reducing lost value today to exploiting new value opportunities tomorrow. With several countries approaching major awards of spectrum bandwidth in the coming years—including 3G expansion band and analog TV spectrum—communications operators have the chance to lay the foundations for new services, ranging from 4G mobile to high-definition TV. In “Timing Is Everything,” authors Simon Harris, Darren Waterman, David Lancefield, and Alastair Macpherson examine the timing of these spectrum awards and offer a framework for assessing their true potential value to a business—thereby helping operators pinpoint the price they might justifiably pay.

Our fifth article changes focus even more radically, moving from operators planning and managing costs to consumers sharing their views of the industry. “The Speed of Life” is Deborah Bothun’s overview of the findings from PricewaterhouseCoopers’ global consumer-research program that involved qualitative focus groups and online discussions with more than 750 consumers about how the economic downturn is affecting their consumption of communications services. Irrespective of any cost pressures and optimization programs, operators must never lose sight of consumers’ expectations—as this article clearly demonstrates.

Navigating a downturn is one of the most challenging yet inspiring experiences a business leader can have. It requires an ability to focus with equal rigor on both the here-and-now—cost optimization, operational excellence—and the future, building capabilities to exploit value opportunities in the recovery phase. It means striking a fine balance, and every article in this issue is about how operators can get it right. With this in mind, I hope, and believe, this issue of *Communications Review* will provide you with valuable insights as you formulate and execute your own strategies for the downturn. As ever, I would love to hear what you think. Whatever your feedback, please feel free to e-mail me directly at paul.g.rees@uk.pwc.com, or call me on [44] 20 7213 4644.



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Skipping rocks



Embracing Disruption

In the face of one of the most challenging business environments in decades, the priority for many companies in the communications sector is starkly defined: surviving the next 12 to 18 months. Not surprisingly, cost containment and cost reduction programs are well under way throughout the industry. But while these responses to the crisis may make sense in the short term, our experience suggests that tactical efforts at cost optimization will merely keep pace with the effects of competition and ongoing market erosion during 2009. Crucially, programs focused purely on cutting costs will do little to provide companies with a real competitive edge in the future. Instead, broader-based, forward-looking initiatives are needed to position companies strongly in the recovery—and the current downturn provides a “burning platform” that fully justifies the disruption such initiatives will create. Companies that grasp this opportunity to transform both their cost structures and their business operating models will be the eventual winners when the recovery finally dawns.

While just how long this downturn will last remains uncertain, it is clear that the eventual recovery will see a very different set of market dynamics in place across the communications industry. Even before the credit crunch took hold, telecoms, media, and technology (TMT) businesses were struggling to adapt to the new demands of a converging digital marketplace. And the pressures of the financial crisis have massively accentuated the need for organizational change—change geared to ensure both short-term survival and long-term competitiveness.

The challenges confronting the TMT sectors are well recognized. For telecom companies, in many markets mobile and broadband demand is reaching saturation. Traditional voice services are being commoditized, while mobile revenue growth may be available from the take-up of value-added content and applications services.

Achieving similar growth with fixed broadband delivery models is much more challenging because of strong competition from other digital delivery platforms and new business models. In enterprise markets, challenges are arising from the complexity of delivering end-to-end converged network and network-related services, meeting the price expectations of sophisticated buyers, and the risk of disintermediation from non-telecoms players (see Figure 1).

Media businesses must contend with a complex and rapidly evolving set of service, device, content, and technology requirements. Audience fragmentation (between the Net generation and older audiences) calls for far greater flexibility in terms of content delivery mechanisms, storage, pricing, and availability. And agility is key if companies are to seize the new opportunities being created by regulators and technology innovations.

In the technology sector, collaboration and partnerships will become ever more important as companies seek to drive innovation and enhance core competencies while controlling investment. Overcapacity is set to trigger further consolidation, reshaping the entire industry. And companies also will have to implement different revenue models to accommodate exploiting their intellectual property (IP) more effectively and intensively.

All the issues named above mean that, throughout the TMT sector, the traditional sources of competitive advantage are changing forever. As a result, organizational change soon will be mandatory for these businesses, not optional. Tactical cost-cutting measures may help companies survive the savage, short-term effects of this financial crisis. But in the longer term, companies that have significantly realigned their business models will be the ones experiencing higher growth rates.

Stopgap cost reduction under way

The majority of TMT businesses have already launched cost containment and/or cost reduction programs. With the variety of measures introduced in Q4 2008 and Q1 2009, cost-cutting pledges are the order of the day. Vodafone, for example, is committed to removing US\$1 billion in costs, while Telecom Italia plans to remove \$2 billion. Meanwhile, announcements of job cuts are hitting the headlines on a virtually daily basis, as many organizations seek to reduce head count by between 5% and 15%—4,000 workers let go at Motorola; 3,400 cut at Texas Instruments as profits slide; and 8,000 to go at Sprint-Nextel as the third-largest mobile operator in the United States targets savings of \$1.2 billion.

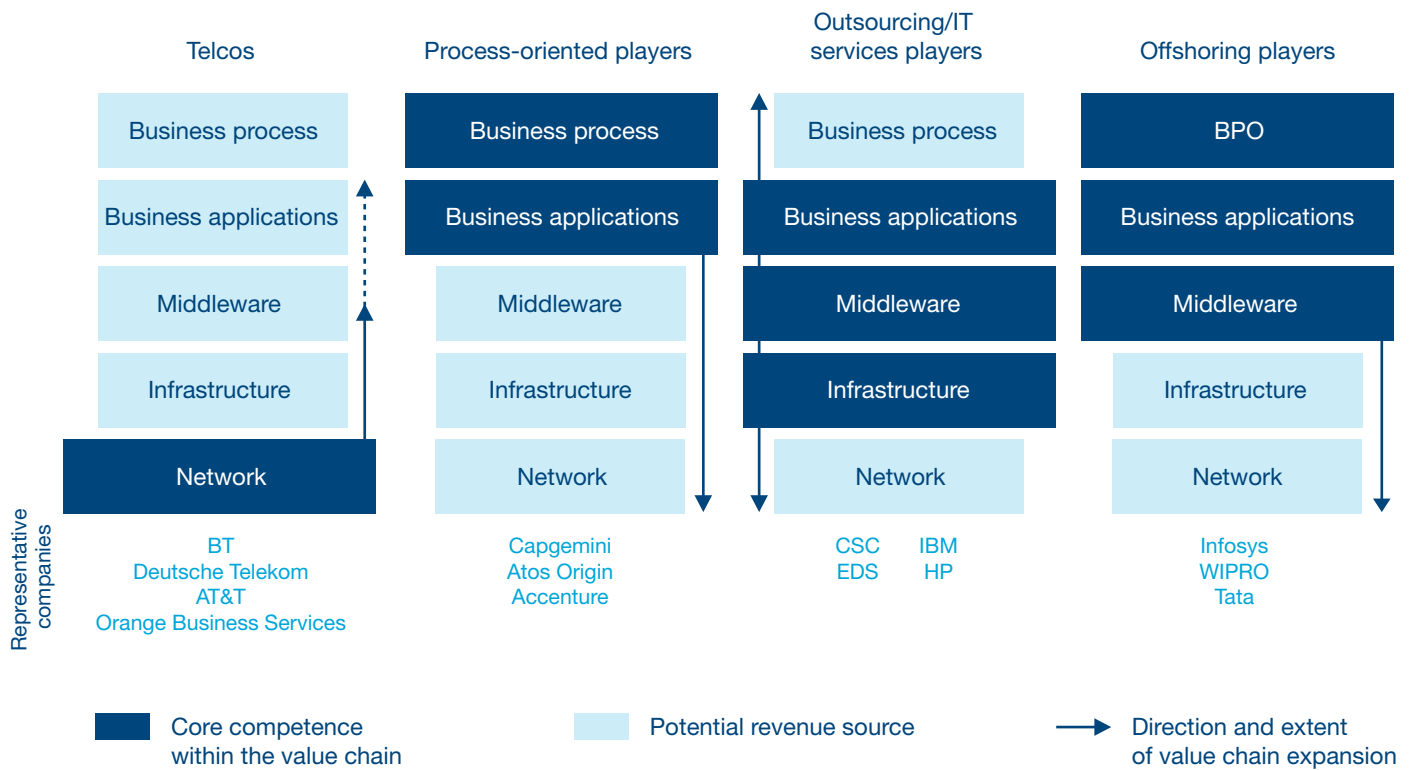
In the drive to reduce costs, most areas of opex (operating expenditures) and capex (capital expenditures) are under scrutiny. Aside from job cuts, labor costs are being minimized through hiring freezes, pay freezes, zero bonuses, sabbaticals, and cutbacks in training and entertainment budgets. Nonlabor general and administrative expenses are being reduced through minimizing travel, consolidating real estate portfolios, and reducing power usage and communications expenses.

Sales costs, also, are being slashed, with cutbacks in corporate entertaining and advertising spending, along with reallocation of promotional spending to lower-cost channels. Sourcing from third parties is being scrutinized (with supplier and outsourcing contracts renegotiated and, where possible, consolidated), contract compliance audits initiated, and discretionary spending deferred. And capital expenditure is being cut through capex deferral and IT/network program reduction.

There is no doubt that, under current conditions, lean businesses stand the best chance of survival. But time will tell whether companies can save their way to prosperity—through these head-count reductions and other stopgap tactical adjustments—without making substantial changes to their business models.

It is worth remembering that any business should be able to take out 10% to 15% of managerial labor opex at the end of a profitable period. The problem now is that the sheer level of uncertainty surrounding this downturn (in terms of its extent and severity) means that companies may find that additional deep cuts are needed further down the line, and these could prove highly disruptive. Certainly, our experience shows that typical cost optimization projects, while likely to keep pace with market erosion throughout 2009, risk being insufficient to sustain growth into what, inevitably, will be a very volatile 2010 (see Figure 2).

Figure 1: The changing competitive landscape



The convergence of information technology and telecommunications is drawing suppliers from different backgrounds into one intensely competitive market.

Focusing on “new world” competencies

As the current recession tightens its grip, value in consumer markets will be eroded further. As shown in Figure 2, this means that, in revenue terms, companies will have to run ever faster simply to stand still. At the same time, traditional business models for generating revenue are being undermined continually by regulation and technology innovation. In communications, for example, consumers have grown accustomed to getting more for less (broadband packages being a case in point).

Against this unforgiving backdrop, TMT businesses need to look at leveraging trends in digital convergence to enhance their offerings and secure a competitive edge. Put bluntly, winning companies will, we believe, be those that broaden the scope of

existing tactical cost optimization programs by transforming their business models to focus on “new world” competencies.

So, what does this mean in practice? In the mobile telco sector, one of the vital new-world competencies—network sharing—is already much in evidence. Passive network sharing is becoming a massive business in India; and collaborations by players such as Hutchison, Orange, Telefónica, T-Mobile, and Vodafone in some European markets are defining new approaches to managing what was viewed in the past as a source of competitive advantage.

Other types of collaboration provide the opportunity to rethink traditional organizational models. Bharti Airtel’s use of an IT and innovation “Community of Practice” of partners to deliver large parts of its business model is well documented. In Japan, recently Nokia announced its

imminent launch of a mobile virtual network operator (MVNO) via its Vertu luxury handset brand. Run as a managed service by Nokia Siemens Networks on DOCOMO’s network, the MVNO will enable the offering of value-added services without the major cost of start-up investment in people, software, and equipment.

Such new approaches represent a significant shift away from an entrenched “go it alone” mindset. The successful development of competency in collaboration is truly transformational, calling for radical reassessments of underlying business and revenue models, collaborative capabilities, and IP ownership.

Fixed-line incumbent telcos, on the other hand, are finding that many of their required new-world competencies come back to the people domain. Most companies with this type of business model

face the triple challenge of having too many people for the next generation of infrastructure, insufficient numbers trained in the new technologies, and a high cost of workforce reduction due to the age profile and the protected rights of some employees. Managing workforce transformation in all its aspects is therefore a required competence in going beyond an incremental approach to cost reduction.

Elsewhere in the TMT ecosystem, other competencies are being developed by forward-looking businesses. For example, already evolving rapidly in the media sector are the traditional core competencies of channel ownership, marketing strength, proprietary IP, regulatory/policy lobbying, and national, limited cross-media ownership focus. Traditional publishing business models are particularly

challenged. Increasingly, companies are transforming their operations to enable cross-platform execution and value capture (of content and brands), strategic agility, customer insight, partnership/alliance mind-sets, and, crucially, global focus.

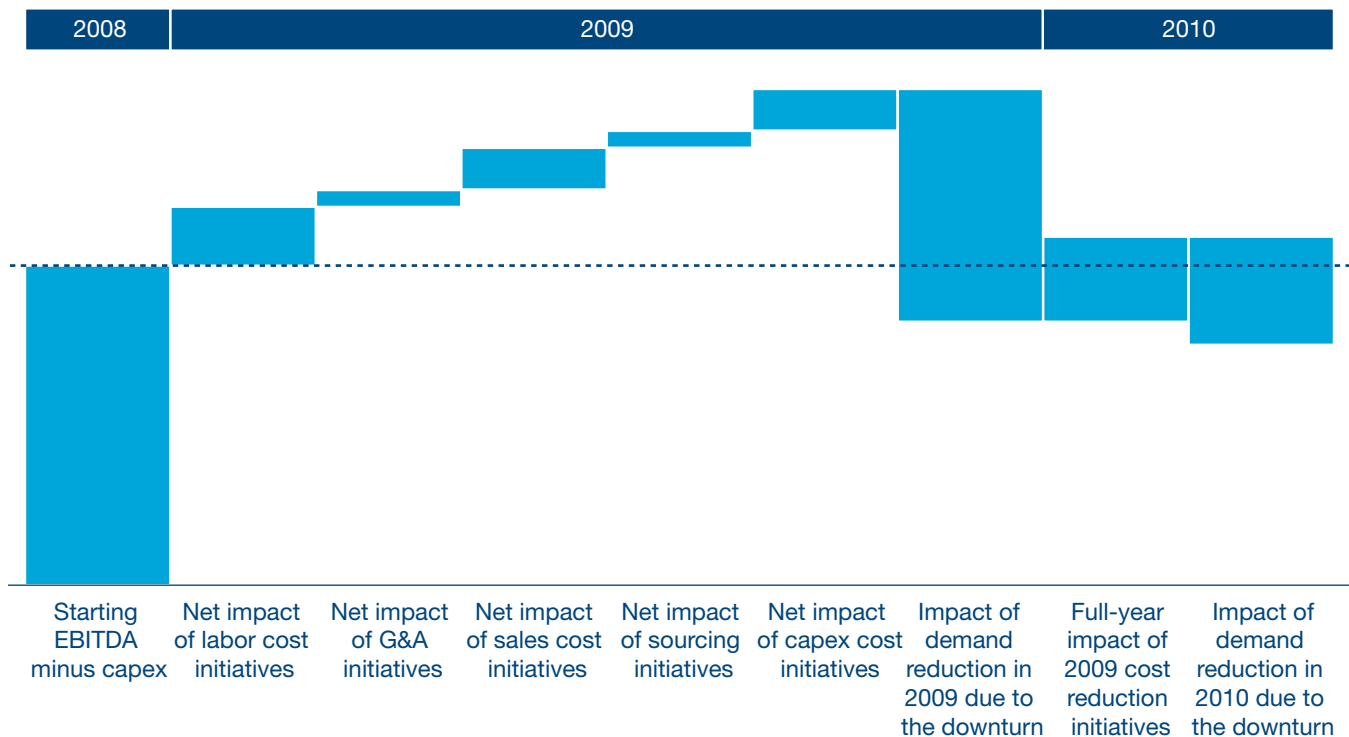
At the sharp end, Apple is a technology/media business that continues to lead by example. Its willingness to push organizational and technological boundaries was vindicated by its decision to open up the iPhone to independent software developers—the iPhone’s App Store is expected to generate upwards of \$800 million in 2009. And the recently announced iPhone 3.0 software will drill even deeper into what convergence has to offer by enabling the device to become a control panel for a whole range of electronic devices.

Seizing the opportunity

Throughout the TMT sector, driving toward convergence is acknowledged as a strategic priority, whether in consumer or enterprise markets. A few businesses have already made real progress toward this goal. Many, though, have scarcely embarked on the journey, and for these businesses, 2009 is not just about overcoming short-term cost reduction challenges. It should also be about deciding just how far-reaching and disruptive they want the transformations of their business operating models to be.

CEOs in these companies have a clear choice. They can opt to introduce incremental changes that should, if nothing else, ensure survival into 2010. Or they can grasp the opportunity to champion and push through an agenda for much more transformational change.

Figure 2: Typical EBITDA minus capex bridge for tactical cost optimization programs



In general, tactical cost optimization projects will mainly keep pace with market erosion in 2009 and will risk being insufficient to sustain growth in 2010.

One of the advantages of pursuing a more disruptive agenda during a downturn is that people within the business will be more willing to countenance what may be painful initiatives (initiatives that often will impinge on closely guarded organizational fiefdoms). In other words, the downturn offers a burning platform for change that will be difficult to emulate if these decisions are delayed until the recovery has begun. And not only will the changes be easier to sell to internal stakeholders, but also they will inflict less pain on shareholders (because the associated restructuring costs will be assimilated over a shorter period). Such advantages should help to ensure a favorable reception from the analyst community as well.

Companies that emerge from the downturn with a step-change lower cost base and a differentiated business model will be able to redefine the competitive dynamics in those sectors most affected by shifting consumer behaviors. Specifically, experience shows that this means that companies should be aiming to achieve a 30% to 35% lower opex base, a 40% to 50% shorter time to market, and a 20% increase in customer advocacy—all key capabilities in the convergence marketplace.

A realistic appraisal of the business unit portfolio should indicate where a transformational approach would yield the most “bang for the buck.” Examples could include the traditional print publishing division within a media conglomerate or the large enterprise business within a telecom group. Companies should expect to see results within 12 to 24 months (contingent on the scope and complexity of their business-model/cost-base transformation). That time frame means that if the change process is initiated during the second half of 2009, positive business impacts will be experienced in the second half of 2010 and beyond.

Understanding what is involved

As companies square up to the complex challenges posed by this financial crisis, they should actively consider the various transformational options along with the good-housekeeping measures they already have under way.

The components of any cost-base transformation will vary by subsector and by company. There is no single correct approach. But any such project is likely to involve elements of organizational change. Telecom businesses need to take action in a number of key areas:

- Align the organization to new consumer behaviors to enable a real competitive edge; optimize product development and after-sales care to meet the demands of each market segment.
- Ensure that staffing levels, pensions, and benefits/capabilities make sense in the new organizational structure; deal with legacy labor-cost issues and optimize tax-planning benefits.
- Consider network sharing and/or network outsourcing to achieve step-change reductions in opex and capex.
- Reassess priority markets—and exit those that materially dilute average return on invested capital (alternatively, customers and assets in those markets can be swapped with competitors through reciprocal distributorship arrangements).
- Practice agile decision making—a key capability in delayering internal structures and increasing management spans.
- Challenge each element of the internal value chain in terms of insourced vs. outsourced performance and tax-optimized location.

For entertainment and media businesses, on the other hand, the following actions stand out:

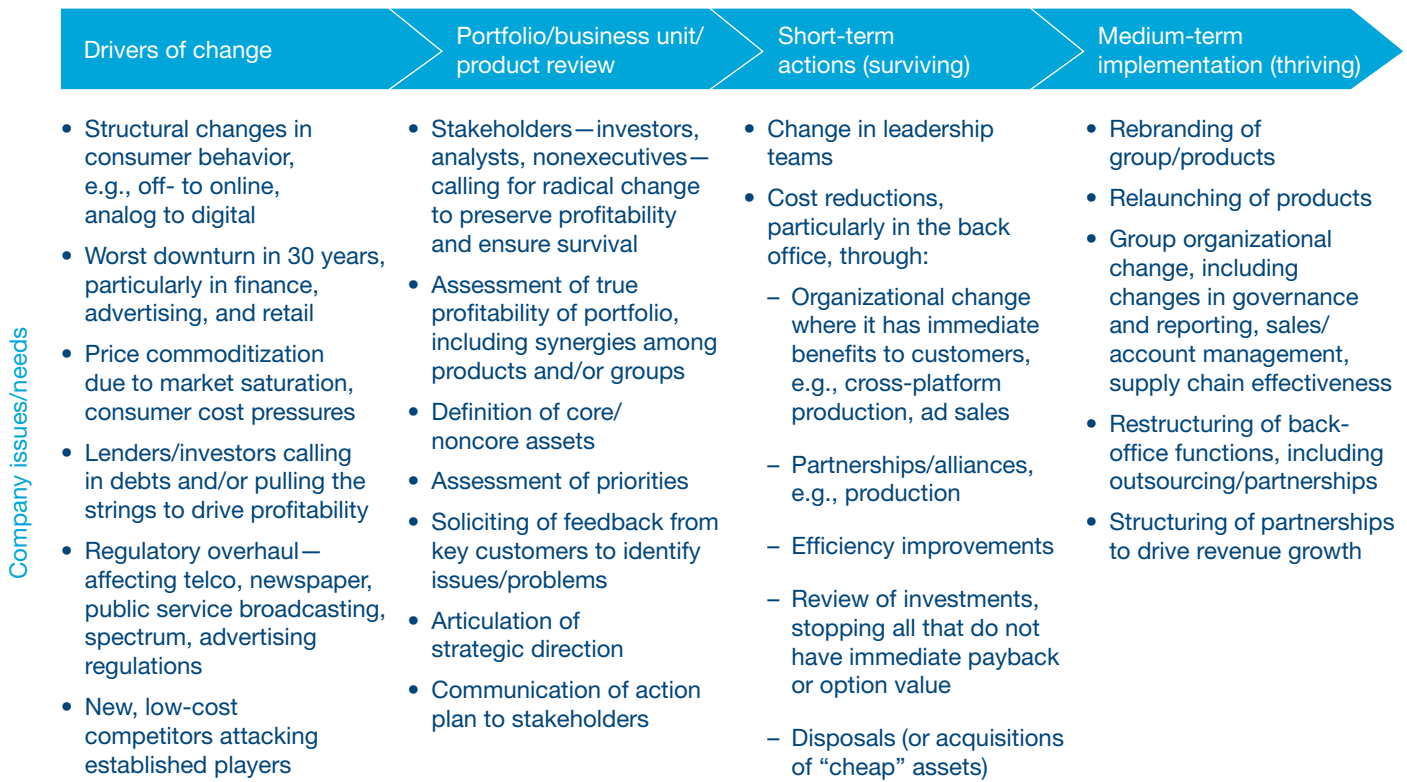
- Shift content production (e.g., editorial) spending to more profitable channels as part of an overall portfolio optimization.
- Align the organization to new consumer behaviors to enable a real competitive edge; optimize product development and after-sales care to meet the demands of each market segment.
- Renegotiate, partner on, and/or outsource distribution; exit noncore activities.
- Realign resources in core content and commercial areas (advertising, rights, etc.) to exploit cross-platform opportunities.
- Deploy a cross-platform, return-on-investment approach to spending (marketing, content, etc.), identifying and managing “cannibalization” effects between channels.
- Reduce the cost burden from regulatory intervention, which constrains investment and consolidation (e.g., ownership rules, content).

The recognition by management of the need to realign their business portfolios will define the type of transformation needed. Figure 3 highlights some of the principal drivers of change for TMT businesses, as well as the actions that should be considered.

Whatever the specifics of the transformation, the winners will be those companies that have successfully rebalanced their business portfolios and have realigned management, organization, and processes. Inevitably, those achievements will involve:

- A program of actions and projects that are interrelated and closely coordinated.

Figure 3: The principal drivers of change and some actions to consider for transforming the business



The recognition by management of the need to realign a company’s business portfolios will define the type of transformation needed.

- Redesigning organizational structures to minimize complexity and ensure accountability.
- Securing the right internal sponsorship for each project.
- Rapid deployment of planned initiatives.
- Understanding the internal political dynamic.
- Robust and proactive change management processes to manage the inevitably disruptive and threatening nature of some of the changes.

And longer-term development must assimilate the new convergence imperative.

Under these circumstances, decisive action is essential. Certainly, cost reduction/containment is needed to ensure survival into 2010. But to focus solely on this imperative is to overlook the broader-based transformations that will be needed to ensure competitive advantage in the new convergence marketplace. PricewaterhouseCoopers’ experience suggests that winning businesses will use this period of crisis to leapfrog the competition by introducing deeper organizational and strategic change initiatives.

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Future-ready capability

There is no questioning the severity of the challenge facing TMT businesses. Current revenue opportunities are constrained by the recessionary environment.



Skydivers in formation



A Case for Collaboration

As the economic downturn bites in markets across the world, companies are switching their focus from growth to reducing both operational and capital costs. The large procurement budgets and the need for major, ongoing capital investment mean that current pressures are especially intense for chief procurement offices (CPOs) in the communications industry.

However, managing sourcing effectively in a downturn is not about beating suppliers down on price, but rather about focusing on risk and risk management. For CPOs, the consequences of risk are immense: Suppliers' bankruptcies leave purchasing departments scrambling to find alternative sources to avoid disruptions in production schedules; record volatility in raw-material markets calls established hedging policies into question; and suppliers are pressured to reduce costs further, which may lead to reduced quality or missed delivery dates.

The current environment presents a major opportunity for the CPO to take a strategic, long-term view of the business's needs, and establish procurement as the business's cost and quality "watchdog" —influencing and managing activities that range from collaborative R&D to shared services centers and network outsourcing.

Even before the current economic downturn, the communications industry was facing tough challenges, including the need for major capital expenditure on next generation networks (NGNs), intensifying competition, technology convergence and evolution, and the need to build new content-based relationships and revenue models. Now the wider downturn has created additional pressures, making access to capital even harder, creating uncertainty around raw material and commodity prices that drive business costs, and strengthening the industry-wide focus on cash flow and cost management.

Consumers are also focusing on telecom cost management, as spending on telecom equipment and services is a significant element of both operating and capital expenditure across many sectors. At the same time, as customers are getting more sophisticated, they are demanding complex, high-quality services at affordable prices. In handling these shifting customer dynamics, telecom operators face a range of ongoing trends with profound operational impacts. These include the need to accelerate innovation and to improve cost efficiency and agility, in response to rising market liberalization and competition. In addition, the advent of new technologies—NGNs, all IP, voice over Internet Protocol, gigabit Ethernet, and so on—that promise better economics, ultimately, is creating short-term uncertainty during the transitional phase.

The result of all these developments has been a disaggregation and a relayering of not only the traditional telecom network architecture, but also the value chain itself (see Figure 1), enabled—in part—by a move to common platforms and more open network standards. Telecom operators are looking to focus more on their core business and simultaneously avoid the

pressure toward commoditization, with realization of opportunities in the application and content layer. The shift brings the telecoms and IT sectors closer together with industry and network convergence. This reshaping of the value chain has also seen the rising use of outsourcing, offshoring, and managed services, ranging from the creation and outsourcing of shared services centers for support services, to network infrastructure sharing and outsourcing deals with competitors and third-party specialists.

Balancing risk

So the already tough telecoms market is getting tougher, and doing nothing is not an option. The downturn is throwing up extraordinary market conditions, intensifying the existing capex crunch, demanding more thorough business cases and return-on-investment planning. More generally, cost has returned to the top of everybody's agenda, because the lack of significant opportunities for growth means the sure way to drive up profits is through cost reduction exercises.

As the economic climate worsens, many organizations are becoming increasingly concerned about the robustness of their key suppliers. This concern is well founded according to the latest figures, which show that company failures were up 50%, year-on-year, in the last quarter of 2008. We believe that this area is important to consider as part of your risk management processes.

The impact of a supplier's potential failure can prove to be very significant. An example occurred a few years ago in the automotive sector, when the high-profile failure of the sole supplier of the chassis for its Discovery model led Land Rover to take on onerous debts of the failed business to avoid the disruption of finding an alternative

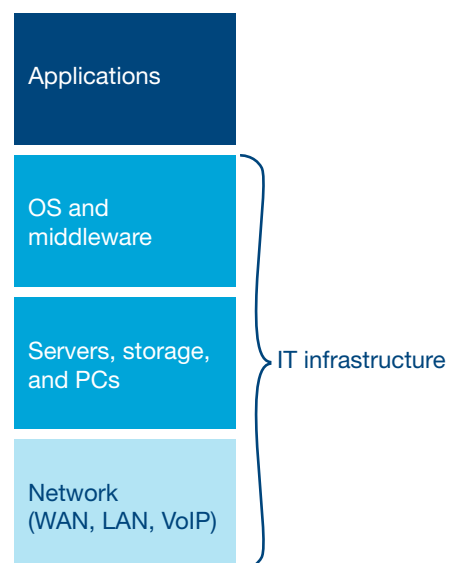
supplier. The cost of failure for organizations in terms of their ability to deliver essential services is equally high.

While protecting themselves completely against their suppliers' failures is not possible, organizations can help mitigate their risks by systematically assessing the probability of failure and deciding where some form of intervention is required. Organizations need to mitigate both the risk and the impact of potential failures by:

- Understanding the criticality of suppliers.
- Identifying and monitoring the vulnerability of suppliers.
- Assessing the need for intervention.
- Developing and implementing contingency plans.

The chief procurement officer is clearly on the front line of the battle to keep the business on an even keel. A recent survey of CPO leaders by *CPO Agenda* found that three-quarters of those interviewed said that their function has been

Figure 1: The new telecoms value chain



Case study 1: Aligning procurement with the chief technology office

A major national incumbent operator that was undergoing significant internal and external change needed to keep its complex sourcing programs on track. PricewaterhouseCoopers was engaged to help.

The chief operations officer felt that a communications gap had opened up between the company's procurement and chief technology office functions, resulting from process discontinuities. The company's main issue was a complex and costly next generation network program with more than 100 component projects, all of which needed to be kept on time and on budget while new procurement processes were developed. The first step was to identify the true value of what the company was buying and benchmark and rationalize the procurement effort. Additionally, the existing procurement team required product and industry training.

As a result of our efforts, the operator saved more than €10 million (US\$12.6 million) on a €300 million (\$378 million) network investment program.

directly affected by the downturn, with roughly the same proportion indicating they are under direct pressure to cut costs—a directive which is being passed on as a challenge to suppliers. So CPOs need to balance the conflicting pressures to cut costs and meet business needs with the equally pressing requirement to manage and improve their supply chain and operations in a sustainable way for the future. This includes strategically ensuring the security of supply for vital inputs, in an environment where suppliers themselves are under severe financial pressure.

Put simply, this current defining time brings advantages and disadvantages for the CPO. On the upside, procurement's status in and importance to the business have escalated, and internal customers have become more willing to collaborate in areas such as demand management and forecasting. Suppliers are also ready to negotiate on price.

Balancing those advantages are the downside effects, including the risk of suppliers going out of business, or that an overly aggressive approach to suppliers now could destroy relationships in the supply chain and leave the company exposed when the upturn comes. While

procurement inevitably will have to exit some supply contracts that are no longer required and renegotiate others to reduce quantity or price levels, keeping its hard-won, carefully managed, professionally selected supply base intact is vital to help support growth in the cyclical recovery phase.

The need to reconcile all these pressures brings challenges for the CPO—but also opportunities. A downturn not only shifts the balance of power from seller to buyer, but also makes implementing and executing on best practice more important than ever. And operations that outperform their peers often build the basis of that outperformance during a recession. The CPO function is no exception.

Challenge as a trigger for improvement

What the current situation provides is a unique trigger point for procurement to reposition and redefine its role within the organization. To drive forward in the current environment and lay a platform for the future, communications operators need smarter strategy planning, with carefully targeted investment in key areas that add real value to

the business. Ideally, procurement can guide and participate in this process through a new approach that positions it as a cost and quality watchdog for the business.

Rather than being based on technical requirements alone, buying decisions are, at root, commercial and should be approached as such, including working out how to share value and risks with key suppliers. By taking a holistic view across all its stakeholders—both suppliers and internal customers—procurement can evolve into an expert interface between the needs of the business and the external supplier environment. It can then collaborate and add value on both sides, through a core team of experts able to both act as a broker for some projects and take a more hands-on approach for others.

On the internal customer side, effective operation involves working closely with the business to define, monitor, and meet its needs, while also tracking and forecasting demand so as to meet customers' needs more effectively and at lower cost. Crucially, procurement needs to incorporate balance in its views across the business—a sourcing function led solely by the CTO function being no better than one led solely by the COO or the CFO

Case study 2: Building a rigorous telecom sourcing hierarchy

A major European communications operator engaged PwC to help transform its procurement division. The effort involved shifting the division's focus to strategic sourcing for effective planning, value enhancement, and operational excellence. To that end, we addressed these major objectives: extending the span of control for the procurement division and involvement in the overall procurement process, emphasizing market analysis and developing sourcing strategies, exploiting group synergies, and streamlining processes.

An annual procurement plan was compiled to facilitate the needs analysis, procurement planning, and sourcing group strategy development, improving control over specific expenditure areas that directly affected the organization's bottom line.

The engagement helped to optimize capex and opex and to develop sourcing group strategies for enhancing bargaining power as well as reducing procurement costs, with a focus on total cost of ownership, flexible decision making, and supplier selection and management.

side. In reality, good practice demands a blend of skills appropriately organized—including depth of knowledge on sourcing items, suppliers, and markets, as well as the usual contracts and pricing knowledge.

On the supplier side, good practice means segmenting the supplier base to identify those who are strategically vital to the business, and building strategic, mutually beneficial, long-term relationships with those suppliers. These relationships will focus on shared value alongside price, including collaborating and sharing information on everything from future demand planning to product development to strategic research and development.

Having adapted this approach, an operator's procurement function can transform the sourcing of major projects and equipment, such as NGNs, by coordinating and managing collaborative, multi-skilled governance teams that take an end-to-end view of each project on the basis not of price but of the total cost of ownership. These collaborative teams—drawn as needed from procurement, information technology, finance, operations, research and development (R&D), and other relevant functions—can use a formal

review process to ensure that all stakeholders have bought in to the project's direction and progress before moving on to the next stage.

Communications operators' changing business models make this an especially good time to achieve such a transformation. In their drive to avoid commoditization as pure providers of bandwidth "pipes," communications companies are diversifying into areas such as media and IT applications and are increasingly sourcing and supplying software and content. Procurement of software demands different skills than those for hardware; it also frequently involves complex rights and revenue-sharing agreements that require ongoing collaboration and trust. Trust becomes all the more important when such agreements extend into joint development and repurposing for specific platforms. A smarter, more focused, and more collaborative CPO is better suited to building and sustaining such relationships.

The overall impact of the changes we have described is to bring the central procurement organization into a truly strategic role in the business. Our work with clients shows that this change often faces a number of hurdles, including lack of integration between legacy IT

systems, inaccurate management information, weak linkage between the CPO and the rest of the business, and a dilemma between centralized procurement and project agility. In the following, we look at how such challenges can be overcome.

Key dimensions for the CPO during the downturn

How can the CPO take advantage of the potential areas for improvement that we have discussed above? A key step will be to ensure that the corporate agenda is well understood and tightly integrated with the procurement function. PwC has defined 10 critical dimensions that we believe should be considered during the downturn:

1. Take a closer look.
2. Act decisively.
3. Remember: "cash is king."
4. Focus on what really matters.
5. Manage your cost base.
6. Understand that reliable management information is key.
7. Plan for various scenarios.
8. Recognize the value of your people.
9. Take your stakeholders with you.
10. Take advantage of the opportunities.

These areas are addressed in the framework developed below.

In our experience, a good first step is to take stock, ask searching questions, and establish where the function currently stands in the business by benchmarking it against counterparts elsewhere. On the basis of the findings, the CPO function can then take steps to build a deeper understanding of business needs and goals. Having that level of understanding ensures that the function can meet and track the needs of the business as they change—for example, cutting costs as demand slows, improving the speed of supply in response to customer demand, and linking the procurement function with business profitability.

With this bedrock in place, the CPO needs to get its new role onto key senior stakeholders' "radar" to build buy-in across the business. Effective execution in sourcing requires strong representation at the board level, and if this is not in place, it should be addressed. Clear targets can then be defined and agreed to—for example, "the sourcing function will save \$X million over the next two years in the sourcing of new soft-switches and media gateways for the new IP-based network"—thereby creating a platform and a focus for action, and defining the wider benefit for the business. This clarification of the role puts the CPO in a position to collaborate and partner across the organization to deliver on these commitments. It also sets clear areas of accountability on which the CPO will report to the business.

At root, such change involves understanding—by both the business as a whole and procurement in particular—of what effective sourcing really involves. It does not mean "pounding suppliers to death on price." What it does mean is understanding

Outsourcing: 'Bought in' or 'managed out'

Across many sectors, outsourcing noncore functions is well established as a means of achieving greater cost efficiency and quality improvement in the supply chain, as well as enabling business focus. But decisions to outsource need to be based on long-term strategic value as well as cost. As is often the case in change programs, it can be necessary to spend money to save money, which calls for careful planning—especially in a downturn.

Outsourcing in the communications industry is becoming increasingly prevalent, reflecting the changing value chain. Strategic outsourcing arrangements can enable win/win deals, such as equity partnerships, in return for exclusive distribution rights. Also, operators are increasingly ready to consider letting go of areas once seen as strategic differentiators. With coverage no longer seen as a market differentiator, communications companies are seeking out network infrastructure sharing or outsourcing deals that can reduce risk and cost. Also being considered widely are offshore arrangements, which require operators to balance benefits in areas such as labor costs and taxation with hidden costs and risks such as exchange rates, fuel costs, risk to the company's reputation, and inflation of offshore labor rates.

Outsourcing with managed services remains a major trend in telecoms, driven by better and simpler cost management and by strategic gains such as access to best practices, higher agility, capex avoidance, and better risk management. Leasing with managed solutions can help avoid the capex crunch that many telecoms players in today's market face. And leasing can help balance financial constraints with the need to invest in networks to maintain competitive positioning. Business flexibility, also, can be enhanced, with pay-as-you-go, software-as-a-service, and cloud computing models being well suited to difficult commercial conditions.

Approaching outsourcing decisions

Against this background, the CPO should approach and manage the company's outsourcing agenda through three fundamental steps:

1. Identify core areas of the business. What does the business do better and cheaper than others?
2. Define essential areas and identify candidates for outsourcing. Is the area a source of competitive advantage, or is it a common or overhead function in the industry? Is it hard for competitors to replicate it? Note that some areas of strength could be developed for insourcing and offered to other businesses.
3. Execute on the outsourcing plans. Take into account not just top-line costs but also the effect of shipping costs, management effort, time zones in the event of offshore arrangements, and so on. Then establish contracts, operations, and ongoing management of the outsource partner(s). The relationship needs to be managed and monitored continually to keep it running effectively, maintaining control of key activities and metrics to track delivery and performance.

the economics of the total cost of ownership across the business, having the right information about markets and suppliers' economics, allowing them a fair margin, and forming strong relationships and partnerships for mutual advantage.

Achieving all this successfully requires a number of characteristics. The procurement function needs to be facts-based and supported by robust information tools and analytics, effective market research, and clear targets and metrics. It also needs to be identified as a cost center, accountable to the business for financial targets, with talented staff and good communication across the business. And procurement needs to develop a smart organization, able to manage complexity efficiently, reach across silos between functions, and innovate commercially (for example, leasing rather than buying where appropriate). All these attributes need to be underpinned by a clear sourcing strategy that establishes sourcing as a means of differentiation for the business and that aligns a segmented supplier base with defined business goals.

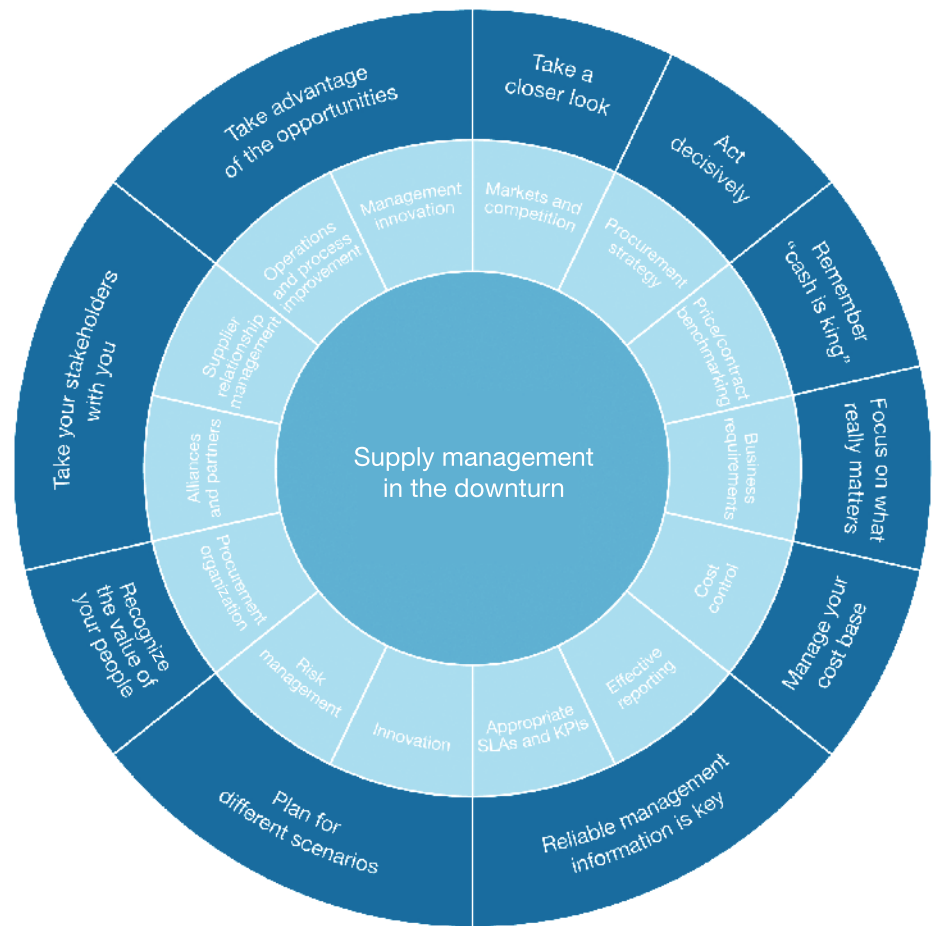
By reviewing and applying changes in some or all of the areas described below, any organization should expect to see some marked improvement in efficiencies and/or in value for money.

The framework shown in Figure 2 identifies key dimensions that we have found useful to consider when working with procurement functions.

The capabilities associated with these areas include:

- Procurement organization—Elevating people, talent, and organizational structures from a clerical, low-skill, and low-knowledge legacy environment to a high-skill base with expert knowledge, both in business

Figure 2: Framework for supply management in the downturn



needs and in the supply items being sourced to meet those needs. This upgrading requires the CPO division to build on the basic skills of negotiating contracts and pricing with three key additions: hiring good people with well-rounded, cross-functional analytical and management skills; setting clear goals and incentives for people linked to business performance; and instituting integrated, cross-functional collaboration and teaming across the business.

- Appropriate SLAs and KPIs—Setting clear metrics and goals that reflect procurement's role in supporting the business's corporate performance and helping it execute its strategy successfully, rather than focusing on internal procurement measures, such as price.
- Effective reporting—Advancing from basic processes to innovative tools and IT capabilities, including dashboards, advanced analytics, and real-time management reporting, all closely integrated with internal customers' systems. Lack of this information can create dislocations between procurement and customers in terms of the equipment sourced and the timing of delivery, pushing costs upward and effectiveness downward. Sourcing via e-business links has become a common tool. Many operators have achieved initial step changes in IT process linkage with simple tools, such as MS Excel, and with effort on the people side before phasing in more complex e-tools, such as e-auction systems and e-buying.

- Alliances and partners—Moving from many suppliers to a segmented, targeted approach that involves a smaller number of strategic partnerships, often including collaboration around R&D and product design. This also involves using outsourcing strategically (see sidebar on page 25), focusing on “do what you do best and outsource the rest.” The reduced number of suppliers enables cost-volume advantages, leveraging of synergies, better innovation in products, and greater speed to market, while also continuing to flex traditional levers such as pricing, changing suppliers, and renegotiating contracts.
- Procurement strategy—Embedding in all procurement decisions a clear understanding of the corporate strategy and how it is being executed. This understanding is used to develop clear, fact-based sourcing plans aligned to the business, including, for example, capex and opex alignment.
- Risk management—Understanding the impacts of risk on the business as a whole, across the various life cycles of processes in the business. Supplier risk also needs to be assessed on a continuing basis, with a business disaster “plan B” ready in the event that a key supplier fails. Better demand planning and scheduling can enable clearer communication with suppliers, and that, in turn, can reduce their risk. The trend toward innovative risk-sharing approaches is growing, including sharing network, asset, and business risk.
- Innovation—Adopting novel techniques that outpace the competition. Examples might include developing active supplier management and strategic links to enable the joint development of products and joint deals, building strategic links into contracts with suppliers, and embedding innovation in supplier agreements. Using the supply chain as a lever for product development—even inventing new products with suppliers—can drive cost efficiency, differentiation, and speed.
- Cost control—Progressing from a price-squeeze focus and basic, local cost control to looking at the total cost of ownership and the economic implications for the whole business. Finance operations and processes also need to evolve, away from a “siloed,” reactive approach and toward cross-functional teaming across the business, with proactive support for innovation. A cross-functional approach, in turn, drives more effective and accountable cost management and supports strategic supplier relations.
- Markets and competition—Understanding not just price but the dynamics and trends in the supplier marketplace, ranging from solvency to technology issues to opportunities for strategic partnering.
- Operations and processes—Developing and implementing more effective processes across the business by focusing on the fundamentals of the selection methods and how they can be improved to align more closely with the business’s needs. The improvement process includes identifying the degree of supplier risk and establishing what level the business will accept, as well as examining opportunities for further rationalization.

Case study 3: Building relationships for the future

BT’s CPO lead, Neil Rogers, spoke recently to the publication *CPO Agenda*. He was asked to what extent he was looking to BT’s top 20 suppliers for more of a partnership kind of relationship.

Mr. Rogers commented: “We would like to work with a smaller number of real partners with whom we will innovate. That is proving very difficult to do, because even people with whom we spend a lot of money who you would think would have that ethos—a long-term ethos—don’t behave like that. They don’t take on risk, they sit in their box and take their quarterly results, they don’t really align innovation with us, and they certainly don’t commit beyond what their contractual proposition is.

“I can think of two companies in particular right now with whom I’m immensely disappointed. I’ve been on their side, you see, and I have this conversation with them here where I say, ‘If I were in your shoes—and what I’ve done all my life—I would waive that or invest in this or get over that, because I want to be here for 20 years.’ And if I’m playing a long-term game like that, I’ll get over this month’s problem, I’ll make it easy for the customer to get over this month’s problem, because they’ll remember that in the next evaluation. They have a corporate memory. People will say, ‘I want to go with them, because I remember when they helped me overcome that problem.’”

- Business requirements— Accepting that procurement is not an island, engaging with customers in the business to understand what they need, and collaborating with them to source it at an economical price—while taking into account any long-term strategic value rather than just the immediate cash cost.
- Management innovation— Scanning the horizon strategically to identify the next steps in continually improving and implementing effective measures and metrics to track progress in the CPO function. Examples include tracking cost and quality on market and supplier-facing issues, monitoring internal customer satisfaction, measuring agility and speed on projects, tracking the value delivered by alliances and partnerships, and measuring how effectively internal projects' needs are met.
- Price/contract benchmarking— Understanding the value suppliers offer through analyzing pricing and contracts effectively.
- Supplier relationship management— Developing and maintaining strategic partnerships with a focused supplier base.

the same direction as the business and leveraging relationships to secure goodwill to get value from strategic suppliers while driving costs out.

In our view, those that do succeed in acting now by focusing on the key dimensions, addressed above, stand to realize significant benefits.

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The authors would like to acknowledge contributions to this article by Evangelos Markopoulos, Alexandre Ramos, and George Xirogiannis.

Looking ahead: Beyond procurement

As we have pointed out in this article, the current downturn provides a trigger to transform the role and the capabilities of the CPO's division in the communications sector. Operators that act decisively now will emerge fit for competition as exponents of growth.

With operators' risk increasing, they need to address the CPO function now. They need to ensure that the CPO function can contribute effectively in creating value for shareholders, which means pulling in

the 1990s, the number of people in the world who are illiterate has increased from 500 million to 700 million.

There are many reasons for this. One is that the population of the world is growing so fast that the number of children who are illiterate is increasing. Another reason is that the quality of education is so poor that many children who are in school are not learning to read and write.

There are also many people who are illiterate because they do not have access to schools. In many parts of the world, there are no schools, or the schools are so far away that it is impossible for children to go to school.

It is important to find ways to help these people learn to read and write. One way is to build schools and hire teachers. Another way is to use mobile libraries and other innovative methods of education.

It is also important to make sure that the education is relevant to the needs of the community. For example, teaching people how to grow crops or how to start a business can be very helpful.

Finally, it is important to make sure that the education is free and of high quality. If people have to pay for school, many will not be able to afford it. And if the quality of the education is poor, people will not learn anything useful.

There are many organizations that are working to help people learn to read and write. One of the most famous is the United Nations Educational, Scientific and Cultural Organization (UNESCO). There are also many local organizations that are doing similar work.

It is important that we all work together to help these people. We can donate money, volunteer our time, or simply raise awareness of the problem. Every little bit helps.

Let's all do our part to help these people learn to read and write. It is one of the most important things we can do to help them improve their lives.

Thank you for reading this article. I hope it has helped you understand the importance of literacy and the challenges that people face in learning to read and write.

If you have any questions or would like to learn more, please contact the organization that you are interested in. We will be happy to help you.

Remember, every child has the right to a good education. Let's all do our part to make sure that every child has the opportunity to learn to read and write.

Thank you again for your interest in this important issue. We will continue to work together to help these people learn to read and write.

With love and respect,
[Name]

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It is important to find ways to help these people learn to read and write. One way is to build schools and hire teachers. Another way is to use mobile libraries and other innovative methods of education.

It is also important to make sure that the education is relevant to the needs of the community. For example, teaching people how to grow crops or how to start a business can be very helpful.

Finally, it is important to make sure that the education is free and of high quality. If people have to pay for school, many will not be able to afford it. And if the quality of the education is poor, people will not learn anything useful.

There are many organizations that are working to help people learn to read and write. One of the most famous is the United Nations Educational, Scientific and Cultural Organization (UNESCO). There are also many local organizations that are doing similar work.

It is important that we all work together to help these people. We can donate money, volunteer our time, or simply raise awareness of the problem. Every little bit helps.

Let's all do our part to help these people learn to read and write. It is one of the most important things we can do to help them improve their lives.

Thank you for reading this article. I hope it has helped you understand the importance of literacy and the challenges that people face in learning to read and write.

If you have any questions or would like to learn more, please contact the organization that you are interested in. We will be happy to help you.

Remember, every child has the right to a good education. Let's all do our part to make sure that every child has the opportunity to learn to read and write.

Thank you again for your interest in this important issue. We will continue to work together to help these people learn to read and write.

With love and respect,
[Name]



Scientist inspecting cloned gene



Focusing on the Details

In today's economic environment, cost reduction and conserving cash are the priority for most organizations. In mature markets, cost reduction has been an imperative for a number of years, and most communications operators have a "director of transformation," or a similar role, leading the charge. One area that few have addressed properly through traditional cost-cutting regimes—and that has the potential to quickly yield cash and take out costs—is that of unlocking the value in contracts. Effective contract management can help operators identify, assess, and recover what is typically 5% to 10% of a contract's value in leakage.

Communications businesses have become increasingly complex over the last decade. The trend has been toward centralizing spending, outsourcing noncore activities, and entering into more complex partnering arrangements, such as those with equipment vendors, content suppliers, and asset sharing. This complexity creates an ongoing challenge for operators trying to maintain value for money, specifically in relation to services or construction of capital assets—where the levers for reducing activities or costs are not immediately apparent and neither is whether value for money has been received. Contracted spending, therefore, is less sensitive to traditional cost-reduction approaches.

Opportunities exist in contractual arrangements because ambiguities and inefficiencies manifest themselves after the contract is signed. The key to unlocking the value in contracts is to develop a granular understanding of how the benefits received and the actual cost incurred relate to the contract and the various elements of the service delivered.

Contracts are documents that are frozen at a point in time and

represent rights and obligations that are to be delivered over a future period. Contracts often represent a company's perception of a "good deal," which usually focuses on price and quality—both easily understood by all stakeholders. However, whether a good deal really has been achieved can be concluded only if the delivery was in line with expectations, in terms of quality as well as the total cost.

Inadequate oversight at the various interfaces between procurement, commercial, operations, and finance can result in total cost outcomes that are higher than they need to be. Total cost is not just a function of price but is driven by a number of other factors, including effectiveness of planning and demand management, quality of scope definition, visibility of remedial work, effectiveness of works management, and working capital efficiency, to name a few.

The total cost of services changes over time, as needs change and as the scope and the services delivered under the contract vary. In such longer-term arrangements as network infrastructure, maintenance, and information technology systems, the value received tends to decline over time. Typically, the level of

commercial diligence applied at the start of the contractual arrangement is not maintained throughout delivery and is not extended to understanding the cost of the service delivered. Supplier and client behaviors that result in loss of value are not effectively understood or acted upon.

Often, those who negotiated the contract are not responsible for its management or day-to-day delivery. We have seen situations in which those managing the contractual arrangement have never read the contract and focus solely on operational objectives. Hence, the visibility of what drives costs in the contract is often low (see Case study 1).

Operators with established and separate functions, such as operations, procurement, finance, and commercial, are particularly susceptible to loss of value in contractual arrangements. Responsibilities and accountabilities between separate functions mean that total cost outcomes are often owned across functions; in effect, no single person has a view of what really drives costs in a contractual arrangement.

Case study 1: Understanding what drives costs

An operator entered into an asset and infrastructure maintenance contract following an invitation-for-tender process. Prior to this process, the operator conducted a benchmarking and market study to assess the appropriate pricing of the service. The sourcing process was best-in-class. The contractual arrangement was input-based with agreed-upon rates for materials, as well as specific rates for items such as tools and equipment hire, which were charged when used on-site. An incentive process was put in place to motivate the supplier to complete the work at the appropriate level of quality and ahead of schedule.

Our review uncovered the fact that the contractor was not claiming any of its incentive payments because it never completed work ahead of schedule. Rather, it kept the tools continually on-site. As a consequence, the contractor was able to profit (in excess of £30 million) from the pricing mechanism that inadvertently rewarded keeping the tools available rather than by trying to gain the incentives.

Now understanding the perverse incentive in the contract, the operator controls and manages tool hiring and avoids the unnecessary costs.

Conversely, suppliers typically have a keen understanding of the contractual arrangement and can appreciate how to use the various levers in the contract to maximize margins on the contract most effectively. The contract manager on the supplier's side often has margin and revenue objectives built into his or her bonus arrangements.

Many operators have reduced head count in important areas of contract management, and now they are starting to pay the price. Consider the gravitas and seniority of those who manage your relationships with your equipment manufacturers or your billing system provider, and compare them with those you have managing your interests in the arrangement. Alternatively, consider the time and investment you place in maximizing contracts on which you are the provider and the impact that has on margins.

What types of contracts represent the best opportunities?

In gaining an understanding of how the activities of both the supplier and the client impact the total cost, it is possible to identify areas where value is being lost and to develop effective countermeasures.

Framework agreements

Framework agreements with suppliers provide quick access to products and services by establishing contractual terms with particular regard to prices and quantities, which are applied when products or services are drawn down. Such agreements are entered into to provide the best buying leverage for the operator and usually are input-price-based, with charges ranging from simple price lists to complex equipment and service day rates. Mechanical and engineering, facilities management, and logistics services often are managed under framework agreements.

Case study 2: Examining a framework agreement that has lost shape

A major multinational communications company was operating under a framework contract to provide site inspections and technical evaluation services. The agreed-upon rates were input-based, with specific technical equipment priced at day rates and skilled personnel at various levels assigned specific hourly rates.

We discovered that over time the contract had lost its shape, as new equipment was used that was not specified in the contract and that was charged at very high spot rates. Additionally, almost 30% of the total spending related to idle time prior to commencing work on-site. These situations were under the direct control of the client and were largely avoidable.

Individual risk management decisions meant that excessive equipment had been scoped on standard day rates as backup in the event that failures would occur, a practice that added 19% to 23% to the cost outcome. In addition, because contractual rights related to equipment failure were not fully understood, they were not properly tracked or enforced.

Once able to turn off the tap on idle-time wastage, the operator quickly established reduced and more appropriate levels of backup and created processes to hold the supplier accountable for failure. The result was a reduction in annual spending under this agreement of more than 30%.

Issues arise not in setting up these arrangements, but in how the products or services are drawn down. Inefficiencies and waste in the drawdown can be hidden under the presumption that the “best deal” was made when the contract was agreed upon. Since it is assumed that the framework agreement has settled the question of price, those calling down on the contract often erroneously abdicate responsibility for the total cost (see Case study 2).

Hybrid arrangements

Hybrid arrangements, those with fixed and variable elements as well as exclusive and nonexclusive rates, are increasingly typical of network equipment contracts. They are also prevalent in outsourcing arrangements, where demand can be predicted to some extent yet there is likely to be a need for related services that cannot be defined easily up front.

In these contracts, some services attract an exclusive rate—which represents a very competitive rate in exchange for the supplier having the sole right to these types of services. Other services with a higher, nonexclusive rate are presumed to have their prices tested in the market. Hybrids also include complex service-level metrics that drive a certain element of the fee as well as measure service quality.

The ability to apply commercial diligence to changes in scope and the metrics that drive the arrangement can become impaired. These types of arrangements can become complex. Cost transparency is easily lost among the various types of services that have been called upon and whether they should be charged at exclusive or nonexclusive rates.

Network maintenance contracts are a good example. The distinction between planned maintenance, unplanned maintenance, and repairs often attracts different prices and charging regimes, but the distinction in the field is often open to debate.

Input-based contracts

Input-based contracts are usually entered into when the scope of the services cannot be accurately defined upfront or the cost risk cannot be passed on to the supplier. For communications companies, typically falling into this category are operator services, field services, and professional and technical consultancy. Input-based contracts are usually time and unit-rate driven, with reimbursement of third-party/subcontracted costs. These contracts sometimes include provisions for agreeing on the prices for specific projects upfront; however, usually the cost of a specific project is built on the rates implicit in the contract.

Value is lost in determining whether the activities delivered under the contract are appropriate to the needs and have reasonable durations, and also that cost estimates to the projects include no hidden contingencies

(hidden, usually, in durations and reimbursable cost estimates).

Open-book arrangements

Open-book arrangements are a variation of input-based contracts but aim to provide transparency concerning actual costs incurred. Examples of open-book arrangements entered into by communications operators include manpower services, distribution arrangements, and information technology projects. In practice, open-book arrangements contain significant assumptions, such as overhead allocations, intercompany recharges, actual versus estimated standard costs, and the reconciliation of actual head count to charges on the project.

Value can be lost when costs are not measured appropriately, margins are hidden in recharges, confusion arises between cash and noncash costs (such as depreciation or impairment), or duplicated costs arise as accounting systems fail to take into account how resources and costs relate.

Open-book audit rights are rarely invoked because they are erroneously assumed to apply to issues around trust rather than

good governance. When audits are performed they often miss the key issues, as they tend to follow compliance-based processes related to what the provider presents to them, and to not properly challenge the mechanisms of delivery or the validity of the costs incurred (see Case study 3).

Contract renewal

Complex contractual arrangements that are coming up for renewal or renegotiation present an opportunity to ensure that deficiencies in the current service and pricing arrangement are resolved. This opportunity is frequently missed, as organizations do not perform a bottom-up analysis of how the various cost levers within the contract were used in actual practice. As a result, the waste that may have been inherent, but not identified, in the previous contractual arrangement is repeated in the renewed contract process.

Uncovering value leakage in contracts

In general, a condition for value leakage is complexity. Complex contractual arrangements are less likely to be managed effectively, especially if multiple interfaces are

Case study 3: Realizing value from auditing an open-book arrangement

A company entered into a contract with a technology services company to acquire and run the research and development assets. The remuneration mechanism consisted of various charges under an open-book arrangement.

Our examination of the billing arrangements uncovered the following issues:

- Payroll costs could not be reconciled to the actual persons working on the account.
- Accelerated depreciation charges resulted in unnecessary cash outflow from the client.
- Insurance charges included unknown intercompany profit uplifts.
- Charges for additional use of services did not correlate to the marginal cost of providing the service.

What the company thought to be a simple 8% cost-plus arrangement was effectively a 20% cost-plus charge for what was a relatively risk-free contract for the supplier. By challenging the validity of costs and the mechanism used to deliver the service, the company brought costs back under control.

involved. Furthermore, when the services being provided are highly technical or difficult to measure, the ability to challenge and determine whether value has been received becomes heavily subjective. Thus, commercial arrangements that have complex pricing and subjective value definition provide the greatest opportunity for identifying value leakage. Figure 1 illustrates some potential opportunities in the communications industry.

To evaluate whether value leakage has occurred in a contract, a company needs to develop an approach that looks at how the contract is operated, what activities were delivered under the contract, and how these factors relate to contract spending. Such an approach requires cross-functional input and a deep understanding of both the services delivered and the terms of the contract. In addition, sufficient granularity of spending should be obtained to enable an analysis of the root causes or drivers of cost. Once that is obtained, a picture of how the service was delivered from a cost perspective can be developed.

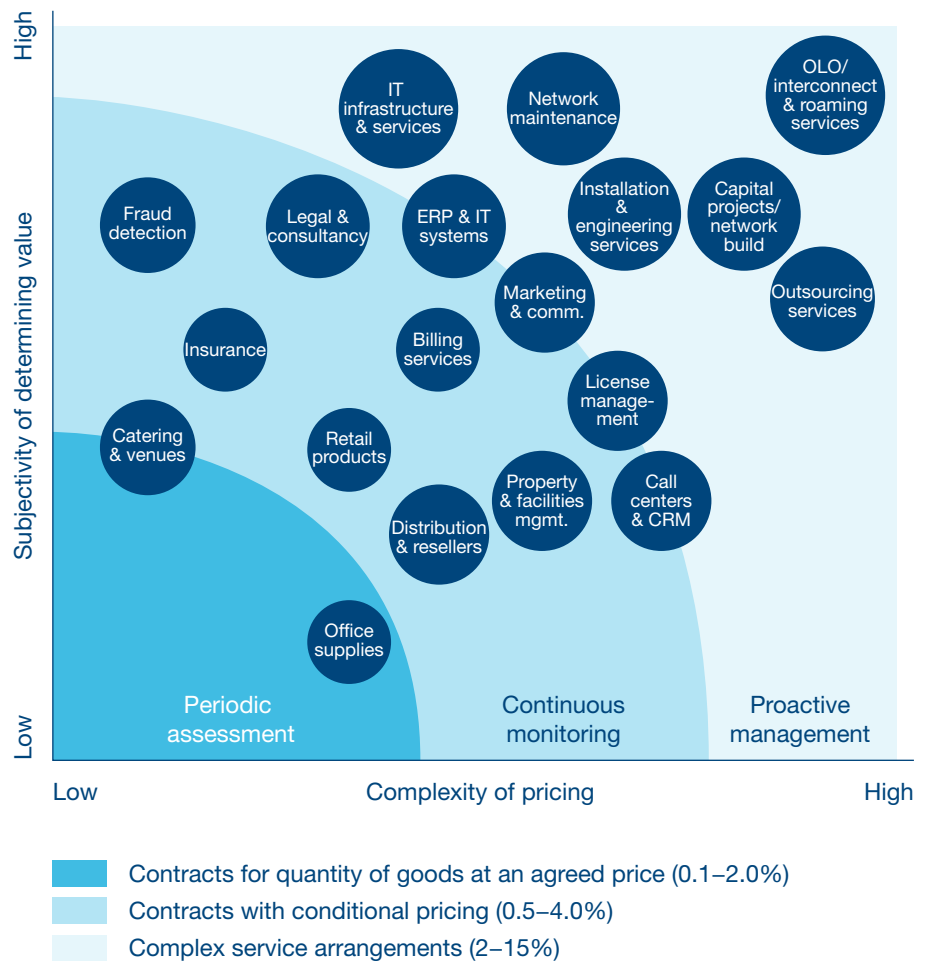
Understanding the cost drivers

A cost driver is any activity that generates cost; this includes activities that both the client and the supplier undertake. Activities can be routine, proactive, or reactive. Through understanding the sum total of activities that occurred under the contractual arrangement, why they occurred, and their cost consequences, we can identify how behaviors and activities should be changed to capture value.

Activities that drive cost usually fall into five broad categories:

Bad planning. Other than in simple contractual arrangements, planning is a critical element of determining costs. Planning defines how the

Figure 1: Opportunities to find value leakage



operator engages with the supplier to identify specific needs sufficiently in advance to enable the supplier to organize and deliver on that need within an agreed-upon time frame and cost. Unplanned emergency requests usually are expensive and can drive up costs significantly.

For example, in network maintenance, the ability to deliver to plan is the major determinant of cost. Often a fixed budget is allocated to maintenance, and that budget is spent on both planned and unplanned activities. Poor planning (sometimes hidden in budget manipulation) can result in most of the budget being spent on emergency work, with discretionary preventative maintenance being

deferred to the next budget period. The emergency nature of the work causes it to be expensive, and deferring preventative maintenance means that more “emergencies” arise due to a poor asset condition. This vicious cycle can then drive up maintenance costs.

When analyzing contracted maintenance costs, it is essential to separate and understand the planned and unplanned elements of the cost. The next step is to understand who absorbed the planning risk in the contractual arrangement. If planning has been delegated to the supplier, then how is the supplier being held accountable for maintaining the stability and quality of the plan?

Scope definition and costing.

This area is particularly relevant to project spending. The ability to define needs precisely has a direct correlation to the cost of the project. However, defining scope depends on how well informed the operator is on their needs and how these needs should be delivered. Poor scope definition can result in costs escalating when changes are made and commitments escalating as the original requests evolve. Suppliers may be incentivised to deliver over-engineered (expensive but effective) solutions; and the operator will need to be armed with sufficient information to counter this tendency.

Costing is another area where the risk of value leakage is high. In reviewing contracts for information technology services, we have come across quotations for six weeks of labor to make a change that should take three days at the very most. Opaque costing is particularly prevalent where complex technical services are being provided.

The approach to estimating costs also can drive costs. Contingencies can be duplicated by being built into the task durations as well as being identified separately as “risk.” In addition, collusion can occur between client personnel and the supplier, as they avoid the embarrassment of exceeding the budget by having an excessive budget to begin with. Because work and cost expand to meet the available budget, tight budgeting is imperative in controlling costs. An absence of overshooting the budget, which is not a good thing, usually indicates unchallenging budgeting rather than excellent project and commercial management.

Poor scope definition and ill-informed buying can be significant cost drivers and very difficult problems to crack. Understanding the level of expenditure that is purchased “blind” is the beginning

of defining the information needed to control and mitigate these types of costs.

Drawdown. Drawdown relates to how the services of a supplier are to be called upon, what level of notice is required, and what obligations—such as access to the site, user rights, information, and other deliverables—the client needs to provide. The costs that result from poor drawdown can be significant. We came across a situation where more than 30% of the spending with a contractor directly related to the failure of the client to provide timely access.

Often those drawing down on the contract are insulated from the cost of their decisions and are motivated by operational pressures, and therefore they lack the incentives to consider the best deal. Their focus is often on the relationship when dealing with the supplier, as maintaining goodwill is essential to support their aims. Without some form of independent review, the relationship can take precedence over appropriate commercial tension.

A typical scenario that demonstrates how the drawdown can become distorted is this real life example. The head of the billing consolidation project calls the outsourced IT support and says, “I want John, whom I trust, to do a maintenance update.” IT support explains, “John no longer does maintenance, but he could do the update as a developer.” The head of billing consolidation agrees to this arrangement, not realizing that a developer rate is 75% higher than maintenance; he also agrees to secure John to do the work in three months’ time and accepts an invoice in advance of the work.

The ability to understand how failing to deliver effectively on the client’s obligations affects spending is critical to addressing this cost driver.

Change management. Change management is closely linked to defining scope and costing. In a competitive environment, responses to tenders are keenly priced. Sometimes the pricing in the contract is at a breakeven point or a loss, with a view to recovering margin from change.

Change is an inevitable consequence of doing business. Passing on the risk of change to the supplier might be possible in some cases, but, in any event, it will come with a heavy premium. In most cases, the risk of change remains with the client. Understanding how much of the contractual spending relates to change as well as the root causes of the change (usually root causes sit in the domains of “planning and drawdown” and “scope definition and costing”) are the first steps in addressing change as a driver of costs.

We have come across circumstances where normal operational risk has been defined as change and has been charged through the contractual mechanisms. In other instances, we have noted conflicts of interest in which identifying and approving changes had been delegated to the supplier.

The cause of change can also prove to be ambiguous. When the change is caused by the supplier or is in response to a failure to deliver on obligations (for example, not following the agreed-upon maintenance strategy), then the cost of change may be subject to negotiation. However, if processes are not in place to identify the root cause of change, then inevitably the cost of change will be passed on to the client.

Change, therefore, can drive costs significantly in a contractual arrangement. The ability to anticipate, manage, and control change is critical to mitigating the cost of change.

Validation and billing. When complex services exist with various levels of pricing, the ability to validate a service and determine whether the correct billing has occurred can be challenging. Complex contractual arrangements are not usually negotiated by the people who end up in charge of administering the day-to-day interactions on the contract. We have come across circumstances where the administrator had not read the contract, and, consequently, certain shared assumptions had developed between the supplier and the client that did not correlate to the actual terms of the contract. An essential control for validation is a three-way reconciliation of the cash amounts charged under the contract to the service delivery and then to the contractual pricing terms.

Having effective and independent measures to determine whether a service has been delivered appropriately is fundamental for accurate validation. We came across help-desk utilization measures that formed part of the cost of service but had been inaccurately calculated by the supplier and overstated. In the absence of independent measures, sufficient audit rights should be maintained for the buyer to be able to validate performance measures that drive costs.

Validation is also the last line of control before cash passes from the client to the supplier. An effective validation process identifies both nondelivery by the supplier and poor engagement by the client. An essential ingredient for effective validation is the level of granularity received as part of the billing process from the supplier.

Conclusion

Managing contracts effectively is at the very least a two-person game. It is not just the delivery responsibilities of the supplier

that drive costs, but also how effectively the client delivers on its own obligations. The behavior of both the client and the supplier impacts the final cost outcome of any commercial arrangement. Understanding how the contracts work in actual practice is the key to determining how the various levers in the contractual arrangement can be manipulated to drive cost and cash benefits.

Much of what has been discussed here is incorporated to varying degrees in the contract management practices of many communications operators. However, the measure of success of effective contract management is the preventing or detecting of value leakage. Often, internal compliance departments are designed to ensure billing compliance. In our experience, however, billing compliance issues are a minor contributor to value leakage in contracts.

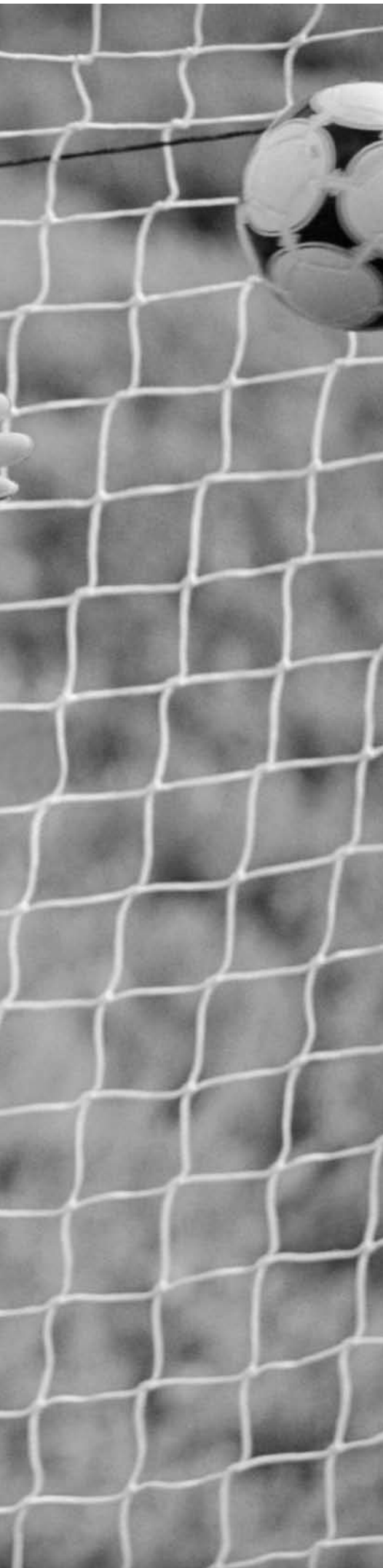
Effective contract management is risk based, with management intervention focused on the contracts and the drivers that most likely lead to value leakage. This intervention will include periodic investigations of how and why cash was spent to identify how effectively the supplier is engaged and whether the structure of the arrangements really deliver the perceived value. The absence of an independent, bottom-up review of the cash spent on the contract usually is the reason why many issues that drive value leakage remain unidentified.

Value leakage is almost certainly occurring in the supply chain of telecom groups. Whether the value being lost is material and worth addressing is the critical question. In the current economic climate, companies cannot afford the luxury of not knowing the answer.

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Goalkeeper diving for the ball



Timing is Everything

The next few years will bring significant awards of spectrum bandwidth in a range of countries across the world as regulators seek to promote the efficient use of spectrum. The release of the 3G expansion band and the analog TV spectrum are two of the most significant awards. This spectrum is expected to be used by telecom companies and broadcasters, and potentially others, to help facilitate the launch of new communications services, including 4G mobile services, high-speed wireless Internet services, and high-definition television services.

The timing could not be more challenging. It is therefore even more important for potential bidders to think hard about the value of spectrum, in terms of the direct value from delivering new services, the opportunity cost of not acquiring spectrum, and the impact on their overall competitive position.

Providers of wireless services will have greater access to the airwaves than ever before as new spectrum capacity is released on the switch to digital broadcasting and the award of the 3G expansion band. Access to new capacity will enable the expansion of the existing, and the introduction of new, wireless services.

The new services include more digital terrestrial television channels in standard and high definition as well as faster, more reliable Internet and other data services on mobile phones and other portable devices. Eventually these services will enhance customers' experience of wireless services and will herald an era of converged innovation and competition between providers. Many new services require new network deployments and technology developments and hence may not be ready for commercial launch until after 2012.

Wireless communication services, such as radio, television, and mobile telecommunications, are provided using varying frequency ranges

within the electromagnetic spectrum. Due to interference issues at low frequencies and limited signal range at high frequencies, the spectrum that is most suitable for broadcasting and telecommunications is focused on the so called "sweet spot" of frequencies. This is illustrated in Figure 1. As this bandwidth is a scarce commodity, regulatory authorities generally license it, often through an auction process.

National regulatory authorities are adopting varying approaches to releasing and awarding this spectrum—from competitive auctions, where the highest bidder wins, to administrative processes, where spectrum is awarded for no direct fee and operators bear the cost of key license obligations. Auctions and administrative allocation processes are due to take place at increasing pace over the next few years. The structure and timing of the release of spectrum has a very large impact on the sums of money companies ultimately pay. This effect is demonstrated by the award of the original 3G licenses across Europe, which began in 2000.

The auction of 700MHz spectrum in the United States in 2008 demonstrated the value that companies expect new wireless services to bring. Although the auction took place before the economic downturn took hold, its proceeds reached some US\$19 billion, or \$75 for every mobile subscriber in the US.

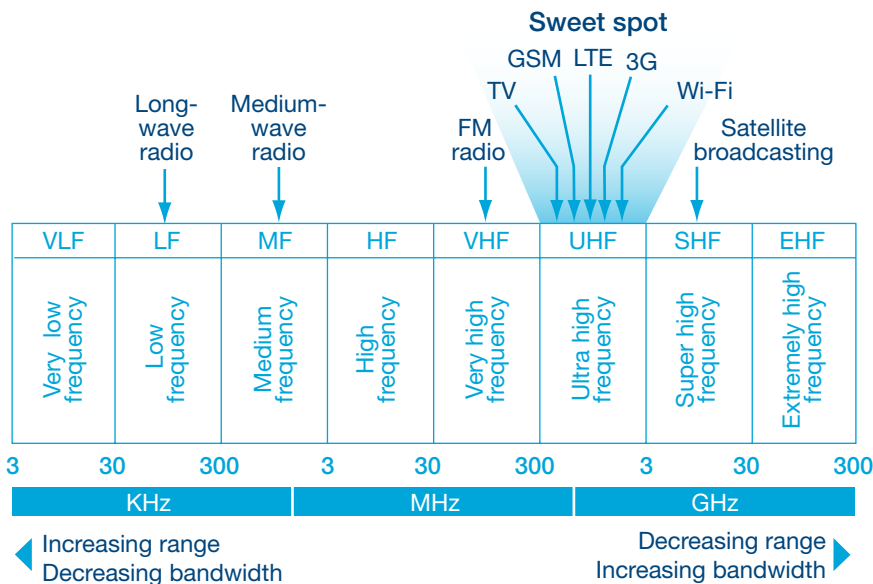
The economic downturn presents regulators, governments, and companies with difficult and immediate decisions over the award of spectrum. On the one hand, regulators believe that the timely release of spectrum provides certainty over access and incentivizes the early development of new services. The value of new services deployed using auctioned spectrum will be determined over the entire life of the license, by which time the outlook may be more positive than at present.

On the other hand, bidders may take more of a short-term view. The prospect of paying large sums today for spectrum that might not generate cash-flow returns until sometime in the future may not be attractive against a backdrop of cost cutting, limited investment in today's services, and shortened time horizons for assessing the payback from any investment in new services.

If regulators continue to press ahead with their objective of auctioning spectrum over the next few years, companies may be forced to pay significant sums for an asset that has no immediate benefit to their bottom line today. This is a question for governments to consider as they evaluate the appropriate timing of the various award processes.

Here, we help companies break through this complexity by setting out a commercial and pragmatic approach to spectrum valuation and bidding. This approach helps companies answer two important

Figure 1: The electromagnetic spectrum and the "sweet spot"



Sources: Ofcom, PricewaterhouseCoopers.

questions: (1) Should I bid for this spectrum?; and if the answer is yes, (2) How much should I bid?

The changing spectrum landscape

The competitive landscape and economic environment in which spectrum awards take place is changing. The shift encompasses the increased use of auctions and a change in the competitive dynamics between bidders.

In early spectrum awards, many regulators allocated and licensed spectrum for specific types of services. Spectrum offered for GSM mobile would attract interest only from companies looking to provide GSM services. That meant regulators were effectively determining, and therefore restricting, the types of services consumers could access.

Now, however, we are seeing an increase in demand for the use of spectrum driven by an increase in applications, as well as an increase in the supply of spectrum driven by the shift in policy and the move toward market allocation. Regulators are adopting less prescriptive approaches by offering spectrum licenses on a technology- and service-neutral basis, thereby allowing market forces to shape the allocation of spectrum to technologies and services. Put simply, the bidder that offers the most wins—and then uses the spectrum for whichever services it chooses to offer.

Convergence is changing the competitive dynamics among bidders radically, widening the range of interested parties. Bidders are finding it harder to predict how much they need to bid for spectrum, given the range of potential uses and bidders competing with them. At the same time, partnerships are becoming ever-present in the value chain as a way of sharing risk, cost,

and knowledge. Deciding when to compete or partner will be critical for any bidder navigating the issues of competition law along the way.

Lessons from previous auctions

In order to decide whether or not to bid for spectrum, companies need to determine the value of the spectrum to their business. This requires them to be mindful of the lessons of the past, in particular the challenges of estimating the revenue potential of spectrum usage.

Two key awards are taking place across different countries: the spectrum released following the digital switchover, which is particularly valuable, given its lower frequency, and therefore has attractive propagation characteristics; and the 3G expansion band, which historically was reserved for mobile services and now is being released as the take-up of 3G services has expanded.

In the US, the Federal Communications Commission (FCC) held its 2008 auction of 700MHz spectrum (that released by the switchover to digital television) in October 2007 (Auction 73). More than 200 bidders qualified to take part in the auction, which lasted for two months and 260 rounds of bidding. The auction was expected to attract a lot of interest from bidders for two reasons. First, 700MHz has relatively attractive propagation characteristics compared to most of the spectrum previously available. Second, the FCC planned to allow the spectrum to be used on “technology-neutral grounds.” Licenses could be used for fixed, mobile, and broadcast purposes, including fixed and mobile wireless commercial services; fixed and mobile wireless uses for private, internal radio needs; and mobile and other digital broadcast needs.

A key issue in the auction was the FCC’s requirement that the winner of the largest bandwidth lot for sale (Block C) would have to provide open access to all devices and applications. The requirement prevented an operator from offering exclusive services using this spectrum and aimed to provide assurance to companies like Google that customers would have ready access to their services without limitations imposed by the operator of the spectrum. With uncertainty thus created over the value of the spectrum, the winner needed to consider how the independent strategies of other application and device providers could affect its own strategy for monetizing the spectrum. The auction raised \$19 billion, with Verizon Wireless paying \$9.6 billion and AT&T \$6.6 billion.

It remains to be seen in the US whether the returns will justify the price paid for spectrum. However, the sheer size of the financial commitment underlines how important it is for market players to be certain of the value of spectrum they are buying. The risk is that they overpay or miss out on other opportunities that could have been funded by the capital used to bid for spectrum. Awards of further spectrum at this frequency are expected across Europe. Although no awards have yet taken place in Asia, South Korea, for example, is expected to open up its 700MHz band in 2012.

Recently, 2.6GHz spectrum awards have taken place and have generated significant sums. The prices paid have been lower than those in the 700MHz auctions in the US, which reflects the less attractive propagation characteristics of this spectrum. Scandinavia led the way with the auction of this spectrum, with awards in Norway and Sweden. The Hong Kong government raised HK\$1.5 billion from its sale of the 3G expansion in January 2009.

Adopting a holistic view of the value of the spectrum under consideration in light of other spectrum requirements and alternative technology will go a long way in shaping informed commercial decisions and in avoiding these risks. Figure 2 presents the steps that we advise companies to follow in evaluating their spectrum requirements and auction strategies. The valuation of spectrum is a critical component of planning and decision making throughout the process.

Using previous auction experience to benchmark the value of spectrum today

The results of previous spectrum auctions can be used to guide the value of spectrum, with a healthy dose of caution and interpretation. The difficulties in valuing spectrum are underlined by the prices paid in previous awards. Figure 3 shows the average price paid per MHz per capita in selected auctions over the past 10 years.

Figure 3 shows that it is difficult to use any single simple metric as the basis of spectrum value, as a range of factors influences the prices paid at auctions. We have developed a benchmarking model as a guide to future values, drawing on past experience and a high-level analysis of the relevant factors driving value.

For example, we have estimated the value of future European spectrum awards by using past auction experience. This approach aims to estimate an indicative value for the “digital dividend” (450MHz to 862MHz) and the 3G expansion band (2,500MHz to 2,690MHz), which will be licensed across Europe over the next few years.

Our starting point is the prices paid for similar spectrum in recent spectrum auctions on a price per MHz per capita. For example:

- In March 2008, the US auctioned 700MHz and raised US\$19 billion, or €0.83 per MHz per capita. We use this benchmark as a guide to the value of the digital dividend.

- In May 2008, Sweden auctioned the 3G expansion band and raised €225 million, or €0.13 per MHz per capita. We use this benchmark as a guide to the value of the 3G expansion band.

We have controlled for key factors that drive differences in the value of spectrum across countries:

- Average revenue per user (ARPU) from mobile services.
- A measure of mobile market concentration (Herfindahl Index).
- Fixed-line broadband penetration.
- Mobile penetration.

We recognize that these factors apply more to the mobile telecoms sector than to broadcasting. However, in our view, mobile operators are more likely, compared to broadcasters, to drive the ultimate prices paid for spectrum when they are competing for the same spectrum.

These factors have been weighted in their application to the benchmarks, based on our view of their relative importance in driving spectrum

Figure 2: Four key steps in spectrum bid preparation

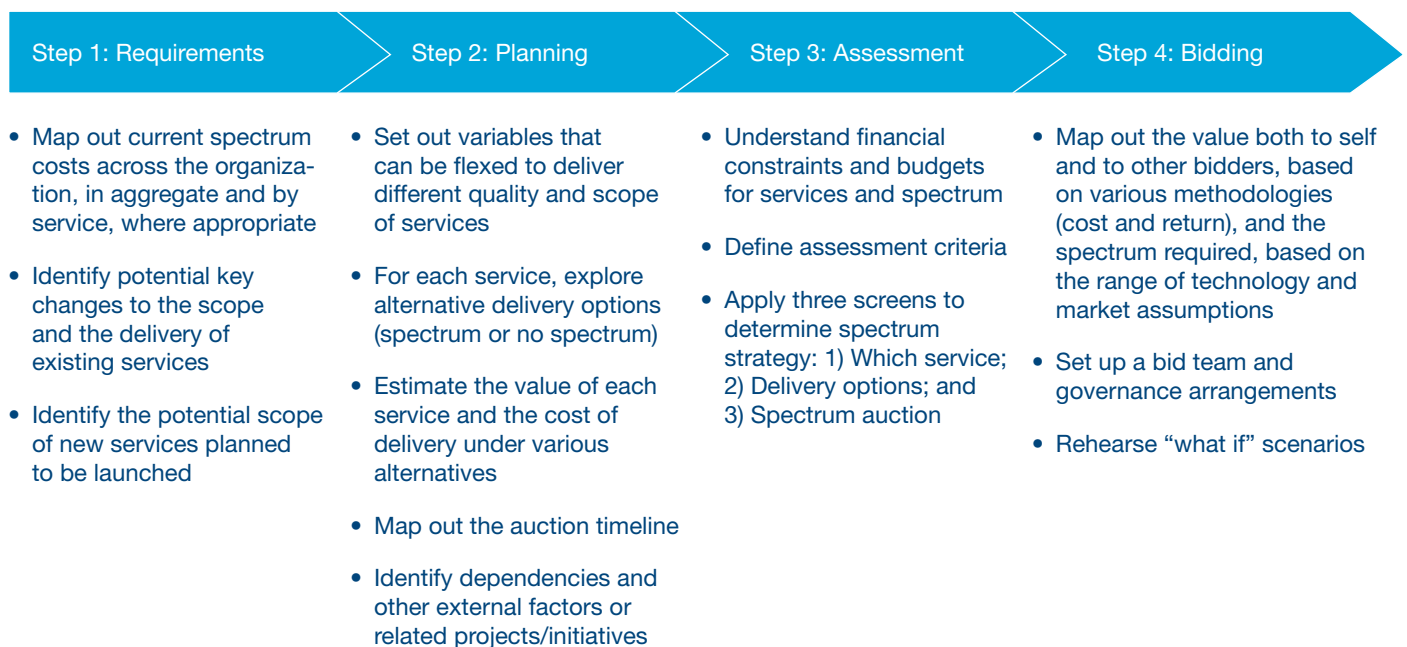
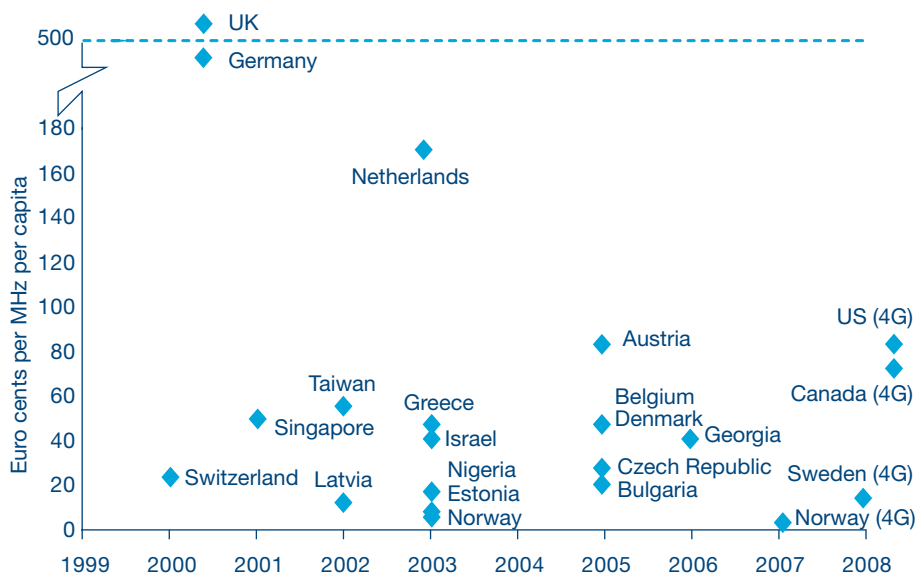


Figure 3: Comparison of trends in spectrum prices is difficult across markets



valuation. For example, ARPU was assigned the highest weighting because it approximates the value of consumers’ willingness to pay for mobile services, which drives cash flows and supports the value of spectrum.

We have therefore taken our base price per MHz per capita, adjusted it for the key factors described above for each territory, and then multiplied by the population and assumed bandwidth for each country. We estimate that the spectrum awards of the digital dividend and the 3G expansion band in Europe are worth €40 billion. A value of around €10 billion is attributable to the 3G expansion band and €30 billion to the digital dividend, a difference that reflects the more attractive propagation characteristics of the digital dividend.

This valuation is designed to indicate the quantum of value attributable to this new spectrum. Companies can use this approach as a “sense check” to their own valuations. However, bidders in auctions should conduct a much more detailed analysis when assessing how much they are prepared to pay, as many

factors will come into play in addition to those we have described above.

Three pillars of spectrum valuation

The three main ways spectrum can be valued are as:

1. Value arising from the launch of new products and services made possible directly from acquiring spectrum.
2. Cost savings arising as a direct result of acquiring spectrum.
3. The franchise fee, or the ability to protect existing business as a result of acquiring spectrum.

New products and services

Launching new products and services involves a number of technology choices. Whatever these may be, it is vital to have a well-defined and robust business plan that clearly sets out the service offering and its anticipated revenues and costs.

Of particular importance is the relationship between assumed pricing of products and services and the valuation of spectrum. Pricing should determine the value of

spectrum independently, rather than the other way around. The prices that consumers are willing to pay for services determine the profitability and hence the value associated with new services. For example, companies may want to build market share by adopting penetration pricing in the early stages of launching new products, and this will affect the value of spectrum in the context of supporting this particular business model.

A relevant example is the success of the mobile broadband offering from mobile network operators in the United Kingdom, which is driving significant capacity requirements. Operators are likely to require further spectrum to meet consumer demand for bandwidth—penetration pricing has been adopted that may limit revenue generation, which in turn may impose a constraint on how much operators are willing to pay for additional spectrum.

Cost savings

The release of the digital dividend opens up opportunities to provide cheaper coverage networks and in-building coverage. For example, this spectrum can provide cost savings for mobile operators based on their current products and services and on consumer demand. Using spectrum at a lower frequency compared to spectrum as currently used by mobile operators may generate significant network cost savings. A multiterritory spectrum acquisition strategy also may generate further cost savings through economies of scale on both network equipment and handsets.

An additional opportunity to reduce costs is to share spectrum and infrastructure, i.e., a network/ tower-sharing agreement. For example, tower-sharing exists in Canada, where the regulator cited environmental reasons for requiring incumbent operators to share their masts with new entrants. In the

UK, T-Mobile and 3 are developing a site-sharing deal that covers their 3G networks. Operators with high market shares seeking to collaborate, however, should be aware of the potential for legal challenge on competition and regulatory grounds.

The franchise fee

The franchise fee represents the loss in value to an operator if it does not acquire spectrum. We believe that a significant proportion of the large sums paid in the early 3G auctions were likely to have represented a franchise fee. Underpinning the bids was a need to protect existing GSM mobile businesses against the threat of new entrants that would offer more enhanced services using 3G technology, potentially making GSM services redundant at a faster rate than operators had been assuming.

Brand value may result when an operator is considered at the forefront of mobile innovation and technology. Brand perception has an impact on retail success. Experience shows that operators may face customer churn if they stand by while other players in the market migrate to more advanced technologies. So operators that are slow to adopt more advanced technologies risk losing a significant proportion of their existing revenues and stranding existing investments in customers and networks.

The relationship between spectrum value and auction prices

The price paid to acquire spectrum does not necessarily equate to the value that each winner places on the spectrum it has acquired. In most auctions, the price paid is usually the final bid of the losing bidder rather than the highest price the winner may have been prepared to pay. A number of other key factors that will influence auction prices are summarized in Figure 4.

Figure 4: Factors affecting auction prices



Uniqueness of the opportunity

The valuation of spectrum in use in a specific territory may not capture the value of a “toehold” strategy. This reality is relevant to companies that operate across multiple territories. By acquiring the same spectrum across different territories, a company may be able to realize benefits from economies of scope and scale. For example, the early 3G auctions in the UK and Germany resulted in higher spectrum prices than in subsequent auctions. Bidders realized there was value from leveraging economies of scale and scope across countries. Once the toehold strategy was established, subsequent bids were based only on the incremental value of the opportunity in the specific territory and may have even discouraged competition from other bidders that did not secure spectrum in earlier auctions.

The arrival of new entrants means that incumbents need to consider the franchise fee element of their bid very carefully, as it provides a greater threat to their existing business. In this scenario, the franchise fee will represent a key factor influencing the price they may have to pay for spectrum.

In addition, if the auction is expected to represent the one-time chance to secure spectrum, competition may be more intense. However, regulators increasingly are looking to establish secondary markets for spectrum, which may enable new entrants, for example, to secure access to spectrum after the initial auction.

Market forces

The 3G auctions in the UK and Germany took place at the height of the dot-com bubble. The

positive market sentiment drove high expectations of future service revenues, which may have had an impact on spectrum values. In the present economic climate we expect the opposite to be true.

Given that new services are, potentially, some time away from commercial launch, auction bids should be based on expectations about the economic climate in the long term. However, the economic downturn is constraining the capital available to companies for new investments. If companies are unable to access capital to fund auction bids, that may reduce their ability to bid up to their own valuations. Indeed, new entrants may find it particularly difficult to raise capital to fund bids.

In concentrated markets, competition for spectrum may be the greatest, and therefore bidders are more likely to be forced to bid up to their own spectrum valuations. In addition, bidders are more likely to have similar valuations for the spectrum if their business models are similar. In less concentrated markets, there is likely to be more differentiation between bidders' own valuations.

Efficiency of the auction

Regulators are looking at increasingly complex auction designs to ensure that the prices bidders pay reflect their underlying valuations to ensure that bidders with the highest valuations prevail. As governments come under increasing pressure to raise funds, spectrum auctions may be perceived as a good way to generate income.

In the past, regulators have held auctions where more licenses were being awarded than bidders were participating. This disparity leads to depressed auction values. Regulators increasingly are looking to maintain competition for spectrum in auctions—by dynamically adjusting the number

of lots or licenses in response to bidders' interest, or by ensuring that they market upcoming auctions aggressively to generate interest and to be sure they understand the number of interested participants.

Also in the past, regulators have included obligations as part of spectrum licenses, for example, time-bound minimum coverage requirements. That can force winners to make uneconomic investment decisions that should be factored into the spectrum valuation model.

Conclusions

The spectrum due for release across Europe is prime real estate that telecom and media companies will acquire to enhance their customers' experiences of existing services and to launch new services.

We estimate that the spectrum has a value of some €40 billion, representing 8% of the market capitalization of the leading telecom and media companies in Europe. In the current economic climate, that is a significant investment. The companies' ability to pay may be constrained, particularly as the benefits of acquiring spectrum are more likely to be realized in the medium to the long term.

Industry convergence widens the range of potential bidders, making it harder to predict likely motivations and strategies. Convergence also offers opportunities to partner.

Valuation is considered to be more of an art than a science. The range of factors influencing spectrum value is known to be wide. Applying sound judgment to complex models therefore becomes more important than ever—and will enable interested parties to achieve the best possible economic outcome in the midst of significant uncertainty.

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New York City subway



The Speed of Life

As part of our global consumer research program, PricewaterhouseCoopers' Telecoms, Media and Technology practice is conducting a series of consumer discovery sessions to elicit candid feedback and gain new understanding of consumer attitudes and behaviors in a rapidly changing communications landscape. This research yields powerful business insights that help our clients identify and capitalize on emerging trends.

The following is a summary of what we discovered during a discussion with an online community of over 750 consumers, ages 18-60, about the economic downturn and its effect on their media habits, usage, and attitudes. This online community augmented our qualitative focus group research and provided additional insight into our continuing research on the impact of the economic downturn on media habits.

Summary: Consumers aim to keep communications services, but demand more control and benefits

Today's economy poses many uncertainties for communications companies. But here's one bright spot: consumers say they're not about to give up their must-haves—chiefly, their Internet access and cell phones. Although some are trimming communications expenses, particularly premium services, most consumers say they see those services as essential and that they'd rather cut other areas of their budget first. For telecoms, media, and technology companies, that means there is still ample opportunity to grow and build loyalty, especially if companies focus on providing the services consumers want most: cost savings, excellent customer service, and the ability to customize plans and features.

Compared with our prior sessions, the new findings demonstrate how consumers' budget-minded decisions are potentially impacting their attitudes towards brands. The themes from these new findings include:

My must-haves—communications, technology, and value: Even in today's weak economy, consumers are resistant to cutting back on communications services—they rely on these as critical necessities to their everyday lives. The Internet especially has emerged as a critical “lifeline” tool. However, as their personal budgets shrink, consumers seek brands that will provide greater value—cost savings and better deals.

Save me the money—my way: Cost-saving measures—like bundling or advertising on cell phones—are only valued if they are tailored to the needs of the individual and not broadly mandated by the provider. Flexibility and personalization in packaging

products and services is an opportunity to generate appeal and differentiate for companies that can deliver.

“I wish these companies would be more flexible with their packages... to get the one thing I would pay for it seems like I would have to sign up for loads of junk I don't want.”

If you care, I'll care: Consumers yearn for reliable, quality products, and caring customer service—another perceived gap area. Companies can build loyalty by providing good products and good service and recognizing and rewarding good customers.

“One way for a company to gain my loyalty is to offer excellent customer service—something so many companies have forgotten in recent years.”

Don't call me, I'll call you: Advertising on personal devices (like cell phones) is frowned upon as invasive. This kind of advertising needs to provide choice—so the consumer feels he/she is “opting in” as well as a clear benefit (free minutes?) in exchange for entry into this “personal space.”

“I don't want my calls interrupted!”

Key Findings

Here is how consumers say they are reacting to the economic downturn:

1. Trimming the “fat:” Consumers have begun to identify and curtail the “extras” in their telecoms, media, and technology spending.

Back to basics: Premium cable channels and cell phone services are under heavy scrutiny.

“I don't use cable the way I used to and paying for a lot of channels I never watch is a waste.”

If I had to choose: When asked to prioritize, landline phone service and cable TV are cited as most expendable. They are used less

or duplicate services available on multi-function platforms, such as cell phones or the Internet.

“I would cut back on my cable service, like HBO. TV is optional in my life. My cell phone and the Internet are not.”

2. Choosing Internet first: The Internet has become consumers' top priority in spending decisions for telecoms, media, and technology.

Versatility: The Internet is viewed as both a personal and professional tool for communication and information—a critical lifeline to the outside world.

“I could never give up my Internet...I use it constantly and it is my lifeline for everything.”

Value: Its versatility as a multi-platform device coupled with its relatively low cost put the Internet at the top of the technology “must have” list.

“The Internet is a source of entertainment, information, social connection and so much more. I remember life without it and love the advantages we have with it.”

3. Seeking the personal touch: Customization and personalization remain largely unmet needs—and the idea of bundling with pre-ordained packages, products and services often conflicts with the desire to personalize.

Not their way: The ability to bundle multiple services from one provider has the recognized potential for efficiency, but many are dissuaded by concerns over contracts and commitment levels—especially for things they don't need.

“I don't like the idea of bundling because it's too much hassle if you're not happy with the service. Then you're stuck with something you don't want.”

My way, instead: Consumers want more control over their service plans to better economize. They want to create their own “packages” instead of feeling constrained by dictated options.

“I think these companies should let us choose which services we want and get rid of their ‘packages.’ Just let us pick and choose what we need.”

4. **Looking for loyalty:** Loyalty is seen as a two-way street and consumers aren’t feeling appreciated for their faithfulness.

Rewarding tenure: Companies can demonstrate and build loyalty (and differentiate) by providing free or improved services (and customer service) and more customization options to customers based on their length of affiliation.

“I would like the corporate content behemoths to practice a little customer loyalty. How about a free month of each premium for every year you stay subscribed? If they are not going to be loyal to me, why should I be loyal to them?”

Don’t favor the new guy: Cable and telecom companies are perceived as too focused on attracting new customers instead of maintaining and rewarding existing ones. This perception is reinforced by contract incentives and options that are offered only to new customers.

“I hate when they give the new customers deals but the loyal customers are given nothing but rate increases.”

5. **Considering acceptance of mobile ads—for a price:** Advertising that adds value and is received on their terms is the cost of entry for consumers to allow ads on their personalized media devices.

Don’t intrude: Advertising needs to be received at a time and manner amenable to the consumer, e.g., texts vs. calls.

“Don’t call me...My phone calls are my private time and I don’t want the intrusion.”

Make it worth my while: Financial incentives—like lower monthly bills—are necessary as compensation for advertising’s “intrusion.”

“Lower rates would encourage me to receive ads on my cell phone—but only at a reasonable rate of ads.”

Implications to your business

1. **Show you care:** Consumers crave personal attention—something they feel is sorely lacking in today’s hectic world and particularly in the current economic climate. Companies can show they care by providing empathetic customer service that helps address relevant needs of the individual; excellent service, such as high-speed access or no dropped calls; and, consistently quality products.
2. **Prove your loyalty:** Incentivize and reward through things like cross-platform customer loyalty programs that show consumers how they might get more in exchange for their allegiance to your business. Bundling as a loyalty device must bring value to the consumer.
3. **Provide freedom of choice:** Consumers want to save money and are willing to bundle services if they can have what they want and avoid or eliminate what they don’t want—such as mandated products, services, or contract commitments. The ability to customize and personalize provides a differentiating

advantage to companies by empowering consumers in a climate where they have little control over economic levers; it can also build both loyalty and value perceptions by showing greater customer empathy and demonstrated cost efficiency opportunities.

4. **Trade rewards for advertising:** Explore meaningful incentives as a way to break down resistance to advertising on personal media and communication devices. In a sluggish economy, financial incentives (e.g., lower bills or bonus services) are likely to be even more motivating and may have the potential to pave the way for continual acceptance once the economic situation improves.
5. **Use ads that add value:** Advertising on personal media and communication devices will be more readily accepted if it adds value, like personally relevant products, services, discounts, or entertainment. Consumers’ ability to customize and personalize is critical.

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Yes
 No

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No 39%
Yes 61%

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