Two men kayaking down the Savage River, Western Maryland, USA

Put to the test

Communications operators have demonstrated their resilience amidst the recent turmoil by adapting successfully to pervasive change and simultaneously laying down a solid base from which to capitalise on the recovery. The real test, though, is just beginning, as the upturn gathers pace.

With broadband becoming ubiquitous and the growth of data services exploding, the telecom value chain is fragmenting rapidly. In the race to capture revenues, many operators are losing out to application, content and device providers, who are garnering the lion's share of new value. Facing saturation and commoditisation of their traditional core services, communications companies are at risk of permanently slower growth and narrower margins. In PricewaterhouseCoopers' view, operators—if they are to claim their rightful share of future value in the digital era—need to tackle six key strategic challenges.

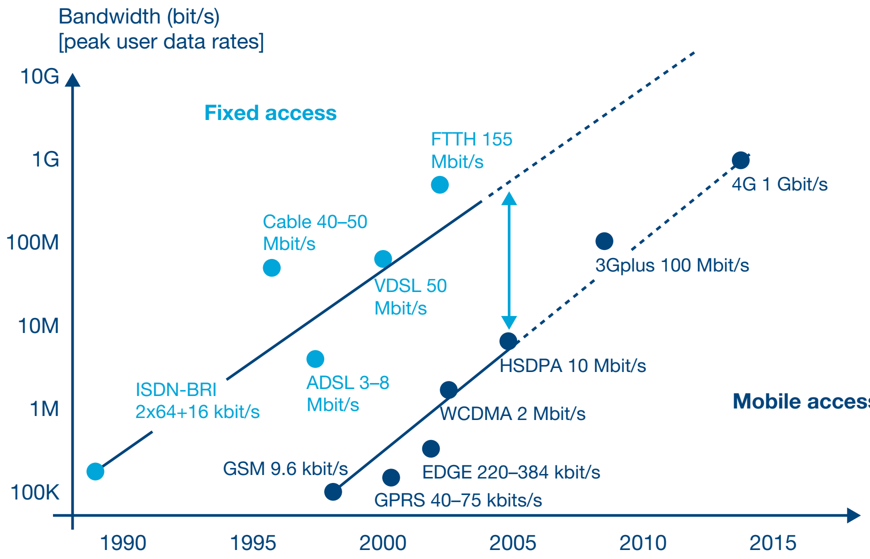
by Colin Brereton

The communications industry has emerged from the recent downturn in relatively good financial shape but facing a business environment that is undergoing a profound and irreversible transformation. The pace of innovation in the sector is continuing to accelerate in both fixed and mobile (*see Figure 1*), driving bandwidths ever higher. With each technological step forward, operators face an exponential rise in the data traffic being carried across their networks—and a corresponding decrease in the price they can effectively charge customers for carrying each bit of data.

As well as advancing, communications technologies—and the markets—they serve are converging at a headlong pace. This process is replacing the traditional telecom model with a convergence of network-centric, digital services.

Examples are evident across the industry worldwide. The smartphone is beginning to rival the personal computer as a communication tool, and consumers routinely use it to view digital content such as music, games and the Internet. This capability, coupled with the dramatic rise of social networking, has fundamentally changed mobile communications and is accelerating the migration to digital by providing anytime, anywhere access to digital content. At the same time, operators' previously core voice products are suffering from intensifying competition and market saturation. Both factors are driving revenues and margins downward in developed markets (*see Figure 2*), initially, and will have the same impact in emerging markets ultimately.

Figure 1: Successive technological advances driving fixed and mobile bandwidths ever higher



Sources: SwissCom, PricewaterhouseCoopers' analysis

Figure 2: Aggregate EBITDA margin for core voice services (mobile)

	2003	2009	% Change
UK	35.2%	23.7%	-11.5
Spain	48.1%	38.7%	-9.4
France	39.1%	35.7%	-3.4
Australia	41.6%	31.4%	-10.2
China	52.7%	45.9%	-6.8
India	33.3%	29.5%	-3.8
Latin America	36.4%	39.0%	2.6
Algeria	47.7%	54.6%	6.9
Egypt	60.2%	47.2%	-13.0
Morocco	46.4%	58.3%	11.9
Nigeria	50.1%	55.5%	5.4
South Africa	38.3%	41.0%	2.7

Source: PricewaterhouseCoopers' analysis

To date, communications companies have been quite successful in tackling the immediate financial pressures of the downturn. They have cut back operating costs, capital expenditure and debt and have put managing cash and improving the customer experience at the top of the management agenda. However, many still need to take steps to address the wider and longer-term challenges raised by digital transformation. Competing purely on (initially) network reach and (then) price would simply drive operators towards the role of a 'commoditised pipe'—and to surviving on a sliver of the value generated by data traffic and the revenues of other players.

To claim their place in the digital future, and ensure their share of digital revenues, operators need to raise their sights from simply providing services and generating cash to targeting the key strategic challenges facing them today and into the future. In broad terms, this shift will mean embedding customer centricity as a way to optimise their customer mix and offerings; securing revenues from elsewhere in the value chain; and aligning their operating models with the new market realities.

Shifting from volume to value

To maximise the impact of making those changes and reap the full benefits, operators will need to migrate from their traditional focus on volumes of call minutes and customers to a rigorous focus on value on each side of the customer relationship: the value delivered to each customer via a differentiated, tailored experience, and the value gleaned from each customer for the operator itself. Operators embarking on this migration from volume to value have a number of assets at their disposal.

Although networks and billing may seem far from 'sexy', they actually are the main weapon in operators' value-creating arsenal, since their networks are pivotal to the success of other participants in the value chain and help them maintain ongoing customer relationships. Furthermore, a number of approaches have already emerged to help operators drive their nontraditional revenues upwards, such as offering multi-play bundles that include TV content and expanding their role as business-to-business service providers.

As operators strive to reposition themselves to capture their fair share of digital value, we believe they will need to tackle six critical strategic challenges, which we examine below.

Strategic challenge 1: Establishing ownership and understanding of the customer

As a succession of new players—ranging from device manufacturers to application developers, and from content suppliers to retail brands—enter the communications marketplace, it is becoming increasingly difficult for any one entity to claim ownership of the end customer. The effect on operators has been compounded by a change in recent years in the focus of customers' loyalty and brand trust, which have shifted away from the network on which devices and services operate and have migrated towards the device itself and the online applications accessed through it.

This shift has been engineered partly by device, content and service providers, who have proved adept at cementing their brands into the public consciousness and at playing operators against one another. They also have demonstrated impressive agility and responsiveness in identifying customers' changing needs and behaviours, and in innovating or stimulating innovation by third parties—such as mobile applications developers—to meet them.

Six key strategic challenges for communications operators

1. Establishing ownership and understanding of the customer
2. Monetising new services effectively
3. Achieving an economic return from rising data traffic
4. Improving operational simplicity and efficiency
5. Managing regulatory risk
6. Creating value through consolidation

The resulting changes in consumers' usage and loyalty can occur with breathtaking speed. As Figure 3 shows, operators' own mobile portals were UK customers' primary way of accessing mobile Internet services in 2007. Just one year later, operators' websites had plummeted down the rankings, to be superseded by an array of non-operator brands.

Put simply, as mobile usage behaviours have changed, mobile operators have progressively lost control of the value chain—and ultimately will lose the end customer. This process has seen the network's perceived value in the eyes of the customer steadily diminish, with the network increasingly downgraded towards the status of an undifferentiated 'dumb pipe' on which the customer's smartphone happens to operate. This commoditisation is evident in operators' relatively meagre revenues from digital services. Despite their key role in powering the online economy, operators end up with only an estimated 2% to 3% of total online fund flows in developed countries.

Adopting a customer-centric philosophy

To fight back against this commoditisation and re-establish the level of customer ownership and trust that they enjoyed in the 1990s, operators need to adopt a customer-centric philosophy and mind-set. This change is fully consistent with the shift from volume to value that we mentioned above. The first step is to reorient the organisation around the customer, in recognition both that all customers are different from one another and that a 'one-size-fits-all' strategy no longer works. This differentiation should be understood and applied not just between consumers and corporate customers but also between various segments within those classes of customers.

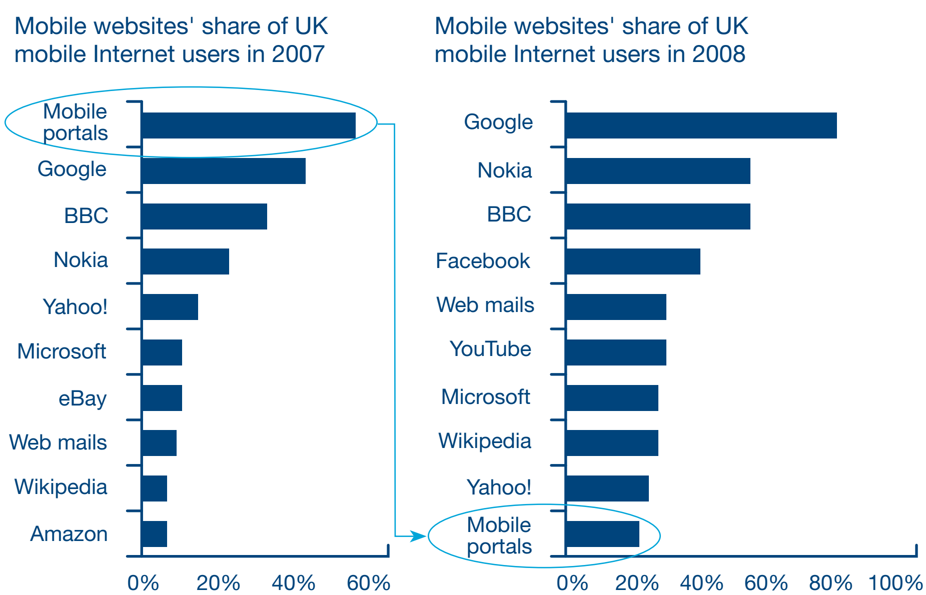
B2C: Four key elements

On the business-to-consumer (B2C) side, a customer-centric approach has four key elements: sophisticated management of customer value; a differentiated retail distribution strategy; intelligent and responsive bundling of offerings; and an ability to form and sustain value-creating partnerships. In combination, these supporting pillars can enable an operator to expand its loyal customer base while simultaneously growing its average revenue per user (ARPU) and progressively reducing its cost to serve.

Significant advances are under way in each of the four key aspects of consumer-focussed customer centricity. Many operators, including mobile network providers, are now offering bundled multi-play services—fixed, mobile, fixed broadband, TV—in an attempt to reposition themselves in the value chain and generate additional revenues. Some are also creating partnerships with alternative brands and distribution channels, enabling them to target various segments in parallel and avoid damaging or diluting their core brand.

In customer value management, operators increasingly are profiling, segmenting and managing customers against a customer lifetime value (CLV) framework, thereby moving away from the old one-size-fits-all approach. In retail distribution, mobile operators are tackling the challenge

Figure 3: Aggregate EBITDA margin for core voice services (mobile)



Source: PricewaterhouseCoopers' analysis

of direct distribution competition from online services. Using their retail outlets they are creating differentiation through personalised services, such as detailed advice on complex smartphone offerings. Some operators are also opening their own application stores.

Delivering such additional services and value to consumers can enable an operator to reposition its brand at the centre of consumers' digital services needs and avoid being seen as a dumb pipe. It also reasserts the underlying value of connectivity, by highlighting direct consumer benefits such as integration across access devices, high quality of service for network-centric devices, synergies with adjacent technologies to create broader bundles, and the customer's direct and regular contact with the operator—as opposed to the one-off transactional relationship many customers have with their device providers.

B2B: Converging into ICT services

Major customer opportunities also exist on the business-to-business (B2B) side, where convergence is drawing B2B suppliers from various backgrounds—operators, outsourcing and IT service suppliers, process reengineering specialists, offshore processing providers, and more—into one competitive market. As with the B2C market, communications operators that fail to respond adequately risk being disintermediated from direct customer relationships and left with the 'commodity plumbing' of a corporate customer's information and communications technology (ICT) connectivity.

To date, operators originating from a fixed heritage have made deeper inroads into the broader ICT market—especially with the larger corporate clients—than have their mobile counterparts. To get into the larger corporate customers, then, mobile players have focussed on growing their ICT capabilities, building direct relationships with small and medium enterprises, and partnering with fixed line operators. In emerging markets, however, the mobile brands often have more credibility in the B2B arena than do the fixed players, which creates greater opportunities in enterprise ICT services.

And across all business customers globally, the rising use of hosted services and the evolution towards virtualisation and cloud computing are elevating the role of the network as a key enabler of end-to-end service quality.

Strategic challenge 2: Monetising new services effectively

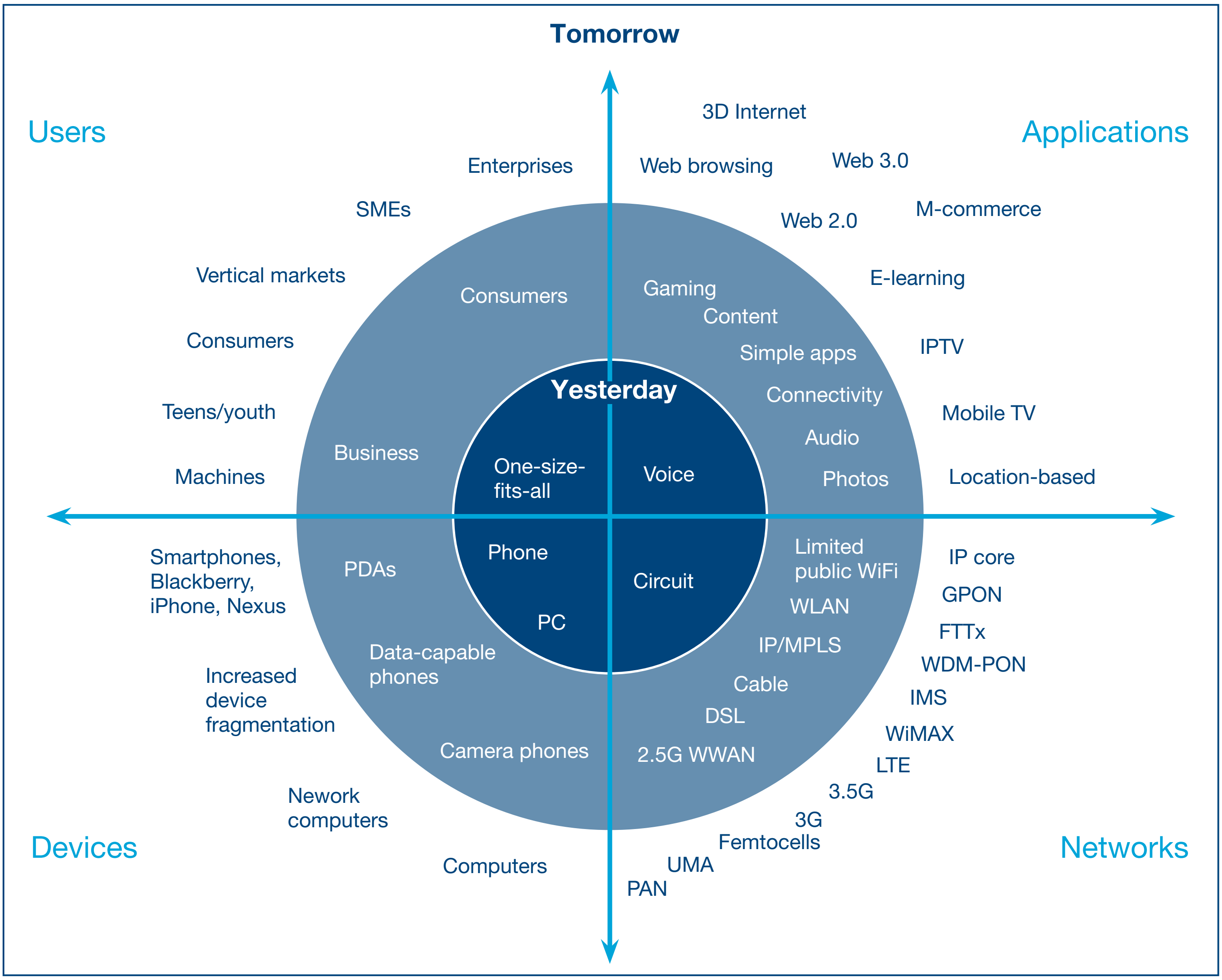
In recent years, the rising penetration of both fixed and wireless broadband has enabled the launch—and has underpinned the quality—of new online services that range from entertainment to eHealth to online and mobile banking. However, given their legacy of offering broadband access on a fixed-price, all-you-can-eat basis, operators are facing severe challenges in monetising the take-up of these services, beyond simply charging for the related connectivity.

Compounding the monetising challenge has been the explosive rise of the smartphone. This class of device, which has seen the mobile handset finally make the leap from optional gadget to indispensable and converged lifestyle tool, handles virtually everything people need. The smartphone's ever-expanding array of third-party applications now includes payment and secure access to buildings. That kind of customer-focussed innovation brings revenue. The three billion mobile applications downloaded for Apple iPhones in just 18 months realised some US$500 million in sales, one-third of which went to Apple. That was just the start: The mobile applications market is forecast to hit $6.2 billion in 2010 and $29 billion in 2013.

Meanwhile, from the operator's perspective, an ironic side effect of selling all-you-can-eat data packages is that the heaviest users of sophisticated new services can end up being the least profitable for the network carrying the data traffic. To address this situation and build their share of revenues from new services, communications providers need to take a fresh look at their positioning in today's ecosystem of network-centric digital services, which encompasses users, applications, devices and networks (*see Figure 4 on the following page*).

In search of a bigger slice of the revenues generated in and flowing through this ecosystem, a growing number of players across the communications value chain are crossing and expanding amongst the various quadrants. Witness Microsoft's announcement in April 2010 of the new Kin handset, targeted at social networking users. Similarly, operators need to examine

Figure 4: The emerging ecosystem of network-centric digital services



Source: PricewaterhouseCoopers' analysis

opportunities outside and beyond their 'home' quadrant to add value to their core transport services, and to participate more effectively in the revenue stream from the rising usage of new services. Increased customer centricity will support these kinds of efforts, and that will help develop deeper, more durable customer relationships, ones that create more value for both provider and customer.

Revisiting IPTV

Internet protocol television (IPTV) is an emerging service area with major potential for operators. Increasingly, the steady rise in bandwidth capacity and rolling out of next generation networks are bringing IPTV services back onto the agenda. The revenues operators have realised to date from IPTV generally have been modest, due partly to strong competition from cable and satellite providers. The availability of pervasive broadband Internet—both fixed and mobile—has the potential to subvert the traditional pay-TV models.

In the long run, Web-enabled television may serve as an embedded digital video recorder that allows viewers to access shows online from their TV set without having to remember to record a programme or being limited by the number of programmes they can record simultaneously. Pay-TV providers can see the threat coming and are looking to stay ahead of it with differentiated offerings, such as HDTV and 3D TV. However, further encouragement for operators is being provided by moves from competition regulators, such as Ofcom's recent decision in the United Kingdom to require Sky TV to cut the wholesale prices of its premium sports coverage.

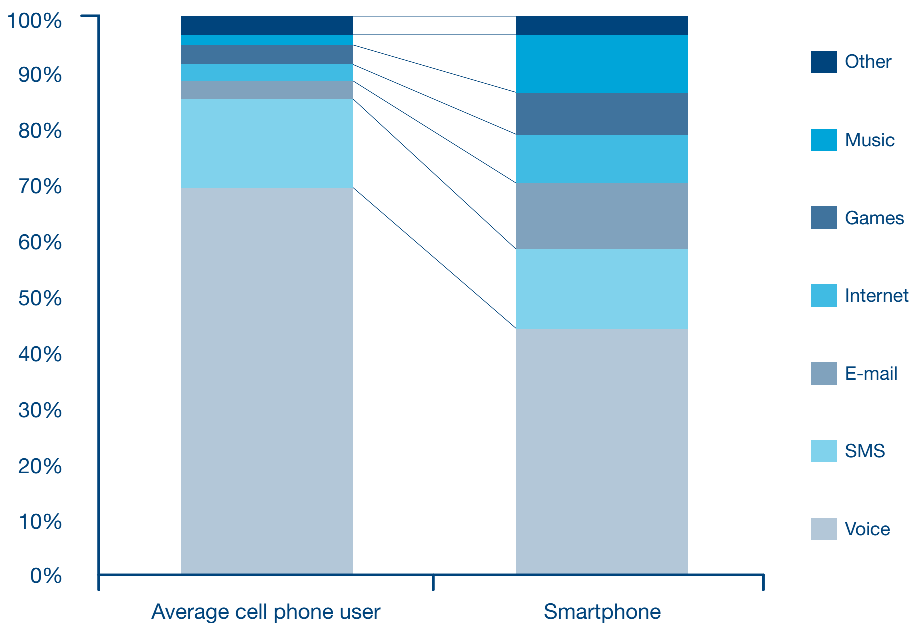
In our view, the whole arena of IPTV presents major opportunities for operators and should be revisited. Newer and emerging areas, such as eHealth and m-payments, also have significant potential. In many cases, these types of emerging services are best approached through collaborative, revenue-sharing partnerships, which bring access to critical expertise and hasten the time to market.

Strategic challenge 3: Achieving an economic return from rising data traffic

Consumers' changing behaviour and habits are now fueling a remorseless and exponential rise in the volumes of data traffic that operators have to carry across their networks. Yet customers generally are able to indulge in this increased usage of bandwidth at no marginal cost, because operators have sold them fixed-price, all-you-can-eat data access plans. Industry estimates in the United States suggest that just 3% of smartphone users are consuming 40% of all network traffic. As a result, the huge traffic growth on operators' networks is accompanied by declining ARPUs for data customers.

What drives the explosive demand for data is the rapid take-up and rising use of smartphones to access mobile Internet services, including streaming and downloading video content. Digital content is rapidly replacing voice as the main use of smartphones, and consumers are spending more time using them at the expense of other devices such as game consoles and PCs. Going forward, such personal applications as social networking may drive consumers' use of the Internet still further towards personal mobile devices. Figure 5 illustrates the dramatic impact that owning a smartphone has on the consumption habits of the average consumer.

Figure 5: Breakdown of daily use of mobile phones



Sources: Apple, PricewaterhouseCoopers' analysis

Against this background, widespread flat-rate pricing for access means operators are faced with investing in network capacity such as Long Term Evolution (LTE) and fibre to the home simply to maintain service levels, with no prospect of a reasonable return on that investment. At the same time, operators in some jurisdictions are hindered by the concept of network neutrality from striking bandwidth deals with specific application and content providers. Over time, this situation could become crippling for operators, unless they are able to change the way they charge for use of their networks.

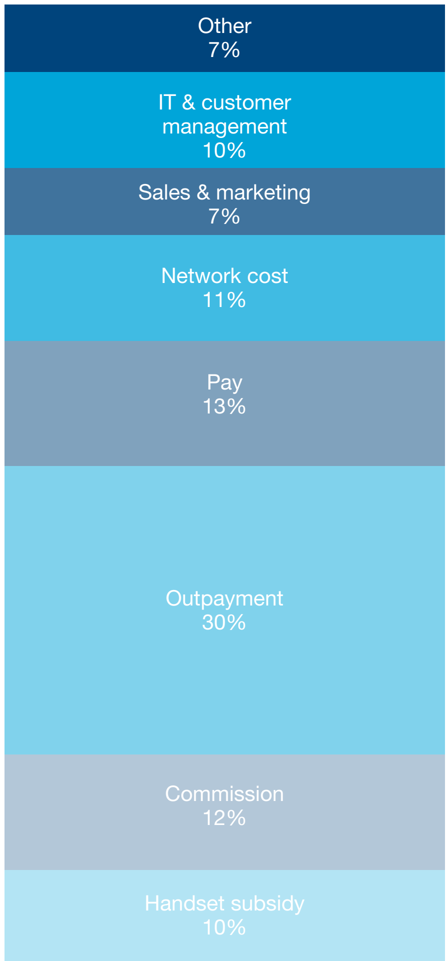
For mobile operators, the clearest way out of this impasse is to adopt usage-based charging models for mobile data. Taking that step might not be easy to sell to customers, but operators may have no choice but to take it—and some have done so already. In Japan, all-you-can-eat charging plans resulted in year-on-year data revenue growth of 11% in 2008, and operators responded by shifting away from these plans. To minimise customer resistance, such changes should highlight the benefits to relatively lower-usage customers, perhaps stressing that below-average users are effectively subsidising the heaviest ones. The repricing campaign might be accompanied also by educational initiatives to re-establish the core value of connectivity in the eyes of consumers.

Strategic challenge 4: Improving operational simplicity and efficiency

Operators' legacy of growth by consolidation and use of 'bolted-on' solutions to handle new services has left many of them with highly complex, inefficient and unwieldy operating models, often structured around organisational and product silos rather than the customer. Each of the key operational requirements facing operators today—customer centricity and responsiveness, ongoing cost reduction, integration and monetisation of new services, usage-based pricing, bundled offerings, collaboration, consolidation—demands that they simplify their operations to effect real change and realise the full benefits.

More generally, whatever internal and external challenges and changes operators face today and in the future, they will need greater organisational agility in order to respond to them effectively. One of the core competitive advantages leveraged by application and device suppliers in recent years has been their higher degree of agility and speed to market. To compete more effectively with them, operators need to mirror this capability. So, the only option for succeeding in the emerging digital value chain will be to realign operators' organisational and operating models to fit the new reality and support faster, more focussed execution of their future strategies.

Figure 6: Illustrative mobile network operator's cost stack



Source: PricewaterhouseCoopers' analysis

One of the key priorities of operational simplification is to achieve a significant, permanent and ongoing reduction in the cost base. The challenges are especially clear. As Figure 6 shows, a typical mobile network operator's customer-facing costs are relatively high, hampering its ability to compete in an increasingly cutthroat marketplace. Information technology and customer-management-related costs (including billing and customer relationship management systems) are about 10% of the total. That percentage is typically driven by the split of prepaid to postpaid customers and the degree of sophistication with which the company segments its customers. Sales and marketing—driven by the level of competition and the launch of new product programmes—accounts for a further 7%.

Against this background, operators are seeking to reduce expenditures and align their cost structures with a saturated, competitive and commoditised market. They are doing so by targeting ongoing cost initiatives across the organisation, from corporate centre to network operations, from IT to real estate management and from support functions to product life cycles. Operators are focussing more rigorously on their key differentiating sources of value, leading many to move support functions into horizontal shared services and outsource non-core activities, including the entire network. Some mobile players are being prompted to reduce capital expenditures and operating expenditures through network-sharing agreements.

Centralising intelligence

To reap the full benefits of such changes in terms of the cost and effectiveness of customer-facing operations, however, requires a critical step that many operators have yet to take. Operators need to remove customer, product and business intelligence from the various silos and centralise it on an enterprise-wide basis. By unifying and concentrating all this intelligence in a single entity, an operator benefits from greater efficiency, agility and responsiveness to external change—whether the change is in customer demand, competitive dynamics or regulation.

By clarifying the nature and location of key data, centralising intelligence also facilitates regulatory compliance, enterprise-wide standardisation and corporate actions, such as disposals and mergers and acquisitions. Especially clear are the benefits of unifying data on fixed and mobile customers: Centralisation supports joined-up and consistent management of multiproduct customers and provides greater clarity over their lifetime value.

That said, implementing centralisation of intelligence brings execution challenges. It is a particularly difficult step for international and global communications operators with various country operations, which often include minority holdings. Experience, though, shows that the effort is worthwhile.

Going forward, operators that successfully simplify operations will gain access to wider opportunities. One is that of becoming a service provider to other operators by giving them access to their more efficient core operational engine. This possibility could trigger the emergence of a new wave of virtualised operators. It also underlines the extent to which the frequently cited 'polarisation' between operators acting either as a dumb pipe or a content provider is overly simplistic. In practice, many hybrids and variations will exist between these two extremes, with a wide array of business models, some yet to emerge.

Strategic challenge 5: Managing regulatory risk

In the wake of the heavy and renewed interventionism by governments worldwide in response to the credit crunch, communications operators are in regulators' sights at both an industry and a national level. Partly as a result, regulation is increasingly a political issue rather than purely a matter of maintaining competition or protecting consumers. This also means it continues to vary widely by territory. Current change initiatives on the agenda in various countries and regions around the world include traditional price regulation, structural and functional separation between services and infrastructure, and actions to close the digital divide.

This ongoing state of flux creates significant uncertainty, complexity and risk for operators, especially international ones. Furthermore, operators are subject not only to industry regulation, but also to wider government, competition and tax compliance requirements.

With many governments seeking to raise their tax take to replenish their coffers, operators' strong and transparent cash flows present an attractive target.

In PwC's view, there is scope for positive change in both industry and tax regulation. If regulation stunts industry innovation by reducing the scope for exploiting innovation commercially, that hardly serves consumers' interests. So, industry regulators could focus less on price controls and more on the customer's wider interests in terms of quality and choice. Tax authorities, for their part, could look to incentivise good corporate behaviour and long-term wealth generation.

A particular concern in the regulatory field at the moment is network neutrality, which has emerged as the most prominent regulatory issue worldwide. In our view, net neutrality is a blunt and possibly counterproductive instrument, which could have the effect of hampering investment and innovation both by operators and by their wider ecosystem of suppliers and partners. For example, the developer of an online, medical diagnostic application that requires substantial bandwidth might find its offering's functionality is undermined by the requirement for operators to level the playing field by allocating bandwidth equally to all applications.

In our view, such developers should be able to strike deals with operators for guaranteed levels of bandwidth—and market forces, rather than some concept of an artificially levelled playing field, should determine what services are provided and how. Regulators need to accept that some providers will offer better and differentiated higher-value, higher-priced services. So long as new entrants can enter the market and companies are not profiteering from customers, the regulators should stand back.

Strategic challenge 6: Creating value through consolidation

Ongoing consolidation is an established aspect of the communications marketplace and will remain so. The reasons include the near-saturation and intense competition in mature markets; issues around the ownership of minority stakes by international operators in smaller markets; the need to access emerging technologies to fill gaps in capabilities; and the expansionist agenda of rapidly growing—and highly operationally efficient—emerging market operators.

In crowded, developed markets, the only alternative to industry consolidation is the ongoing destruction of shareholder value. PwC recently conducted some economic modelling of the optimal number of telcos in a marketplace, which showed that driving out duplication between operators in the market—far from harming the interests of consumers—actually can result in lower-priced services. The experience in the US market supports these findings: The country used to have two long distance and eight regional operators but now has three national players, and prices have not risen.

Deals will be driven as well by emerging market giants seeking exposure in developed countries, and in and between mature markets themselves. In general, consolidation will target three objectives economies of scale, fixed/mobile convergence and sustainable cost reduction to help provide a robust platform for growth in the digital era. Network-sharing agreements will continue as part of the drive to reduce overcapacity and costs, and the logical extension of this in some cases may be consolidation into fewer players.

Equally significantly, the previous dynamic of developed-market operators moving into emerging markets in search of growth may go into reverse. Emerging market operators from countries such as India are aggressively looking around for assets and may target the developed markets. These companies have built proven, low-cost operating models and may well be able to undercut the incumbents in mature markets—thereby possibly triggering a further round of consolidation.

In any consolidation deal, the priority is to create shareholder value. That objective has proved elusive in the past. In line with the strategic challenges we have highlighted, the optimal approach may be to integrate new operations closely in operational terms (including centralising intelligence), whilst remaining close to customers in each market through carefully segmented and targeted bundling, branding and pricing.

Conclusion: Into the new era

In the battle for positioning and revenues in a fragmenting and increasingly competitive communications value chain, operators are currently losing out to the new value creators. We believe the six strategic challenges we have described provide a sound framework for them to redress the balance.

There is no question that developments such as the explosive growth in broadband services, rapid take-up of smartphones and exponential rise in data traffic present major challenges to network operators. Those challenges are especially likely in an environment where the business model to deliver adequate financial returns on their network investments is still elusive.

However, operators can yet turn digital transformation to their advantage. They have the capacity, positioning and capabilities to re-establish the value of connectivity, build deeper and more lucrative relationships with customers and other participants in the value chain, and open up new revenue streams from innovative services and business models.

In our view, three prerequisites in particular will be critical to their success in achieving these goals. One is true customer centricity and understanding. The second is an ability to collaborate effectively to target and leverage new opportunities. And the third will be the heightened operational agility brought by operational simplification and centralised intelligence.

Put simply, data transformation is at the halfway stage, and operators are chasing the game. It's time for the fight-back.

Colin Brereton is the global leader for PricewaterhouseCoopers' Communications Industry group. For more information, contact Mr. Brereton by phone at [44] 20 7213 3723 or by e-mail at colin.brereton@uk.pwc.com.

The author thanks Graeme Clark, Kenny Fraser and Jonathan Oxley for their contributions to this article.