

InfoComm Review



Volume 11, No. 2

Changing Shape

Customer centricity

Outsourcing

Business models

Regulation

PRICEWATERHOUSECOOPERS 

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Drawing on our accumulated experience, we anticipated and met the challenges of global regulatory change, and have helped our clients deal with the impact of industry convergence. We continue to add measurable value to our client relationships through our leadership and innovation, which are evident in our evolving services and products.

InfoComm Review

Volume 11, No. 2

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300 Madison Avenue

New York, New York 10017 U.S.A.

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Pendant des années, les sociétés de télécommunications ont évoqué la nécessité d'être axées sur le client, mais en termes d'organisation interne, elles ont conservé des catégories de produits cloisonnées. Avec la multiplication des offres et l'arrivée de nouveaux concurrents sur le marché, les entreprises qui réussiront dans le créneau des télécommunications seront celles qui s'organiseront en fonction des besoins actuels et futurs de leurs clients.

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À l'heure où les sociétés de télécommunications cherchent à réduire leurs coûts et à pénétrer de nouveaux marchés, certaines transfèrent leurs activités secondaires et même fondamentales vers des centres à moindres coûts à l'étranger et, dans certains cas, sous-traitent à un fournisseur tiers. Pour réussir une externalisation, il faut appréhender le projet comme une transformation et pas comme une simple transaction.

par Paul Horowitz, Pawan Verma et Arpita Pal Agrawal

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13 Hecho a medida

Durante años, las compañías de telecomunicaciones han hablado sobre centrar la atención y focalizarse en el cliente, pero desde el punto de vista interno, mantienen su organización en departamentos estancos. Como los consumidores tienen más opciones, y nuevos competidores entran en el mercado, el éxito de las telco's estará determinado por aquellas compañías que se alineen alrededor de las necesidades actuales y futuras de los clientes.

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El mundo de las telecomunicaciones busca modos de reducir gastos y entrar en nuevos mercados, unos mueven sus actividades no estratégicas e incluso algunas estratégicas a lugares donde los costes son inferiores y, en algunos casos, también se están produciendo subcontrataciones a terceros. La externalización será más exitosa si se entiende como un proceso de cambio que como una transacción.

por Paul Horowitz, Pawan Verma y Arpita Pal Agrawal

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Las fuerzas que conducen la convergencia están creando una situación en la cual lograr el valor máximo para el accionista está por encima de las capacidades de los modelos de dirección actuales. Las empresas deben adoptar un modelo abierto, eliminando barreras internas entre unidades de negocio y barreras externas entre sus socios actuales y otros aliados estratégicos.

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41 Acortando el gap

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Seit Jahren konzentrieren sich Telekommunikationsunternehmen auf die Bedürfnisse ihrer Kunden. Ihre internen Organisationsstrukturen orientieren sich jedoch nach wie vor an den Produkten. Aufgrund der konvergenzbedingten Ausweitung der Dienstpalette für Konsumenten und des Markteintritts neuer Wettbewerber werden sich diejenigen Unternehmen erfolgreich am Markt behaupten, die sich strukturell an den aktuellen und künftigen Kundenwünschen ausrichten.

von Mike McGrath, Ash Bassili, Quentin Orr und Gerald Adang

23 Fernsteuerung

Um ihre Kosten zu reduzieren und in neue Märkte einzutreten, lagern Telekommunikationsunternehmen zunehmend Teile ihrer Wertschöpfung in Niedriglohnländer oder—in manchen Fällen—an andere Anbieter aus. Eine erfolgreiche Outsourcingstrategie zeichnet sich dadurch aus, dass sie als Transformation und nicht nur als Transaktion gestaltet wird.

von Paul Horowitz, Pawan Verma und Arpita Pal Agrawal

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Aufgrund der zunehmenden Konvergenz sind bestehende Management-Methoden kaum geeignet, den Shareholder Value zu maximieren. Aus diesem Grund müssen Unternehmen Geschäftsmodelle wählen, welche die Barrieren sowohl intern zwischen den Geschäftseinheiten als auch extern gegenüber Unternehmen und Partnern beseitigen.

von Randy Browning und Deborah Bothun

41 Überbrückung der Hürden

Der Umfang der Investitionen und des Engagements von Telekommunikationsunternehmen ist vor allem in Ländern mit geringem verfügbarem Einkommen und einer geringen Marktdurchdringung von Telekommunikationsleistungen bestimmt durch vielfältige regulatorische Unsicherheiten. Regulative Instanzen in diesen Regionen spielen eine bedeutende Rolle bei der Gestaltung von Rahmenbedingungen, die eine Entwicklung und ein Wachsen der Telekommunikationsbranche erlauben.

von Alastair Macpherson und Michael Hardt

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Manoj Kohli, Präsident des indischen Telekommunikationsunternehmens Bharti Airtel Limited berichtet im Rahmen unseres Interviews über seine Erfahrungen, sein Unternehmen von einem führenden Telekommunikationsunternehmen zu einem führenden Markenunternehmen in Indien zu entwickeln.



Message from the Editor

I am pleased to welcome you to the first issue of *InfoComm Review* under my editorship.

In the current world of telecommunications, it is hard to find the most appropriate term to describe the companies that are doing battle in this space. We've settled here for "telecom operators," but the players and their roles seem to change daily: We have satellite broadcast companies entering the broadband market, cable operators offering quadruple-play services, and incumbent telcos providing HDTV. The convergence of telecoms and digital media is here in force and will cause the reshaping of these industries over the next few, if not many, years. Is this the birth of a new industry, or merely a merger?

In reviewing the articles for this issue, one theme came across very clearly. The process of convergence around digital communications technology is now driving rapid, pervasive change that encompasses products, services, customers, and regulation. Given this state of flux, the articles in this issue explore how telecom operators worldwide are reshaping and restructuring their businesses to face the reality that is now emerging.

The first article, "Tailor Made," led by my partner Mike McGrath, takes a hard look at what the reality of convergence means for the way telecom operators go to market. Specifically, the article examines the need for telecom operators both to convince their customers to buy and keep more products and

services and to meet and exceed their customers' service and value expectations at every touch point. Achieving all this requires a company to do nothing less than transform itself from a product-oriented to a customer-oriented organization, and ensure that people across the company thoroughly grasp what customers expect—of not only specific areas, but also the business as a whole.

The answer lies in becoming a customer-centric business by embedding an enterprise-wide focus on customer lifetime value, and using that focus to create end-to-end alignment of products, services, and the business processes that deliver and support them. Such a transformation is not easy, especially as traditional, product-based approaches to customer relationship management are not up to the job. So Mike and his team go on to examine how telecom operators can achieve the differentiated excellence in customer experience, service, and responsiveness that will characterize the winners of the future.

In the second article, "Remote Control," a transnational team of PricewaterhouseCoopers' professionals—made up of Paul Horowitz and Pawan Verma based in the United States and Arpita Pal Agrawal in India—drill down into an increasingly important aspect of the widespread organizational reshaping now under way. This reshaping is the global trend for telecom service providers to move their non-core and even core activities offshore and/or out-of-house to reduce their costs and open up new markets. Using case studies,

the authors analyze the “offshoring”/outsourcing continuum, ranging from wholly owned, captive operations to full outsourcing. The resulting experience and insights will be valuable for any telecom operator.

We then move on to a piece of thought leadership on organizational strategy from my partners, Randy Browning and Deborah Bothun. Their thesis in “Wide Open Spaces” is that the sweeping change under way in the industry requires telecom, media, and technology companies to adopt a new type of open business model. This model involves tearing down existing internal and external barriers to create freer interplay among content, distribution, and technology, which enables the business to embrace—and benefit from—ongoing disruption.

From there, we return to one of the most pressing external issues facing telecom operators today: advancing regulation. In “Bridging the Gap,” my United Kingdom-based colleagues Alastair Macpherson and Michael Hardt examine how telecom regulation is now shaping the competitive environment, investment patterns, and even service offerings in emerging markets. Then, focusing on original research and the anecdotal experience of operators in various countries in Africa, the authors demonstrate how the key to higher investment is not so much the shape of regulation as its predictability. Unless regulators provide sufficient predictability in their particular market, telecom operators will find other places to invest—meaning that the ultimate losers will be consumers in that territory.

As usual, our final piece brings us face to face with one of the key people shaping the global telecom landscape. As the western world increasingly looks eastward, *InfoComm Review* visits Bharti Airtel Limited, the Indian pioneer in telecoms, for an exclusive interview with its president, Manoj Kohli. With the Indian market poised for continuing headlong growth in wireless and broadband, Mr. Kohli paints a fascinating picture of a company well-established in the telecom space and seeking to extend its consumer brand into other value-adding areas.

This talk of organizational reshaping brings me back to my new role as PricewaterhouseCoopers’ global infocomm leader and editor of this publication. However, while individuals come and go, the formula for *InfoComm Review* will be continuity. I only hope that I can continue my predecessor’s success in keeping the finger of this magazine firmly on the pulse of the industry. As I strive to do so, the feedback and comments I receive from you, the readers, will be crucial. So please keep your comments and insights coming by contacting me by e-mail at paul.g.rees@uk.pwc.com or by phone at [44] 20 7213 4644.



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Tailor Made

Changing the organization to meet customer needs

As the various players in the telecom space assemble and roll out their triple- and quadruple-play bundles, convergence is becoming an everyday reality for consumers. As companies strive to manage expanding product offerings, diminishing competitive differentiation, and increasingly powerful and demanding customers, the winners will be those telcos that convince their customers to buy and keep more products and services as well as meet and exceed their customers' expectations at all critical customer touch points. Faced with this challenge, traditional product-oriented organizational structures and systems are simply no longer up to the job. An alignment of the customer relationship management (CRM) program and supporting organizational structures, processes, and technologies is required to achieve a sustained excellence in customer experience, service, and responsiveness.

**by Mike McGrath, Ash Bassili, Quentin Orr,
and Gerald Adang**

After years of talk, convergence is finally happening across the infocomm industry. Cable television providers are offering voice, high-speed Internet, and even mobile services. Incumbent telcos are rolling out IPTV. Retailers and handset resellers are offering broadband packages. Mobile operators are selling and delivering music and video entertainment. In competitive terms, everyone is rolling their tanks onto everyone else's front lawn.

For the customer, it's great: an unprecedented explosion of choices and new services. For telcos and other providers, it's a new world of competitive opportunities and threats: a whole new market approach and mind-set are needed. At the core of this mind-set has to be a clear and relentless focus on the customer.

Products are becoming more complex, carriers are entering into new content relationships and advertising models, and customer care is becoming a differentiating factor. Companies that do not actively embrace customer centricity will continue to deal with increased customer churn; declining customer satisfaction; employee engagement challenges across critical, front-line, customer-facing roles; decreasing market share; and an increased cost to serve as a result of product-segregated business processes. As a result, the challenges of understanding customers' values, needs, and decision drivers, along with having a holistic view of the customer's relationship with the company, have intensified—making customer focus a strategic imperative.

An integrated customer experience

The sheer scale of the impact of convergence on how telcos go to market is becoming clearer by the day. For many years, telcos have talked about being focused on customers; however, organizationally they remained aligned internally along separate products. To compound this further, successive waves of product launches and corporate acquisitions have been "bolted on" rather than integrated around a single view of the customer. All too often, activities from product development via sales and marketing to billing, customer service, and call centers have remained rigidly organized around products rather than customers.

Convergence is sounding the death knell for that approach. Instead of selling one product to many customers, companies now need to sell bundles and solutions to each individual customer and ensure that customers' needs are satisfied at each stage of their life cycle to engender loyalty. Research

suggests that acquiring a new customer costs several times as much as selling an additional product to an existing customer, and that customers who buy a bundle of products are less likely to switch providers. So companies that sell more integrated solutions to a base of increasingly loyal customers can indeed create a virtuous circle that will drive increasing revenues and, ultimately, greater shareholder value.

The company's ability to understand and anticipate changes in the customer's needs—customer centricity—should be a core objective. Pursuing this objective leads to an enhanced organizational ability to be continually relevant to customers, thereby delivering greater value to customers. The commercial result is a larger base of loyal customers for the long term, consuming more services and solutions.

The onus is on the telco to make sure it always offers the right services through the right channel at a price that the customer regards as reasonable and in the manner in which the customer wants to interact with the company.

Creating a differentiated experience for customers, across all customer touch points, is what is required. This differentiated customer experience must be delivered through appropriate organizational structures, embedded in the underlying business processes, and enabled by the supporting technologies. In a converged, multiproduct, multichannel world, all of these steps are vital to achieving differentiation while overcoming existing organizational complexities and addressing competitive pressures and threats, such as speed to market.

Another of those complexities is the telco's workforce. Some telcos will struggle to make meaningful changes because, typically, powerful unions resist rapid changes in work responsibilities for their members. The traditional telco/operator organizational structure and labor arrangements need to change to empower employees to make the right decisions for the customer, without regard to strict, union-negotiated workplace rules. As we have seen in the auto and airline industries of the United States, often large, heavily unionized organizations are incapable of making changes quickly enough to respond to new market entrants that have different cost structures and disruptive pricing models.

Forward-looking telcos are now preparing for that world by looking at this opportunity from the customer's

perspective, and realigning their operations end-to-end around the customer's current and future needs.

What *is* customer centricity?

In our view, the close connection between customer centricity and customer relationship management (CRM) is key to a telco's ability to maximize shareholder value. But what precisely does customer centricity mean in the context of today's telcos? How can organizations measure it as a baseline? And what is the best way to operationalize that understanding in the management of customer relationships and channels to market?

The fundamental principle underlying customer centricity is a recognition that customers—and their needs, wants, and aspirations—differ and are not static. For example, a 40-something head of household will have different needs and values than will a 20-something, single, self-employed professional. A more subtle distinction between them is the fact that their needs and values are not static.

From the moment a customer considers purchasing a product or service, whether as a standalone purchase or as part of an integrated offer, his or her relationship with that service and the company providing it begins to evolve. Perhaps the customer has had a subscription for many years, or has just taken on a pay-as-you-go deal to try a service. Either way, the customer's requirements are on a cycle of change. Similarly, the traveling professional may have different needs when on the road as opposed to when not traveling. The organization must actively and deliberately pursue strategies to completely understand each segment's needs and effectively personalize the customer relationship.

As this cycle continues, two factors will determine the customer's potential and actual value to the provider over the course of the entire relationship. One is the way the customer's needs and propensity to spend change over time. The other is how well the provider anticipates, monitors, and responds to ongoing change in the customer's viewpoint with appropriate service propositions. So, after acquiring the customer, the onus is on the telco to make sure it always offers the right services through the right channel at a price that this customer regards as reasonable and in the manner in which the customer wants to interact with the company. If it fails to do this, the customer eventually will interact with another provider that better meets those needs.

Through analysis centered on the customer (i.e., customer profitability, customer segmentation insights around unique needs for products and

CRM vs. customer centricity

CRM can be broadly defined as the domain of sales, marketing, customer service, and supporting reporting and analytics. At the highest level, it is the strategy, organizational structure, processes, and supporting technologies used to manage the customer relationship in an organized and controlled manner. The CRM objective is to manage the customer experience life cycle effectively, through any media or channel in which the customer chooses to interact with the company.

Customer centricity focuses on understanding customers' needs and preferences and on adapting a company's service delivery processes to accommodate and satisfy those preferences in order to enhance customer loyalty—which results in increased growth and profitability.

services), an organization can begin the process of enabling CRM capabilities that are designed to satisfy customers' needs and, thereby, consistently deliver a superior customer experience. For example, giving customer service representatives access to the history of contact with a customer, frequency, and reasons alerts them to customers' needs and helps them achieve a more intimate phone experience for the customer. This is already a common source of poor customer service today.

In short, companies that adopt a customer-centric strategy improve their position through deeper understanding of their customers' needs. The result is a unique competitive advantage that insulates a company against disruptive threats. The more customer centric a company is, the more time its competitors need to respond to its moves and the more likely it is to win new customers.

Telcos' transformational efforts increasingly are based on customer centricity. When they have actively pursued this strategy, telcos have benefitted by acquiring customers and improving their value to customers, speed to market, and operational performance in terms of the cost to serve and their performance consistency. Working recently with an Asia-Pacific telecom client, we piloted a program that included a new customer-centric consumer offer, resulting in a 60% reduction in churn among customers in the first 90 days of service. In retail environments, there is much evidence that when a customer-centric approach is adopted, the "close rates," or percentage of shoppers that actually make a purchase, can improve dramatically.

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Customer centricity challenges

Indeed, the prize is large; however, as telcos embark on this journey, they face several challenges. The first challenge is merely knowing their customers—**understanding what their customers want** and how they want to get products and services. Needs-based analyses as well as life stage and lifestyle characteristics demand elasticity, sales propensity indexing, churn propensity analyses, and customer profitability. All represent great sources of customer insight and analytics.

The second challenge is **developing the agility to apply this understanding** to their offerings and operationalizing these needs throughout the customer experience life cycle. Insight into the customer holds value only when it is applied to a process that drives enhanced customer outcomes.

The third challenge is overcoming the constraints of legacy, product-centric organizational structures, processes, and systems and **facilitating customers' needs** and delivery of services. Enabling employees with the right customer insights, analytics, and decision tools can unlock tremendous value in the telco's customer base.

The fourth challenge is **meeting rising time pressure**, as speed to market becomes vital to seizing customer demand. The race is on, and the telco that consistently delivers such value to its customers can relish the coveted first-mover advantage.

Traditional approaches to CRM have attempted to address these challenges across an expanding range of products in a product-centric paradigm with limited understanding of customers' needs, coupled with even more limited CRM enablement for front-line, customer-facing staff. CRM remains an important enabler in today's market, where focus on the customer experience is critical. The full benefits, however, can be achieved only by driving CRM initiatives from a customer-centric perspective and supporting intelligent and responsive management of the company's channels to market.

This shift cuts to what CRM is about. At the foundation, CRM supports the core functional domains: sales, marketing, service, and reporting and analytics. While these all form key parts of a telco's overall CRM effort, they often have been managed separately, with the same activity conducted discretely in different product silos, with little understanding of the impact on the customer experience, and with uncertainty around the business outcomes that are desired.

Operationalizing this type of holistic, integrated approach to customer centricity is increasingly

commonplace in industries such as retail financial services and entertainment and media. However, while many telcos are moving in that direction, their primary focus continues to be heavily influenced by traditional approaches to designing, developing, and rolling out new propositions.

Operationalizing customer centricity

In the multiproduct, multichannel world now emerging, the traditional fragmented and reactive approaches to CRM will no longer work. Telcos must overcome their challenges through an integrated process and program of work that are based on a solid understanding of customers and that take action to mitigate the known obstacles.

As with most proven, successful approaches, the starting point must be a strategic focus with clearly defined required business outcomes (*see Figure 1*). The journey starts by setting a compelling strategy that includes a focus on the opportunities in the marketplace, then identifying meaningful value propositions, aligning them with an execution path, and defining measures of success.

With respect to the business outcomes required, key questions will need to be answered. Is this journey all about customer acquisition? Or is it about customer retention? Or is revenue growth going to be achieved through a mix of both? How will the objective be achieved by the sales and marketing mix? What role will marketing activity play in demand stimulation and customer value delivery vs. the sales and service efficiency and effectiveness levers in your channel mix?

For any company to claim they truly understand the needs of their customers, they must gain a good understanding of their client base through sound reporting and analytics capabilities, customer surveys, commissioned primary research, and segmentation analysis. Only then will a company be in a position to design and deliver a differentiated customer experience based on customers' needs.

Having a data enablement capability that readily delivers "whole-of-customer" data that are consistent, accurate, and timely will serve as the vital basis in moving toward operationalizing customer knowledge and relationship management (*see Figure 2*). A "single view of customer" is critical and must be visible and accurate at all customer touch points. Knowing all the services that the company provides to the customer allows for a more integrated relationship with and experience for the customer.

To truly embed this differentiated customer experience into all customer touch points, significant efforts

Figure 1: Business outcomes

Customer acquisition	Sales & service effectiveness and efficiency
<p>Which customers do I want to target for which promotions?</p> <p>Which marketing (acquisition or retention) strategies will win the most profitable customers?</p> <p>Where do I invest my resources?</p> <p>What price point should I offer on new products or bundles?</p>	<p>For which customers should I allocate specific queues or channels?</p> <p>What price point should I set for custom solutions?</p> <p>What is the minimum term for which I should sign a customer?</p> <p>Should compensation plans be altered to reflect profits?</p>
Customer retention	Customer profitability
<p>Are processes and segmentation aligned with customer value?</p> <p>How do we define our customer servicing strategy?</p> <p>When should penalty and termination charges be enforced?</p> <p>What are the appropriate goodwill adjustment thresholds?</p>	<p>Are segments aligned properly to customer lifetime value?</p> <p>Are the right financial reporting and metrics in place?</p> <p>What strategic analysis is required to support product, marketing, and pricing direction?</p>

Required business outcomes must be definite and explicitly linked to revenue growth.

must be made to ensure that it is operationalized throughout the customer life cycle. To that end, there may be a need to rationalize existing organizational structures and processes in order to align them with delivering the envisioned customer experience.

Both the sales force and the customer service representatives must understand the differentiated customer service that the company needs to deliver, and they must be enabled to deliver that experience. Sales agents must be provided with training in a specific segment that covers the needs and behaviors of the segment and clearly translates the service offerings made available to them. Customer service representatives must understand how varying needs can be met by a select few customer value propositions or approaches to customer care and must cross-sell/up-sell opportunities.

Decision tools (i.e., proposal and recommendation tools) and the appropriate decision rights and delegation authority are required for enabling front-line employees to take the appropriate action on behalf of their customers. Customer-driven routing and integrated voice response strategies, along with tailored scripts and call flows, also will be required in accommodating and meeting the needs of unique customer and segment differences.

These efforts will take the organization from having a reactive customer response posture to operating

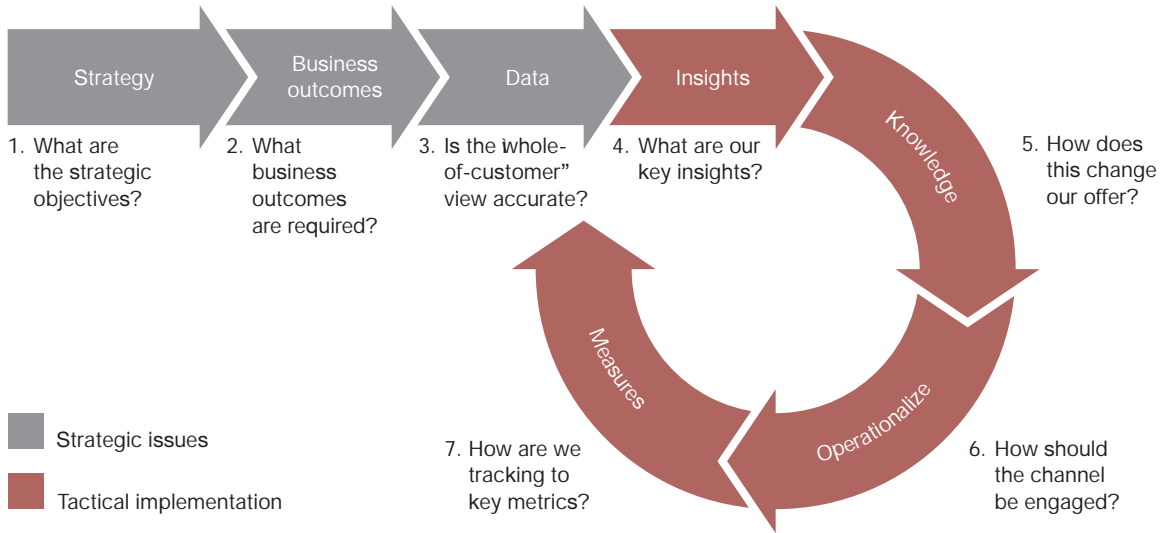
with a proactive, engaged workforce that is able to demonstrate familiarity with each customer at each critical touch point. The level of investment an organization will have to make will vary based on many factors, such as offer complexity, markets and product market maturity, and the flexibility of the underlying platforms supporting these functions.

Clear measures of success—such as service quality, presentation rates, and sales conversion rates—will need to be embedded, providing real-time feedback throughout the entire customer delivery process. Completing the customer delivery cycle, these measures allow for self-correction of the process in real time, thereby always adapting to changing customer needs and ensuring that investment and effort achieve outcomes of value to the customer.

Upon embarking on any of these efforts, companies must overcome the usual obstacles in getting access to critical customer information from legacy systems and repositories. Customer insights can be derived and continually updated only by having a whole-of-customer view. Gaining this view is often complicated by the fact that the information is dispersed across several product-centric systems and platforms and involves many screen hops to navigate and source.

Difficult access to information needlessly prolongs interaction with the customer and influences customer satisfaction. And if a skilled customer service

Figure 2: Operationalizing customer knowledge management



To position themselves to respond to shifting demands and deliver the critical customer experience, companies must base every phase of their operations, from planning strategy to measuring success, on valuable customer knowledge.

Sources: Industry research and PricewaterhouseCoopers' analysis.

representative manages to retain the customer's attention through such activity and secures a commitment to sign up for a new service, the order management process also may be needlessly prolonged. In these situations, the telco must fully evaluate a number of operational excellence, process redesign/evolution activities, or wholesale transformation efforts that revisit customers served, their expressed needs, the product and service offerings, and how the company delivers to the market—as well as the underlying infrastructure for addressing these challenges.

The approach to take will depend on a telco's specific competitive pressures and its position in the market. For example, when an incumbent finds a relative weakness in addressing customer demands as a result of operational ineffectiveness in, perhaps, its order management or provisioning processes, it must take corrective action. More important, the customers' needs for effective order management and timely service must drive the telco's redesigning of its processes.

Convergence is transforming the dynamics of the industry and requiring companies to embrace new approaches to differentiate themselves and drive growth. The new product niche players and new market entrants are doing this well. Focused mobile and Internet service providers have been more nimble than incumbents in their ability to respond quickly to customers' needs.

Incumbents have always wrestled with the desire to provide the complete breadth and depth of service

offerings in order to achieve economies of scale. But breadth and depth of products and services is what often hampers their agility. Once a company has a clear understanding of how it will deliver the critical customer experience throughout the customer life cycle and has assessed the organizational structures, processes, and systems in place to deliver this experience, it must evaluate the need to invest in new technologies or partner with third-party content providers. The objective is to be in a position both to respond quickly to shifting customer demands and to adapt supporting processes seamlessly to meet those demands.

Getting started

Getting started on a CRM program of work will require developing key customer experience principles that must be adhered to in order to provide customers a personalized experience.

The first principle must deal with getting the right customer to the right channel to deliver the most relevant and meaningful experience. This may sound basic for any telco; however, many players continue to struggle with it, causing significant harm to both employee and customer relationships.

One problem springs from a telco's implementation of different contact and entry points for various customer segments or products. When presented with a choice of access points, customers tend to pick one at random, call a number, and end up in the wrong place with an agent who knows nothing about them or their problem. They then find them-

selves passed along and redirected through a chain of agents, often ending up having to call again on a different number to get their problem resolved. This results in a disappointing and frustrating experience for the customer that damages loyalty and makes inefficient use of the company's resources.

Customer centricity focuses a company on identifying the critical customer experience principles it must follow to address customers' needs and translate those needs into capabilities it must develop to deliver the target experience. With this framework, the company can align its CRM efforts with developing those capabilities and fulfilling the promise of operationalizing the customer experience principles.

In the telecom environment, examples of customer experience principles that may be relevant are:

- **Common front door**—A single number to call for all questions regarding products and service.
- **Customer intimacy**—Providing customer service agents with access to relevant customer information so they can communicate an understanding of a customer's situation and current status or issues that a customer may be calling about.
- **Effective customer routing**—Integrated telephony capabilities that mitigate the need to transfer customers.
- **First call resolution**—The ability to resolve customers' queries and concerns on the first call or to "case manage" a request effectively.
- **Premium care capabilities**—The ability to deliver tiered services to customers who are higher-value consumers or are of higher profitability.
- **Back-of-house integration**—The ability to both deliver and support products and services in a timely, efficient manner and to make these capabilities visible to call center representatives dealing directly with customers.
- **Measurement of performance**—The ability to measure and report on operational performance metrics that are critical to the customer, such as installation time, first call resolution, etc.

These customer experience principles drive the prioritization of capabilities that must be delivered through the CRM-enabling technologies. They also help ensure that investments made in the technologies are aligned with the overall strategy and have the support and ongoing sponsorship and commitment of the business units.

Aligning organizational and process requirements to the customer experience principles, then, allows for the definition of technological requirements and ultimately leads to a robust implementation road map.

Moving to customer centricity requires the active participation of and coordination across many functions and divisions. Many leading telcos have confirmed the common issues they are facing with this coordination—understanding who their customers are and should be, as well as their needs, and how the company should respond to fulfill those needs. Our experience shows that, irrespective of the stage of maturity in pursuing a customer-centric approach and linking the approach to its CRM efforts, a telco usually will need to take six steps to create the most value from customer relationships.

While the precise mix of activities and necessary resources at each stage will vary from company to company, the six steps themselves do not. They are:

1. Establish a customer-centric understanding of segments and their evolving needs.
2. Build on this foundation to create an understanding of each customer interaction with the company throughout a customer's life cycle by adhering to the customer experience principles.
3. Identify the implications for the four CRM functional domains—sales, marketing, customer service, and reporting and analytics—to support customers' needs and interactions.
4. Catalogue and prioritize gaps in the current strategy, organizational structure, process capabilities, and enabling technologies.
5. Develop a road map for addressing any gaps, as well as the change management components required to support these efforts.
6. Execute phased initiatives identified in the road map.

All stakeholders must accept the six steps, thereby enabling a customer-focused, problem-solving approach. If done, this will allow for greater collaboration among product, marketing, sales and customer care, service assurance, and field force management. Significant implications for organizational structure and culture are often encountered, especially where the different functions of sales, marketing, and product—contained in their silos—are accustomed to operating with a high degree of autonomy. In our experience, in all cases where the environment has become one of rapid collaboration across functions, a better customer experience has been realized.

continues on page 21

Putting customers first at Telstra

Jovan Barac is managing director of CRM at Telstra, the leading Australian telecommunications and information services company. This role makes Barac a key player in Telstra's drive to turn itself from a product-centric to a customer-centric organization—a sweeping transformation program launched by CEO Solomon Trujillo when he took over in July 2005.

The guiding principle of Telstra's customer-centric transformation is market-based management. This approach involves identifying a set of customer segments based on specific and distinct customer needs, and then managing and optimizing each segment with an appropriate end-to-end experience and relevant KPIs (key performance indicators). In simple terms, the approach means putting customers first. Barac joined Telstra in September 2005, from France Telecom's United Kingdom-based mobile subsidiary Orange, to help make the approach a reality throughout Telstra's business.

In practice, Barac must fulfill three main roles. The first role is to define Telstra's needs-based customer segmentation, including building the related customer profiles. The second is to ensure that Telstra implements CRM best practices. And the third—building on the other two—is to oversee the implementation of market-based management and customer segmentation across Telstra's CRM systems and processes. All this must happen in a context where Telstra is also renewing its network infrastructure.

Barac summed up: "We are transforming the marketing side, the systems side, and the network. Everything is moving at once!"

To date, the systems implementation project is well on track, while progress on the market-based management side actually has been faster than expected. "We have been pushing forward very aggressively with trials, using our needs-based information and customer segment knowledge," commented Barac. "These have been yielding good preliminary results, especially in terms of response rates."

On both the systems and the marketing sides, Barac's strategy involves exploiting quick wins while remaining focused on the long-term goal of market-based management. "You have to look at both perspectives," he commented. "You have a long-term plan, so you have to put the framework in place, define segments and KPIs, and start operating. But you also want quick wins. So, for example, on segmentation we have built a reporting system for segments, scored the database, and implemented a quick-win campaign management system."

A great deal has been achieved already, but what challenges and hurdles remain? Barac highlighted three key ones.

"On market-based management, we have the consumer intelligence, the organization in place, and preliminary trials under way, but we still need to industrialize the whole process," he explained. "The second challenge is to make market-based management actually work when we still have the legacy product-based systems. And the third issue, a combination of the first two, is the fact that implementing new systems—billing, CRM, call centers, and so on—simply takes time."

Telstra's record in turning a promising start into long-term success will depend on two critical factors, according to Barac. The first, and most evident, is to remain focused on being customer centric and needs based. The second is to get the integration of market-based management and CRM absolutely right. "We need to implement market-based management through our CRM system, so that at every customer touch point the CRM reflects our customer strategy rather than just being a new systems implementation," he said. "We have to make sure we embed our customer strategy and knowledge into every contact with every customer—whether via shops, call centers, Internet, mobile, or any other channel."

How is Telstra achieving this embedding on the front line? Barac cited Telstra's call centers as one example.

"Traditionally, call centers are functionally based," he explained. "There is an underlying reason for the call, and customers, basically, are routed to the specialist handling that type of call. The process we are implementing starts with a set of customer needs, or segments, and then translates them into a specific call center experience that matches those needs. So, you move from a functional view to a hybrid view to a customer-needs view. You also look segment by segment at the cross-channel experience and start optimizing it based on customer needs and channel economics."

On the subject of where all this is taking Telstra, Barac is crystal clear. "To optimize every touch point with every customer, you simply have to embed customer centricity rather than product centricity," he said. "It's a massive change that involves not just systems implementation but analytics, campaigns, training, culture, behavior, and many other elements. That's the way forward. And that is where we are heading."

Bringing it all together

Our hypothesis in this article is that the wave of convergence, driven by the accelerated roll-out of broadband technology, is permanently changing the ground rules for customer relationships across the industry. As products multiply and become more complex, as carriers create new content partnerships and advertising models, and as differentiation on the basis of product continues to shrink, customer centricity will become *the* differentiating factor.

These changes necessitate a solid understanding of the customers served, their profitability and their needs, which will drive the identification of key customer experience principles that must be adhered to and delivered. These principles will drive the organizational capabilities as well as the supporting organizational structures, processes, and enabling technologies that deliver them. In our view, this shift is not an option but a prerequisite for a place in tomorrow's infocomm marketplace. Those that fail to embrace this shift face being left behind as their competitors achieve customer differentiation and excellence. Leadership and executive sponsorship are critical to adopting customer centricity.

The winners in the converged, broadband, infocomm marketplace, which is now emerging, will be those who not only understand the full value of every customer but also can act on that knowledge. The way to achieve these goals is to recognize and harness the full potential of customer centricity and its implications for the company's CRM capabilities.

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Remote

Control

Using outsourcing and offshoring to stay competitive and enter new markets

Telecommunications service providers across the world are faced with challenges related to intensifying costs, disruptive technology changes, and competitive pressures in combination with continued globalization. As a result, these companies are constantly seeking new ways to reduce their costs and open up new markets. A strategy they are adopting increasingly, as a means of achieving both objectives, is that of moving their non-core and even core activities offshore, either through wholly owned captive operations or via outsourcing. We examine this trend and look at some of the major telecom service providers that are leading it.

by Paul Horowitz, Pawan Verma,
and Arpita Pal Agrawal

In today's fast-changing global market, neither service providers, operators, nor carriers can afford to stand still. Facing growing demands to maintain profitability and shareholder value by increasing their revenue opportunities and maintaining or reducing costs—while constantly harnessing technology to offer innovative services—these telecom companies know that sticking with traditional operating models is not an option.

In a growing number of cases, their response has been both decisive and innovative. Among the various participants adopting new and innovative operating models in the telecom industry, service providers have emerged as one of the leaders in outsourcing and “offshoring” their core and non-core functions. As these companies analyze core and non-core functions across their value chains, they are finding more and more activities that could benefit significantly from being moved offshore to a lower-cost location and, in some cases, from being outsourced to a third-party supplier at the same time.

The competitive necessity

The common, crucial driver behind this shift toward offshoring/outsourcing is the intensifying cost pressure we have already highlighted, which requires ever-tighter control of the cost of operations. The other driver for moving operations offshore is that of advancing globalization, with centers such as India and China emerging not just as low-cost environments in which to operate, but also as very attractive markets for telecom products and services. In the case of outsourcing, accelerating the time to market and freeing up time for top management to focus on core business are other drivers.

In combination, these drivers have changed the rules of the game. Virtually every player in the telecom carrier and service provider space is now either actively offshoring/outsourcing already or looking very closely at the business case for and practicalities of doing so. As a result, offshoring and outsourcing are evolving rapidly from desirable differentiators into a competitive necessity—essentially a prerequisite for staying in the game.

A further development is that, increasingly, operating offshore is a way for companies to “dip a toe” into a particular market before committing to invest heavily in it. By setting up administrative processing or back-office functions in the target location as an initial step, they can get hands-on experience with the local culture, business environment, and regulatory constraints in a relatively low-risk way. This back-office

presence then provides a platform for establishing business relationships and, more important, an opportunity to understand the local markets. The knowledge enables them to customize products and services so as to introduce them effectively into the local market.

Proceeding with caution

Any opportunity to move operations offshore or out-of-house, however, needs to be pursued with painstaking care. Although much attention tends to be given to contract negotiation, service level agreements, and vendor selection, it is actually what happens *before* the contract is signed that makes or breaks an offshoring/outsourcing initiative. Many executives have found themselves in the difficult position of having to explain to the board why their outsourcing initiative is not meeting the original business objectives and the projected return on investments.

Companies must approach these initiatives holistically if they are to succeed; otherwise, they should beware of pitfalls. Spreading portions of mission-critical business processes across organizational and geographical boundaries introduces a whole new set of problems and issues. Also, many changes that affect a company's business operations ripple across a range of core processes, requiring tight, carefully planned integration and coordination of people, processes, and technology.

All this means that a 360-degree view of all the implications and interdependencies is vital to the success of any offshoring/outsourcing initiative. Which core and non-core operations are suitable to be moved to a third party or offshore? In addition to lower costs, what are the likely effects on the customer experience, service quality, brand, corporate reputation, and legal liabilities? What are the effects on other upstream and downstream processes and risk areas? Are there any contractual requirements for particular tasks to be handled in-house—meaning that while they can be moved offshore, they cannot be outsourced? What are the pros and cons of setting up an offshore captive operation versus using a local outsource partner? Where can we get informed, impartial advice from people who have been through the process before?

Adopting a phased life cycle

Before taking the plunge into offshoring/outsourcing, a company needs to consider all these questions, and more. The best way to ensure taking into account every risk factor is to follow a phased, methodical approach that covers every stage of the offshoring/outsourcing life cycle (*see Figure 1*).

Figure 1: The offshoring/outsourcing life cycle**1. Strategy**

- Validating the strategy
- Identifying the options
- Preparing the business model
- Agreeing on the sponsorship and building the team

2. Feasibility

- Building the business model and case
- Creating the baseline
- Understanding the market
- Assessing and benchmarking the options

3. Transaction

- Structuring the deal
- Agreeing on the assets
- Negotiating the contract
- Delivering the deal and the business case

**4. Transition**

- Delivering the change
- Getting quick wins
- Establishing the culture
- Managing the people

5. Optimization/transformation

- Monitoring the contract and resolving disputes
- Transforming the business
- Reassessing the relationship
- Delivering the business case—realizing the benefits

6. Termination/renegotiation

- Planning the termination
- Renegotiating the contract
- Decommissioning and/or reallocating

Through best practices that support both making the right decisions at every stage and forming strong, sustainable partnerships, the life cycle enables successful execution of the original strategy for offshoring/outsourcing operations.

The life cycle has six phases—starting with the strategy and moving through feasibility testing of the market and business case to the transaction itself. However, it is vital for the company to realize that “doing the deal” is merely the culmination of the early phases, not the conclusion of the process. The company still must manage a smooth and efficient transition to the new model, including not just implementing the processes and technology but also taking into account people and cultural factors.

The transition is followed by focused optimization and transformation to ensure that the targeted benefits are realized on a continuing and sustainable basis. And, finally, the expiry, the termination or renegotiation, of the contract leads to a decision on decommissioning, expanding, or reallocating the activity. Often, the outsourcer’s approach and agenda at this stage are driven by the fact that its business is undergoing fundamental changes and evolution, meaning that it wants to renegotiate and reshape the contract to reflect those changes. But whatever the context and specific drivers at the time, the termination/renegotiation phase inevitably brings the focus back to strategy and causes the relationship to continue on through the various phases of the life cycle once again.

Our experience shows that successful offshoring/outsourcing is about two things: 1) getting the right information to make the right decisions at each stage, and 2) forming strong and sustainable partnerships that enable the company to deliver the hoped-for benefits. The life cycle creates a best-practice template for achieving both objectives—thereby enabling successful execution of the original strategy.

Offshoring in action

We find a good example of this kind of carefully planned approach in action in a US\$1 billion telecom service provider, based in the United States, that provides network software and services in the IP, wireline, and wireless sectors. This privately held service provider has grown its business by partnering with customers to deliver flexible, standards-based software solutions and consulting services that optimize complex network and business support systems, helping customers transform their business while aggressively reducing costs and increasing revenues. Its products and services address key areas for telcos such as billing, provisioning, and switching applications.

This firm’s success with its established customer base of large operators in its home market in the U.S. led it to look around the world for opportunities to globalize its business model. One major reason was that many of its largest accounts were expanding overseas to capitalize on emerging market opportunities in countries such as India, Russia, and China—and passing their new software development requirements to other service providers that were better positioned to provide local service.

A second reason was that many of these other service providers benefited from a much lower cost base and therefore were able to offer the large new market entrants a far more competitive package. Committed to both cutting costs and establishing a presence in emerging markets, the company’s senior management asked PricewaterhouseCoopers to help conduct a feasibility study to rationalize their

strategy for presentation to the board. The study included evaluating opportunities in Russia, China, and India to establish the company's offshore Centers of Excellence. After evaluating these potential locations, the firm identified India as the best initial target—both as a low-cost, high-quality location for operations and as a potential market for its own offerings.

A further factor to consider in the decision was that some of the company's customer contracts require it to handle activities within its own operations rather than via a third party on an outsourced basis. This and various other factors concerning risk and control pointed to creating a captive offshore facility in India rather than seeking an outsourcing partner. Setting up a fully owned facility in India was the action the company decided to take. In doing so, it opened the way to a combination of bottom-line cost reduction and top-line revenue opportunity, creating a win-win approach for its business.

Within six weeks, the company built a business case for setting up its first offshore Centers of Excellence in India. Included were critical details on how to manage the initiative globally across all onshore and offshore locations, together with a 24-month implementation road map supported by essential, up-to-date cost benchmarking data. The company then pressed ahead with establishing its first strategic foothold in India.

In September 2005, this strategy bore further fruit when a leading wireless operator in India selected the company to support its long-term evolution of prepaid and postpaid convergent solutions. Under a three-year deal valued at \$20 million, the Indian wireless operator is now deploying the firm's ISCP system, an advanced service delivery platform, along with the service provider's Global Services arm that supplies consulting, program management, and integration services.

Innovative network outsourcing

A further area of the value chain where companies in the telecom space are focusing in their drive to achieve greater efficiency and effectiveness is the management and support of their networks. The outsourcing of network infrastructure by operators has developed rapidly in recent years, as they have looked to improve their financial performance, grow faster, reduce time to market, reduce complexity, and focus on their core competencies in creating and delivering services.

However, the sheer diversity of the business models, competitive landscapes, and market positionings in the global telecom arena means that a one-size

approach does not fit all in network outsourcing. That reality underlines the need for companies to invest significant effort in finding the solution best suited to their particular business.

Diversity is also reflected in the various levels at which network outsourcing can take place. At the initial level it tends to focus on operations and maintenance, while at a deeper level it moves on to network support and development. A telco that starts at the first level can develop its approach over time and move up to the second. As Figure 2 shows, moving up through these levels will tend to increase the amount of value that the network outsourcing agreement can create, and also require increasing levels of trust and collaboration to make it work.

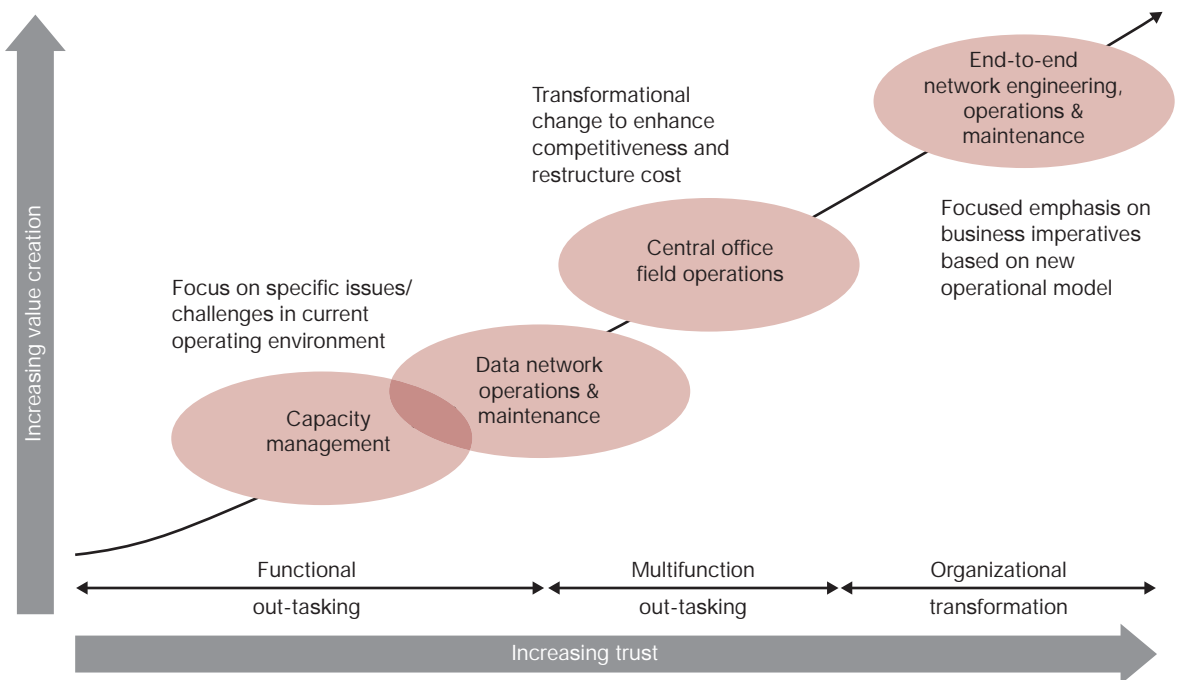
This progression can be characterized as moving from clearly delimited "out-tasking" focused on specific challenges, via broader out-tasking across a range of functions, ultimately to transformation at an organizational level through a new operating model. The ability to embrace a new operating model based on outsourcing—both in network management and other areas—is an increasingly important competitive differentiator in the telecom sphere, and one that is exhibited by many of the most innovative and forward-looking players.

Breaking new ground in outsourcing

An early adopter and pioneer of network outsourcing in the global telecom sector is one of India's leading providers of telecommunications services. It has more than 22 million customers, including more than 20 million mobile customers, and was the first private operator to provide mobile services in all the 23 telecom "circles" in India. The company also provides telephone services and Internet access over DSL in 15 circles.

In February 2004, it scored a world first when it announced a joint initiative with Ericsson to build and manage "mega" networks. This three-year agreement—designed to significantly improve mobile coverage and quality of service, and enable the company to benefit from cutting-edge technology on a continuing basis—was valued at more than \$400 million.

The agreement involved Ericsson's managing, maintaining, and providing quality assurance on 10 existing mobile networks and three new ones. In this unique initiative, the payment for network capital expenditure was directly linked to the actual capacity utilization, and the aim was to provide congestion-free networks with seamless coverage

Figure 2: The various levels of network outsourcing

Companies that embrace outsourcing as a new business model—progressing from clearly delimited out-tasking to out-tasking across functions—ultimately transform their organizations and differentiate themselves competitively.

Source: Lucent Technologies.

and enhanced quality to the customers in the geographies covered under the agreement. It also included plans for deploying EDGE technology to support higher data transfer rates, which would enable the company to deliver the full potential of advanced mobile Internet services, video streaming, and Internet-based multimedia services.

The success of that agreement saw this telecom company spread its outsourcing initiative over more than one provider. It has set global benchmarks by subsequently entering into innovative partnerships with two more of the leading telecom equipment vendors of the world, Nokia and Siemens. With these agreements, this company had outsourced the network planning, supply, and management of each of its 23 licensed service areas in India to Ericsson, Nokia, or Siemens. The company reports that these transformational initiatives have started to deliver impressive benefits. The network quality has been enhanced, state-of-the-art products and services are continually being introduced, and the network is being efficiently utilized—allowing the company to focus on high-quality services in the marketplace.

Whereas the U.S. service provider described above was using the option of offshoring its operations while keeping them in-house, the Indian provider has focused on the other two areas of the quadrant, namely, outsourcing its activities while keeping them onshore in its home country. Its commitment

to outsourcing as a major part of its strategy is further underlined by agreements in other areas of its business. In March 2004, it announced an innovative business transformation agreement with IBM that involved the consolidation, transformation, and management of its comprehensive IT infrastructure and applications by IBM India. And in August 2005, the company announced the outsourcing of its call center operations to a group of four world-leading business process outsourcing providers, including Hinduja TMT, IBM Daksh, Mphasis, and TeleTech Services, with the aim of enhancing the quality of customer service delivery to its customers across the country.

Applying discipline and focus

As the experience of both of these telecom service providers demonstrates, offshoring/outsourcing presents major opportunities both on the top and on the bottom line of a forward-looking telecom business. Both of them also clearly demonstrate the fact that capitalizing on these opportunities requires a carefully planned, holistic, methodical approach that takes all risks, implications, and related effects into account.

So to gain a truly competitive advantage through outsourcing or offshoring, companies must pick the right set of processes to outsource or move offshore, and for the right reasons. They also must focus on

improving business performance across organizational boundaries through integrated and streamlined business processes.

Successful outsourcing is all about approaching the initiative as a transformation and not just as a transaction. This includes carefully identifying and managing all the associated risks—making sure there will be no surprises down the line. The telecom service providers we have described here have done precisely that.

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WIDE OPEN spaces

Removing boundaries to foster creative interaction among content, distribution, and technology companies

The content, distribution, and technology sectors have undergone tremendous upheaval in the past decade, experiencing divestiture as well as consolidation. Across the three sectors, convergence is now emerging as the predominant movement.

However, despite consumer demand and activity in all the sectors, companies are struggling. The forces driving convergence are creating a situation in which attaining maximum shareholder value is beyond the capabilities of current management models.

by Randy Browning and Deborah Bothun

To create shareholder value, companies must adopt an open business model, eliminating internal walls between business units and external ones between a company, its partners, and other strategic business allies. Eliminating the walls will stimulate interplay among a company's content, distribution, and technology capabilities—enabling it to embrace disruption and achieve maximum return on investment (ROI).

A company without walls is operationally fluid and communicates effectively. It integrates customers' ideas and monetizes content that customers may create. It takes risks, makes deals with competitors, and chooses a 50% stake in something rather than holding out for 100% of nothing.

A company without walls anticipates and responds to relevant changes in the marketplace¹ as well as every technological advance. And, it can incorporate disrupters into its business model without being disrupted itself. Such nimbleness, though, does not come without investment in gaining strategic flexibility. As one studio executive put it, "Revenue [based on this new way of managing] isn't necessarily going to happen immediately. Deals take longer. It takes a lot of senior management time to get it right."

By adopting an open business model, a company operates with four basic attributes:

- 1 It employs the disciplines of the capital markets.
- 2 It personalizes the customer relationship.
- 3 It maximizes the potential of content.
- 4 It creates a culture of innovation.

Attribute no. 1: Employing the disciplines of the capital markets

When prioritizing investments, companies in the content, technology, and distribution sectors must relate their actions to the rigorous indicators of value required by the capital markets. They must measure their business units and strategic alliances from within using the disciplines of the market (that is, determining the metrics that will measure success). They must assess the potential effect of activities and behaviors on shareholder value, or on some of its acknowledged counterparts, such as cash flow and revenue growth.

The underpinnings and decision making of most companies in the media, telecom, and technology sectors remain opaque to the market. Although currently not hindered in obtaining capital for investment, these companies—once operating with the openness we advocate—will tell investors what

they are doing, more quickly and in greater detail than is typical today. When the result is a full understanding of segment and company strategies, a balanced view of risks and competition, and a valuation of alliances and internal interactions, the likely effect on the markets will be opening the pipeline of investment.

"The value comes from companies articulating and executing a transparent new media strategy in a changing competitive landscape," said Tuna Amobi, Standard & Poor's chief media analyst.

Strategic alliances require an immediate return on both sides of the equation. The need for something to work quickly for both parties may provide companies a new way to think about how to grow organically, structure relationships among business units, and build mergers and acquisitions (M&As) as well as strategic alliances.

"Alliances could be possible vehicles to broaden a company's reach and diversify its portfolio of content and/or distribution assets," Amobi said. PricewaterhouseCoopers believes this is precisely how business units should be viewed in an open model.

Although alliances vary, they share three characteristics: 1) an agreed-upon set of objectives, 2) an accountability framework, and 3) a clear decision-making process, at the end of which performance can be measured easily.

As one media executive stated, "The key with alliances and with any kind of new M&A or organic growth in this environment is that you have to plan and execute as quickly as possible regardless of the pain. You need to take the hit to really merge the business units and then you're out of the doghouse."

For convergence to work, only companies that are disciplined enough to sacrifice parts of themselves as needed can succeed. A media executive we interviewed described it succinctly: "If a business does not do it itself, another entity will likely cannibalize them."

Attribute no. 2: Personalizing the customer relationship

Of the many walls companies manage to erect, those between themselves and their customers are often the toughest to eliminate. No longer just purchasers of goods, customers of converged companies demand a more prominent role and may even participate in operations and strategic development. The savvy convergence company will mobilize customers as sources of innovation and content creation, and therefore success.

As consumers become masters at managing their own personal supply chains, the relationship evolving between companies and customers is taking many forms. To put this in perspective, imagine a homeowner in the early 1980s. That homeowner's personal supply chain might have encompassed a dozen or so companies, including niche utilities for electricity, water, gas, telephone, and perhaps cable TV. Now consider the personal supply chain in 2006, in which telecommunications services have expanded dramatically. In addition to land-line telephone and cable, a typical household may receive services from a broadband company (sometimes the cable provider, sometimes not), from Internet providers, from providers of technical support for the household's many media devices, and from one or more mobile phone providers, including mobile virtual network operators (MVNOs).

Enterprises in the convergence world should consider customers as employees or agents who are not paid, but who are core to the future success of the business. The convergence-driven open model means that customers can be a source of innovation, product development, content creation, and other mission-critical functions. This requires a new mindset when it comes to thinking about customers, since the methods of motivating them and providing them incentives are different than they would be for actual employees.

An important consideration for customers is their privacy, which must be approached with delicacy and constant vigilance—including within company divisions and alliances. In focus groups conducted recently by PricewaterhouseCoopers, however, consumers indicated willingness to provide information about themselves, their lifestyles, habits, and preferences if by doing so they would receive information, promotions, and advertising that appeals to them.²

According to the study findings, control is the key to customers accepting advertising in new media. For example, they accept e-mails sent to the social network profiles they create, and they would accept targeted commercials in on-demand television if they could fill out a preference form before accessing the service. As our report on lifestyle media points out, advertising, when done successfully, becomes content that listeners, viewers, and device users choose to consume rather than skip.³

Where the consumer is concerned, having an open business model means collaborating with advertising agencies to improve and target ads. Once inside the consumer's life with a service or delivery platform, a company can capture rich data, analyze it for

insight on which to base action, and act on it at record speed—all within the limitations of consumer-privacy laws and regulations.

Access to more information lowers the risks and costs of testing new advertising models. Yahoo!'s Revenue Science project, for example, is a pilot that enables advertisers to run behavior-targeted advertising campaigns across several Web sites, based on the consumer's particular activity.⁴ Models that go beyond the typical ad banners include personalized ads (TiVo bases them on consumer profiles and inserts them into a video stream) and polled ads (ReacTV uses its interactive format to poll audiences on ads viewed and award prizes for participating).

Advertisers should look at users of MySpace.com for sponsorships. Some users gain a vast MySpace audience and launch clothing lines, nightclubs, even film and television deals. PricewaterhouseCoopers has termed these emerging celebrities "underground brands." The branded customer may well be the new high-value customer.

Tracking the development and use of social networks and the roles customers play in other enterprise networks, as well as identifying brands as they emerge, are of utmost importance. For the converged company, effectiveness becomes a matter not of who owns the customer, but who knows the customer.

Attribute no. 3: Maximizing the potential of content

Because customers can find content anywhere, any time, with any device, companies in the content, distribution, and technology sectors need to maximize their own and one another's capabilities to achieve optimal ROI. Content companies will need to exploit the content they currently control. Companies with roots in distribution will need to own or have access to valuable content. And companies with roots in technology will need to maximize the flow of content to the consumer.

Respondents in PricewaterhouseCoopers' consumer focus groups expressed a strong appetite and willingness to pay for unique and hard-to-find content. An example of the market's testing of such consumer preferences is the NBA's arranging with Google Video to sell classic tournament games.⁵ The *San Francisco Chronicle* reported: "Internet television has become the latest rage on the web.... hordes of Internet users are tuning in to sites such as San Mateo's YouTube.com and video.google.com, where they can watch, post and share millions of pieces of video footage."⁶

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Only exploration will determine the ultimate source of value for convergence companies. VeriSign, for example, known for security services, acquired a provider of ring tones as part of a “much larger mobile media market” it is pursuing.⁷ Companies must be able to both speedily recognize valuable content and distribute it according to a defined strategy. Awareness of the value of content includes resisting the kind of short-term gains that can harm overall shareholder value. For example, when the USA Network bought the rights to 88 episodes of the CBS action show *NCIS*, Paramount, seeing value in pay-per-view and video-on-demand, kept those rights for itself.⁸

Open business model companies must collaborate with their technology partners to allow interoperability of content between devices—which consumers feel they have paid for—while protecting copyrights through security mechanisms. They must deal with issues of timing and rapid technology convergence that are quickly eroding tight controls on content distribution. IFC Entertainment and Comcast have agreed to offer independent films to consumers by a video-on-demand service⁹—but they are allowing the viewing to start the same day the films are released in theaters.

Where content and distribution meet, everyone is trying to protect current income streams while renegotiating their rights under the new modes of distribution. A good example of this is Amazon's reportedly discussing with major motion picture studios a fee-based service that would allow customers to download and burn copies of movies and television programs onto DVD—legally.¹⁰ Open business model companies will need to contend with often highly complex issues of digital rights and intellectual property.

In distribution, wireless companies have been embarking on new content strategies, such as downloadable music and ring tones. A report by ABI Research showed a significant rise in consumer spending on wireless content globally, from \$12.4 million in 2004 to \$251 million in 2005.¹¹

Technology companies are joining distribution companies (telcos and cable providers) to extract value through licensing fees, yet the two meet through content. For example, IPTV software, for which Microsoft collects licensing fees, enables the delivery of integrated television services over managed networks. “We provide the tools to the content providers so they can expand their reach,” said Phil Corman, director of worldwide ecosystem partners for Microsoft TV.

Regardless of whether its roots are in content, distribution, or technology, a convergence company's success will lie in understanding its customers and then, rather than simply making content available, creating the compelling experience it wants customers to have.

Attribute no. 4: Creating a culture of innovation

In the traditional view of innovation, a large, established player dominated investments in R&D, controlled implementation, and left other companies to follow its lead. In the world of convergence, innovation results from the interplay of sectors and businesses. Continual innovation is now defining the playing field.

The best collaboration occurs when innovation is accessible at all levels of an organization and among business partners. Digital audio led the charge for convergence when MP3 became a household word. Today, consumers buy and trade digital audio and video files that can be played on PCs, portable devices such as iPods, home stereos, and cell phones. TiVo allows programs recorded on a personal video recorder to be moved to a PC and then recorded onto a personal video recorder or copied to an iPod or PlayStation Portable. This interoperability exemplifies the breaking down of walls we believe will be necessary to meet consumers' demand for content mobility.

How might an open business model foster innovation? Part of the answer is that the intense technology spending and alliance-building activity discussed earlier have created a spike in innovation that continues to rise. Also, companies who see themselves as innovators tend to be less fearful of walls coming down.

Entertainment, media, and technology investor Mark Cuban, for example, is proposing attracting moviegoers to his theaters by selling the DVDs at the showing of current movies.¹² Hewlett-Packard Labs has been working on sunglasses with built-in cameras and the ability to view the photos by means of an HP coffee table complete with Internet access.¹³ Whether these experimental ideas will become products is unknown, but a willingness to test boundaries is part of the creative process.

Another part of the answer is that consumers are providing impetus for innovation. Eric Raymond, president of the Open Source Initiative, pointed out that the history of software development was profoundly affected by customer involvement.¹⁴ Open source software was a disrupter for some companies, but contributed to opportunities for others.

In order to leverage customer innovation, companies sometimes need to overcome their instinct to put up barriers. Lego launched the programmable robot kit Mindstorms in 1997, only to find three weeks later that a thousand hackers had downloaded the operating system, improved it, and posted their work online. When ready to upgrade Mindstorms recently, Lego outsourced innovation to a panel of its developer fans.¹⁵

In the related “remix culture,” consumers combine features of various offerings and create products they want, or “mash-ups.” A popular mash-up, Chicagocrime.org, lays local crime statistics atop Google maps.¹⁶ In response, Google is spreading Google-related development on the Internet by making source code available.

A customer of both Apple Computer’s and Microsoft’s initiated a contest, not sanctioned by either company, for a hack that would allow Microsoft’s Windows XP to run on the Intel-based Macs. Two software developers claimed the cash prize with an open source project to which other developers were already contributing.¹⁷ Such moves could be significant considering that software conflicts and the lack of interoperability between disparate hardware devices have been major roadblocks to convergence in the home.

Creating a culture of innovation involves a true willingness to open the business to innovation in all its forms and origins, and to overcome the natural fight-or-flight response to disruptive forces in the marketplace.

How to open your business to the benefit of convergence

In an open business model, companies should be able to change quickly based on consumer, competitive, or technological demands and to move forward in harmony with the changing worlds of customers and business partners. The steps outlined below show you how.

Partnerships and alliances. Forming partnerships and alliances is a requirement for growth. This means finding a workable method for all parties to get past the understandable zone of discomfort and give more than they currently do.

One central constraint in partnerships is the wall of proprietary intellectual property—in other words, ownership of trade secrets. Eliminating this wall must be done meticulously so that what is lost in intellectual property ownership is gained in ROI.

Transparency is crucial. Partnerships must show how they are using intellectual property, how the intellectual property is being monetized, and how that money is being tracked. Actions to consider:

- Structure alliances to meet established strategic and operational goals that can be monitored continually. Communicate these goals throughout all organizations involved in the alliance. Make sure there is an exit strategy.
- Implement mechanisms for monitoring performance. Include a reporting process that is adequate to ensure that revenue/cost and information-sharing agreements are upheld. Make sure a balanced scorecard/performance-management dashboard is in place.
- Designate intermediaries among the parties involved, providing independent verification where needed. Establish a management protocol based on transparency and trust.
- Clearly define the metrics for success (and failure) before entering into an alliance or partnership. Establish visible and defined accountability for these metrics. Communicate them to all stakeholders. Ensure that the goals and objectives of all parties are aligned to achieve a win-win model.

Preventing revenue leakage. An open business model brings new issues that companies must address as they enter into complex revenue-sharing contracts. These include billing, licensing, intellectual property, contract management, and royalties systems. As companies converge, they need to invest and develop processes and systems to protect revenue streams. Actions to consider:

- Identify and quantify revenue leakage points in revenue-sharing systems.
- Conduct an assessment of billing, licensing, contracts, royalties, operations, service/order provisioning, etc. Put a revenue assurance program into operation.
- Analyze all billing line items for accuracy, including relevant charges and agreed-upon rates. Establish a means of identifying whether partners are being over- or under-compensated for distribution or content.
- Enforce intellectual property rights on licensees. Licensors must report usage accurately and keep all licensing agreements properly maintained and up to date.

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Addressing consumer privacy, security, and piracy issues. Access to customer data is central to an enterprise without walls. Consumer-privacy laws must be respected, but the open model depends on informed, controlled ways of moving past the public hypersensitivity to privacy caused by recent events in other industries.

Content owners should understand technology solutions and controls so they can manage the risks and rewards associated with assigning rights and collecting revenue from new business models. Piracy is a problem likely to worsen before it improves, though companies have both defensive and offensive options with which to address it. Defensive options include restrictive digital rights management systems, rigid access-control policies and tools, and, ultimately, employee training and vigilant monitoring. Offensive options include a focus on quality, simplicity, ease of use, and a superior customer experience to encourage legal purchases. Actions to consider:

- Design contracts that help lower walls while addressing security. The rigor of contracts and the formality of legal arrangements are what will allow data sharing to occur.
- Structure contracts so that all parties have a vested interest in making sound data decisions and so that only good stewards of data have access to customer information.
- Avoid over-promising security measures, during negotiations involving digital content, that are neither technically feasible nor cost-efficient. Do not underestimate the operational challenges of protecting digital content.
- Remember that technology alone cannot protect content. Many advanced security monitoring and access control tools are available, but companies should know that people can be either their biggest strength or their biggest weakness.
- Monitor employee access to content-management systems as well as any unusual movements of content, and institute appropriate training programs.
- Consider that digital rights management schemes often rely on a closed system with proprietary rules. Once content leaves the system, protections break down. In the new converged world, closed systems will be unwelcome.
- Recognize that imposing restrictive controls over content by using proprietary methods will continue to alienate consumers. Focus more on strategies that encourage desired behavior in consumers and less on prevention or punishment.

- Help stem the tide of piracy, whether you own or distribute content, by focusing relentlessly on what consumers want. Ease of use and a pleasant, interesting experience outweigh cost considerations among many consumer groups that purchase content.
- Employ quality as a powerful offensive weapon against piracy. For example, high-definition is becoming the standard for television sets, and consumers want programming to match. High-definition files are extremely large and more difficult to replicate cheaply, lessening the incentive for piracy.

Improving customer service. A potential differentiator for companies in the competitive convergence arena is customer service. Customer-care technology needs to support varying levels of customer sophistication, from early adopters to laggards. Whether a company's support service is Web-based, in-store, or over the phone, customers uniformly want easy access to help and immediate resolution of their problems. Companies must also visibly demonstrate the value they place on loyal customers. Actions to consider:

- Define specific customer segments and what those customers value.
- Ensure that both business-to-business (B2B) and business-to-consumer (B2C) models are supported.
- For B2B alliances, invest in understanding the customer's customer and what drives value for your alliance partners. Invest in your customer's success.
- Examine data on customers to understand how they learn about the company's products or services, purchase them, get them to the desired location, use them, and pay for them. Learn to what extent customers participate in post-sale interactions with service and support.
- Employ customer analytics tools to gain a better understanding of customers' needs and to focus on the most valuable customers. Refine this understanding through such methods as customer profiling, customer profitability, and customer churn analysis.
- Use traditional techniques such as focus groups and qualitative research, including full "immersion" approaches, to round out knowledge of customers.
- Ensure that the entire organization embraces enhanced customer service as a core value and a priority.

Managing change. The open business model has implications for virtually every internal aspect of a company. And a company's culture will have a major impact on its ability to realize this open model.

Since business convergence involves integrating existing organizations, alliances, and partnerships, these changes are considered culture-change initiatives. Approach such initiatives with the goal of developing a culture with the desired attitude toward risk, which in turn will drive individual and team behavior in collaboration, innovation, empowerment, and performance measurement. Actions to consider:

- Establish a clear organizational blueprint that can be executed quickly and efficiently and that addresses the cultural traits of the participating workforces. Cultural integration is necessary for achieving alignment with the intended strategy.
- Do not misinterpret open, flexible business models as loose or lax structures. Operational effectiveness can be achieved by implementing accountability models, a critical element in ensuring individual and group-level conformity.
- Set objectives for the new business models and ensure that internal transparency, learning processes, and communications reach all levels of the organization.
- Plan how to manage change and execute the plan deliberately. Sustain the effort by assessing impact, managing stakeholders, building competency, managing performance, and transferring knowledge.
- Finally, recognize that longstanding management decision-making practices are rooted in closed systems—and closed systems are the Achilles heel of the convergence enterprise. This convergence era is a time of rapid change that demands a new business model.

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This article is an excerpt from Breaking down walls: How an open business model is now the convergence imperative, published by PricewaterhouseCoopers in April 2006. For a copy of the entire paper, please visit our Web site at www.pwc.com/convergence.

Endnotes

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B R I D G I N G the Gap

How telecom regulation can help foster growth
in developing markets

Telecom regulation shapes the competitive environment in the market where it applies, including the willingness of operators and service providers to invest in that market, and influences the types of services they seek to deliver. In regions with relatively low disposable income and shallow penetration of telecom services the level of telecoms activity and investment is especially sensitive to regulatory risk. What investors want is predictability. And our research and interviews show that unless the regulatory environment provides this predictability, telecom companies will seek out other places to invest, thereby depriving a region's consumers of the services they deserve.

by Alastair Macpherson and Michael Hardt

A widespread perception holds that regulation is about constraining what companies can do rather than creating opportunities and enabling innovation. However, the fact is that regulators play a pivotal role in creating an environment in which the communications industry can develop and grow. And the ultimate beneficiaries of regulators' actions are consumers, who are able to buy and make use of extended and better communications services as a result.

Regulators' role in enabling and encouraging market activity is often underestimated—but it is an integral part of their responsibility of safeguarding a “level playing field” and fostering fair competition. In pursuing these goals, it stands to reason that the regulatory framework and regulators' conduct should avoid creating any unnecessary risk or uncertainty that might discourage companies from investing in services for customers.

This need demonstrates the clear link between regulation and the growth and development of the communications industry in a particular market. The level of regulatory risk affects the growth of the telecoms sector through two major mechanisms. The first is that regulatory risk increases the *hurdle rates* that operators require in terms of returns, and thereby reduces the level and pace of investment. The second is that regulatory risk also increases the total cost of ownership, thereby reducing the take-up and penetration of telecom services.

The economics of investment

To analyze the way regulation influences investment in telecom services, the first step is to examine the dynamics of investment itself. In general terms, functioning competitive markets rely on the prospect of profits to attract investors. The potential to earn superior profits drives investment and operational efficiency, while also encouraging innovation and improvements in service quality. Low-risk business environments attract many suppliers and investors, creating competition, which in turn puts downward pressure on profits.

By the same token, investors are reluctant to make investments in countries where the prevailing level of political or sector risk is high, unless the expected returns are also higher. These higher levels of expected returns compensate for the fact that the returns might fluctuate significantly.

This link is relatively straightforward, and most stakeholders—including consumer groups and regulators—recognize that prices usually will be higher for goods and services, which require a greater degree of risk-taking. However, profit levels

may not always be viewed in the context of the risks that were involved in undertaking investments in the first place. So the question is, how does regulatory policy influence the relationship between risk and reward?

Risk and reward

When comparing investment opportunities across the world and in specific markets, companies and investors take into account many factors that affect an investment's risk and expected return. The extra return required to justify accepting a higher level of risk is referred to as a *risk premium*.

In the telecoms sector, an investor considering an investment in a particular market will look at a range of risk factors—and the target country's regulatory policy will influence most, if not all, of these factors. For example, licensing policy will influence costs, the number of competitors, and the time frame for recouping investment. Spectrum policy, interconnection policy, and universal service obligations (USO) will directly influence the costs of the company. Regulation can also affect pricing discretion. Worst of all, if no regulatory policy or framework is in place, then the risk and uncertainty may simply be too great to justify any investment.

Clearly, some specific risk relates to factors outside the control of the regulator and possibly of the government as a whole. An example is political unrest, an additional factor in *country risk*, and one that investors need to take into account. Country risk relates to the likelihood that changes in the business environment will occur that reduce the profitability of doing business in a country. When faced with significant downside risk, investors apply a risk premium and therefore require a higher hurdle rate—the minimum threshold below which investments are not deemed viable. The evaluation of projects against a telecom company's hurdle rate is illustrated in Figure 1. A reduction in the hurdle rate brought about by a more stable regulatory environment increases the number of viable investment opportunities and brings additional sector growth and consumer benefits.

As we have already mentioned, a further factor influencing telecom investment is the level of certainty, or the lack of it. Uncertainty affects the timing of investment, since investors that are faced with uncertainty tend to hold back from investing on the basis that waiting and seeing will lead to greater clarity and reduce the risk associated with the investment. This is true even when an investor has the opportunity to seize first-mover advantages by being the first player in a given market. So regulatory uncertainty directly affects the rate at which new products and services are delivered to the market.

Regulatory risk and total costs

Regulatory risk and unpredictability, however, affect not only the level and timing of investments but also the total cost of running a telecom operation. Ultimately, an operator's costs must be covered by its revenues, so any reduction in costs eventually will lead to lower prices for consumers. These lower prices will in turn prompt further increases in penetration and usage.

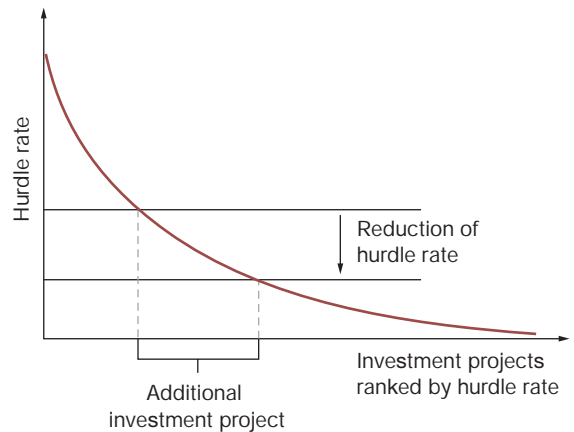
For example, take the total cost of ownership of a phone. The total cost consists of all the expenses that a consumer incurs in owning and using a phone: the costs of the handset, connection, line rental (if any), and call charges, including sales taxes. Operators set retail prices for calls with a view to recovering their costs, including operating costs and the costs of network and non-network assets, among them depreciation and the cost of capital. The latter tends to be a very significant part of total costs due to the capital-intensive nature of the telecoms industry.

Given that the required return on investment depends on risk factors that include regulatory risk, it follows that higher regulatory risk increases the cost of capital—and that the increase will be passed on in the total cost of ownership. This link deserves more regulatory attention than it has received in many countries so far. If regulation is unpredictable and therefore increases risk, the result is bad news not only for operators but also for consumers. Consumers ultimately either bear the associated costs or miss out on services that otherwise might be provided.

Other elements of the total cost of ownership deserve the attention of regulators and governments. Among them are direct and indirect taxes, duties, the costs of acquiring sites, the costs of building and maintaining roads leading to network sites, higher costs due to the use of suboptimal technology driven by short repayment periods, power generation to operate the network, and security measures. Given that demand tends to be highly elastic in developing countries, significantly reduced total cost of ownership will help drive significant increases in take-up.

Our analysis suggests that if governments and regulators want to ensure that their communications sectors thrive and grow, they should prioritize moves to reduce the costs highlighted above. In particular, governments should be wary of overtaxing a sector that accelerates economic and social development and instead should focus on the wider benefits of providing essential infrastructure. Similarly, regulators should take care to eliminate all unnecessary risk, which will drive up required return on capital and thereby the total cost of ownership and the prices consumers have to pay.

Figure 1: Evaluating investment projects against hurdle rate



When a stable regulatory environment reduces a company's hurdle rate, the number of viable investment opportunities increases.

Source: PricewaterhouseCoopers' analysis.

Regulatory behavior

When looking to create a regulatory framework that minimizes risk and unpredictability and therefore encourages investment, governments and regulators need to focus on a number of areas—including license fees, license renewal processes, spectrum allocation, interconnection, USO funding, numbering plans, and dispute resolution processes. The regulatory framework, however, is not the only aspect of the regulatory environment that affects risk. Once an appropriate framework is in place and being enforced, changes in regulatory risk, either upward or downward, will depend largely on regulatory conduct.

Positive regulatory conduct relates to the predictability, impartiality, and consistency of the regulator's behavior across all its regulatory initiatives. To limit the amount of regulatory risk generated by day-to-day regulatory actions, the regulator should:

- Avoid unexpected or apparently arbitrary changes.
- Seek to build up a reputation for consistency (since a reputation for implementing unexpected changes may be worse from a risk perspective than the effect of the unexpected changes themselves).
- Avoid "ex post opportunism" that moves the goalposts for existing entrants.
- Provide clarity about the development of regulations going forward.

A regulator that follows these patterns of behavior within an appropriate regulatory framework will not necessarily succeed in attracting investment in telecom services in the market, since economic

realities such as demand and disposable income will continue to be a factor. But at least the regulator will be fairly certain that it is not hindering investment through its actions.

Case study: Sub-Saharan Africa

PricewaterhouseCoopers recently undertook a study for the GSM Association to examine the impact of regulation and risk on the development of the mobile sector in sub-Saharan Africa. The first point to note is that while regulatory risk and uncertainty clearly are factors in investment decisions in both developed and developing countries, research shows that investment in the telecom markets of emerging countries is far more sensitive to regulatory risk because of less disposable income and the relatively lower penetration of services. The second point, which we have already highlighted, is that investors want regulatory certainty above all. So from an investor's viewpoint, no regulation at all can be even worse than regulation that is burdensome but predictable.

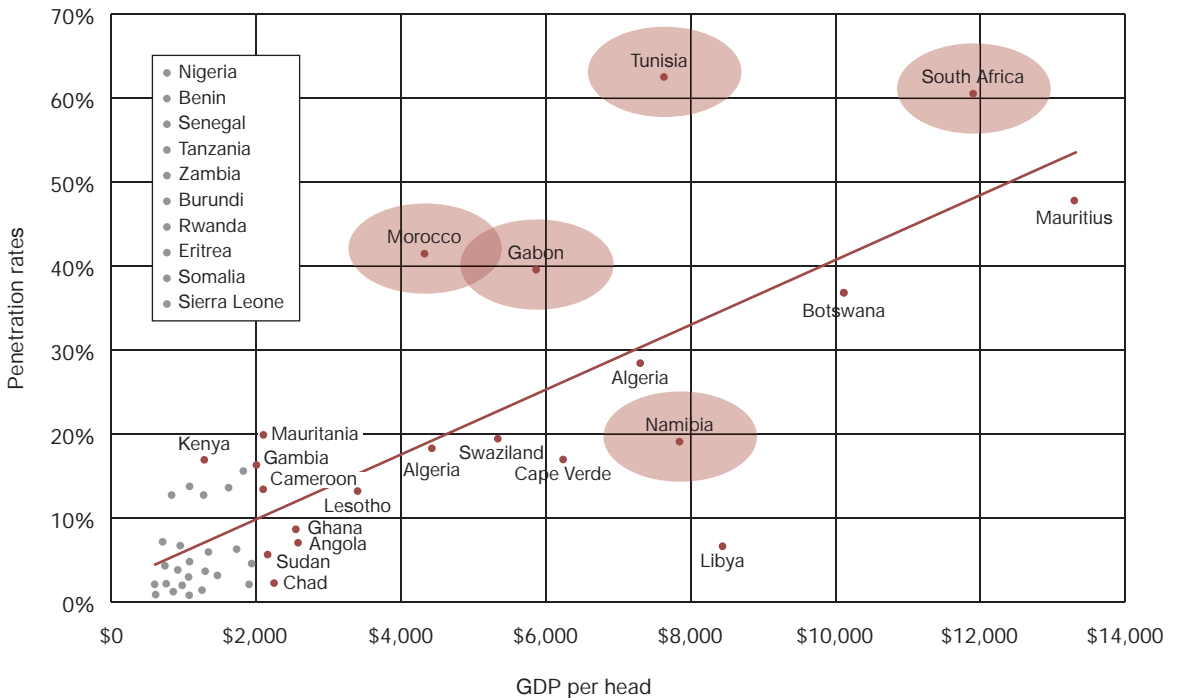
Nevertheless, the relationship between regulatory performance and market performance is difficult to quantify given the range of factors that influence market development. It is possible, though, to examine at a relatively high level how penetration levels compare across various regulatory regimes.

Penetration is affected by a number of factors, the strongest of which is the relative wealth of the population. This fact is illustrated in the scatter plot in Figure 2. Although it is not possible to pinpoint how the regulatory environment contributes to the level of penetration, in several cases the position of a country relative to the trend line is consistent with what we have learned about the degree of regulatory uncertainty.

A few examples illustrate this point especially well. South Africa is above the trend line in Figure 2, and our research indicates that up to now South Africa has corresponded largely to a best-practice regulatory environment. The regime is said to have been stable, with little regulatory intervention. It was also predictable, with future developments laid out in the Telecommunications Act, and the timetable was followed broadly, if not always on time. License fees were reasonable and powers to amend regulations were limited. The regime in South Africa is now going through considerable changes, and their impact may be seen in future penetration rates.

Namibia, in contrast, suffers from a marked lack of regulatory clarity and certainty. Competition has yet to be introduced into the mobile or fixed market, so despite its relatively high income, penetration is low (below the trend line). Of the North African countries included in Figure 2, Morocco is one of the most

Figure 2: Penetration (Q4) and per capita GDP 2005



In sub-Saharan Africa, research shows that not only the relative wealth of a country's population, indicated by the per capita gross domestic product (GDP), but also its regulatory environment contribute to mobile penetration levels.

Sources: Wireless Intelligence, AIA World Factbooks, and PricewaterhouseCoopers' analysis.

Figure 3: Subscriber growth rates in sub-Saharan Africa

	2001	2002	2003	2004	2005
Angola	247%	62%	160%	102%	51%
Botswana	59%	32%	19%	21%	12%
Burkina Faso	285%	74%	60%	62%	43%
Burundi	37%	27%	92%	62%	41%
Congo (Kinshasa)	357%	253%	104%	61%	36%
Côte d'Ivoire	52%	43%	27%	31%	35%
Gambia	216%	320%	95%	29%	27%
Kenya	556%	104%	66%	71%	47%
Mauritius	56%	36%	28%	21%	11%
Namibia	56%	30%	59%	29%	18%
Nigeria	2,211%	153%	98%	183%	99%
Senegal	140%	60%	26%	39%	49%
Sierra Leone	183%	93%	68%	-22%	-11%
Somalia	77%	10%	-60%	48%	63%
South Africa	31%	30%	32%	28%	35%
Tanzania	116%	89%	44%	74%	58%
Uganda	107%	50%	52%	60%	46%
Sub-Saharan Africa	59%	48%	47%	54%	49%

Increases and decreases in percentages of mobile subscribers reflect the influence, over time, of changing economic, social, and market conditions as well as regulation.

Source: Wireless Intelligence.

obvious successes. Despite having income levels almost half those of Namibia, Morocco has penetration levels more than twice as high. Operators see Morocco as having a stable and predictable regulatory environment, and the regulator is considered to be good at using industry consultation to ensure effective decision making. The high levels of penetration may also be due to the licensing strategy adopted: The second mobile license included build-out requirements into local areas.

Mobile growth rates

Further insights into the impact of regulation can be drawn from a comparison of the annual growth in mobile subscribers in each market (see Figure 3). The table shows the rate of growth or shrinkage over time, giving an indication of the combined impact of changing economic, social, market, and regulatory conditions.

Sierra Leone is one of the most striking examples of this impact. Although penetration growth was high in 2001, over the past two years subscriber numbers have fallen. The only other country to

have experienced negative penetration growth is Somalia, a country that has no government and is in the throes of an ongoing civil war.

Sierra Leone has no separate regulatory authority and no telecom law. And while Sierra Leone, also, is quite unstable politically, it is reasonable to assume that the decline in penetration is due partly to the regulatory climate—especially as the beginning of the decline coincided with the official end of the civil war and the reestablishment of government authority. Also, the government's approach to the sector has been somewhat unpredictable. For example, in 2004 the Ministry of Finance decided to impose a tax on airtime that operators have described as "onerous."

Figure 4 summarizes data and demonstrates that the countries that have a well-performing mobile sector are ahead of the others in terms of the liberalization process. For the purpose of this analysis, the category of *good performer* relates to those countries with penetration higher than predicted by

Figure 4: Reform and mobile performance in the countries of sub-Saharan Africa

	Separate regulator	Mobile liberalized	International telephony liberalized
Good performers	92%	100%	54%
Poor performers	69%	69%	38%

Countries that have a strongly performing mobile sector also lead in the process of liberalizing their sector.

Sources: World Bank and PricewaterhouseCoopers' analysis.

the trend shown in Figure 3, and *poor performers* are countries below the trend line.

Significantly, all the good performers have liberalized their mobile sectors, compared to only 69% of the poor performers. Nearly all (92%) of these countries have also set up a separate regulator, compared to 69% of the poor performers. International telephony has been liberalized more often by the good performers. So it appears that sector liberalization, in conjunction with best-practice regulation, brings higher rates of penetration and accessibility.

If all countries in the region were to adopt liberalization and best-practice regulation, the results could be dramatic. Our analysis of sub-Saharan Africa showed that when governments and regulators get it right, all stakeholders benefit from a digital dividend. We estimated that best-practice regulation in the region would have increased total sector investment by 25%, equating to an additional US\$5 billion spent on developing the sector, and would have reduced the total cost of ownership by 10%. Due to the elasticity of demand and the impact of telecoms on economic growth, these two factors in turn would have increased the number of subscribers in sub-Saharan Africa from 83 million to 108 million, adding nearly \$900 million to annual regional GDP.

An investment perspective

To test our analysis of the impact of regulation on investment and growth, we have spoken to a number of telecom industry leaders in the region for their real-world perspectives and experience with regulation in sub-Saharan Africa.

Jay Naidoo is chairman of the Development Bank of Southern Africa, a development financing institution dedicated to expanding economic infrastructure in the region. The bank plays a key role in fostering private-sector investment in large-scale infrastructure projects. Asked what steps he thought regulatory authorities could take to encourage investment in rural areas, Mr. Naidoo pointed out that the mobile telecom sector in Africa remains at an early stage of development. Mobile penetration continent-wide in Africa was just 11.5% in June 2005, whereas it was 20.7% in Asia and 36.6% in Latin America.

He continued: "Improving mobile telephony coverage and penetration, particularly in rural areas, requires a multipronged approach, including public-sector assistance with capex for telecommunication infrastructure, via grant funding (such as using Universal Service Fund-type support mechanisms); public-sector facilitation of 'platform' infrastructure for telecoms, such as electricity provision, both generation and distribution; and public-private partnerships [PPPs], bringing new investors into the continent to engage in market-driven sector development, both in infrastructure investment and in service provision."

Mr. Naidoo went on to highlight the role of regulation. "Regulatory measures are equally important, in that they can give certainty and predictability to the investment climate, both prerequisites for the growth of the telecom sector," he said. "[Possible] measures include the establishment of a regulatory body for telecoms that is independent from government policy-making processes and can guarantee a level playing field for a multiplicity of operators in a competitive landscape; spatially [geographically] defined USO as a condition for operating licenses, helping to deliver rural telecoms to underserved areas; and measures to prevent or limit anticompetitive behavior by dominant infrastructure owners and service providers."

We then asked Mr. Naidoo what he thought of the view that communications is now a basic human right, meaning that providing it should be managed in the same way as is meeting other basic needs. "It is not as farfetched an idea as one might think," said Mr Naidoo. "Human rights are often viewed in two broad dimensions: first, political and civil rights, and then social, economic, and cultural rights. Human rights to basic communication services can be viewed as cutting across both domains. If a society is so advanced and e-connected that the exercise of civic and political rights is dependent on basic access to communication services, then communication services could be said to be a precondition for the fulfillment of civil and political human rights. I don't think the world at large is quite at this stage yet, so I would say that communication services are a matter of facilitating social and economic participation."

Assessing regulation

A second organization we spoke to was Vodacom Group Proprietary Ltd, a pan-African cellular communications company that provides GSM service to customers in the Democratic Republic of the Congo, Lesotho, Mozambique, South Africa, and Tanzania. The company is the largest operator in Africa, with more than 15.7 million subscribers in South Africa alone.

According to Vodacom, regulators should ensure that they create an investor-conducive environment. It added: “Future regulation of the sector should be based on sound market and competition analysis. The following steps should be followed in determining whether regulation is required or not: competition assessment, identification of possible remedies, assessment of the cost and benefits of various remedies, and reassessment of the impact of applied remedies.”

Vodacom went on to say that regulators should refrain from intervening in markets unless there is a proven market failure. “Operators should be encouraged to develop and test new products and services,” commented the company. “The regulator should appoint and retain a highly competent staff complement, able to practice regulation in an effective and timely manner. Regulators should take into consideration international best practices in order to develop best-practice regulation within their local market. Proper administrative processes should be followed in the execution of their responsibility/duties.”

Stifling growth

We also sought the views of Thomas Sonesson, Ericsson’s vice president of customer solutions and sales support in sub-Saharan Africa, who cited the Indian market as a region that had seen steep growth.

Sonesson highlighted the positive effects on economic growth and sustainability related to penetration of mobile telephony services. “An unstable regulatory environment often leads to short-sighted purchasing decisions based on short-term capex thinking,” he commented. “This will not necessarily result in the best return on investment for operators, as the cost of ownership over time is not optimized. This in turn does not necessarily result in the best possible price for mobile services to subscribers and may, in fact, result in lower subscriber penetration.”

He concluded: “It is only with predictable regulation that the operators can make investments with a long-term perspective and benefit from lower and optimized total cost of ownership over time. This will also enable lower user tariffs with maintained

operator profitability. By having a longer perspective in developing the society and related business opportunities, not only the initial capital investment is important but also the running operation costs, resulting in the lowest total cost of ownership.”

The way forward

We have carried out research in the developing countries of sub-Saharan Africa. The results of this research corroborate the predictions of the economic theory of investment and apply more widely to developing countries in general.

Regulation affects all the key aspects of an operator’s business plans, and is therefore a fundamental consideration in investment decisions. At a high level, there is evidence across sub-Saharan Africa that countries with better regulation have higher mobile penetration—a finding that remains true even once income levels and income distribution are taken into account.

An improvement in regulation (regime and conduct) could trigger a virtuous circle. Where there is significant risk generated by regulatory actions, investors demand a premium in compensation. So reduced risk would lower the cost of capital and drive reductions in mobile operators’ total costs that would be passed on to consumers in lower total costs of ownership. Reductions in regulatory risk also would enable more investment in areas where returns are lower, such as network coverage in rural areas. At the same time, reduced risk would allow operators to optimize their investments over a longer time period, in turn allowing them to use better technology.

While regulation is just one factor among many, it is key to a dynamic, competitive, and expanding telecoms sector. Some countries in sub-Saharan Africa have grasped this fact already—and we hope others will soon do so as well.

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Perspectives

An interview with Manoj Kohli

Bharti is a pioneering force in the Indian telecom sector. It was the first to provide mobile service in Delhi, the first private basic telephone service provider in the country, the first Indian company to provide comprehensive telecom services outside India, and the first private-sector service provider to launch national and international long distance services in India. With the Indian market poised for growth in wireless and broadband, *InfoComm Review* sat down with Manoj Kohli, president of Bharti Airtel Limited, to get his insights on the opportunities and challenges ahead for the firm.

InfoComm Review: The government of India has set a target of 250 million fixed and mobile subscribers by 2007. How do you see Bharti's role in meeting this target?

Kohli: We have a mission of putting dial tone in the hands of one billion people, and we take that responsibility seriously. There are currently 144 million (as of April 30, 2006) telephone subscribers in India, and we believe that by 2010 the Indian market should be more than 300 million. Bharti should be leading that market growth.

We launched two breakthrough products last year. One was a Rs. 200 (less than US\$5) recharge coupon, in May 2005. The other was a lifetime product we launched in December 2005, wherein against a one-time payment of Rs. 999 (approximately \$20), the user can enjoy free incoming calls forever without paying any monthly rentals. Both products are quite innovative and customers obviously love them. I think we will continue to introduce such breakthrough products in the future.

InfoComm Review: As an industry, how will you finance the level of investment needed to grow like that?

Kohli: In our case, we have strong cash flows and we are underleveraged. We have no issues of funding our investment—next year we are investing up to \$2 billion in capital expenditures, and I think we should be able to fund it substantially from internal cash flow. Some debt will be required, but getting that will not be an issue. As for the industry, some players will need a lot of debt and others are launching their IPOs—there are a couple of IPOs coming up in the next few quarters.

InfoComm Review: Do you think that the current regulatory environment promotes this level of investment?

Kohli: I think the regulatory environment is quite positive. We believe that the government of India has done a stellar job in supporting this industry. Actually, the telecom industry has been made into a showcase industry by the government, which consistently continues to remove the roadblocks. There is still a spectrum issue, and high license fees and a few other smaller issues, but these should be resolved soon.

InfoComm Review: Usually the market leader has a 50%-plus market share, but in the Indian market there are three players with 20 to 30%. Is there a clear leader in your market?

Kohli: You are talking to the leading brand. Let me clarify. Today, we are the leaders in telecoms; our vision, however, goes beyond that. Our vision is that by 2010 we will be the most admired brand in India. We have to really work hard to achieve that because we are not satisfied with being the leading brand in telecom. I believe we will have to do our best as there are strong brands in other categories.

InfoComm Review: What are the challenges in remaining number one?

Kohli: We are gaining share steadily, although we need to be larger leaders in the future. Our strategies are structured toward picking up more market share. We will have a huge rollout—20,000 sites in the next year. At present, we cover close to 40% of the Indian population and will increase that by more than 50% in the next 12 months, and then further. We aim to cover all the 5,161 census towns of India and also a lot of smaller towns, highways, railroads, all places of worship, and tourist sites by March 2007.

As we launch more breakthrough products and are successful with our broadband penetration and content strategies, that will help us get even more share. Our enterprise strategy is also quite aggressive; we provide end-to-end integrated solutions, which are customized for each company. Our primary focus is on revenue share, not just customer share. I am quite optimistic that we will continue to gain share in the coming years.

InfoComm Review: Which is your key focus, wireless or wireline?

Kohli: We are an integrated player. Our primary delivery platform is wireless, and that will be the biggest thing. The second platform is broadband, and that's a huge focus for the next five years. We believe that will become the next wave in India. I think, through both of them, we will be able to deliver a lot of content to the customers.

InfoComm Review: What is your content strategy?

Kohli: Indians are passionate about music, so this is number one. Then there is Bollywood in second place, third is cricket, fourth is gaming, and fifth is e-education. These are the five big pillars of our content strategy. We are building a separate content services factory. There is also a network factory, there is an IT factory, and now there will be the content factory. We are investing a lot of resources into this new service platform. This concept is already successful with NNT DoCoMo, Vodafone, Verizon, etc., and we will invest major resources into this long-term differentiator.

InfoComm Review: Is content how Bharti will differentiate itself?

Kohli: No. Our long-term differentiation has three pillars. One is customer experience, and this is most important. We are actually building the company away from being a telecom company to becoming a customer experience company. Starbucks sells coffee, but actually it doesn't sell just coffee—it sells a good experience. When you go into Starbucks, you spend an hour, you talk to your friends, you use your laptop, you listen to music, and definitely you have a couple cups of coffee.

We want to do the same. Customers will use the mobile device for music, as a camera, and for identification, m-commerce, and television in the future. And definitely customers will make a few calls, too. Whether it is in our showroom, call centers, or billing, we need to do it right. We need to do it so that each customer has a positive experience and becomes an ambassador for Bharti. So for every moment of truth, every touch point, we are investing a lot in quality and in retraining of all customer-interfacing staff.

This big transformation we are making in Bharti will be the real differentiation. We believe that in the long term, sustainable differentiation can come only from the customer experience.

The second pillar, or point of differentiation, is innovation. Innovation may be sustainable but it is not long term—because competitors copy you, fast. The content services factory is more an innovation differentiator, but it is not as big as the customer experience.

The third pillar that we are trying to build for differentiation is our people culture. The passion of our people to satisfy and delight the customer, to succeed against odds—both environmental and competitive—to work together as a team, to nurture leaders, etc., will be an important differentiator for the customers to feel.

InfoComm Review: Why do you think you can move faster than the competition?

Kohli: If you go back over the last 10 years, I would say that our strength lies in execution. We decide and we execute. There is not much gap between these two. I think we will continue this lead because our execution skills are being institutionalized now through world-class processes and automation.

InfoComm Review: One of the features of the Indian mobile market is the very low tariffs and ARPU's at \$8 and falling. What is the business model for the more advanced services you talk about?

Kohli: We have a unique business model, which is not focusing on ARPU. In our per-minute business model, we look at per minute of revenue, which is a couple of cents per minute. And then there are per-minute operating cost and per-minute capital cost. Capital productivity comes out of that.

So, we have quite a different view from many western telcos. They say that if there is a customer who gives you \$20 per month and another customer who gives you \$10, traditionally the \$20 customer is better than the \$10 customer. We believe either that they will be of similar value to us—or that sometimes the \$10 customer gives us better per-minute profitability and will be equally important in terms of financial viability.

We have adopted this unique model because we think it is quite relevant for us in the Indian environment. The Indian market is one of the most competitive in the world and tariffs are low. So, a mission we took up a few years back was to move toward being one of the lowest per-minute cost producers in the world. We are still working toward that and are planning to improve our economies of scale substantially in the next three years.

InfoComm Review: What is your philosophy on outsourcing?

Kohli: That's part of the business model. We can scale up 10 times in India, and that is required because of the length and breadth of the market and also because of logistics. Our own internal scaling capabilities are not as good as the capabilities of our partners. We have chosen Nokia and Ericsson as our network strategic partners, IBM as our IT and billing partner, Nortel as our call center technology partner, and four BPOs as our call center partners.

Coming up, there will be a few more partners. These are partners who bring to the table technology of extremely high quality and domain knowledge, which operators may not have; and they have an ability to attract good quality talent that we cannot attract. Ericsson and IBM, for example, can attract the right quality because of their own brand names.

In the last two years, this approach has proven right, in both the network and IT fields. Doing this at the right stage has also helped us get our back end right. Our back end, in terms of various IT platforms and IN [intelligent networks] platforms, is quite uniform and consistent. We have one billing system, one IN, and one CRM system. It is one system not only across mobility-wireless but also across the group, across broadband, fixed line, and enterprise customers.

continues on next page

InfoComm Review: Do your customers also receive one bill?

Kohli: Actually, we are experimenting with an integrated product and will have one bill within the next few months. The customer is quite fatigued from dealing with three or four vendors for wireless, fixed line, broadband, BlackBerry, etc. He or she will be delighted to get one bill, one seamless service from one operator.

InfoComm Review: How does the company ensure that outsourced partners adhere to the standards that are required to achieve the excellence in customer experience that you aspire to?

Kohli: It's quite simple. First, we laid out clear SLAs [service level agreements] for quality. Second, we control the planning and review piece; and wherever we feel performance is not up to the mark, we discuss it. There are penalties, too—so it's a strong control mechanism. We are not abdicating our accountability. I think accountability stays with us—it's only the physical "doing" job that shifts, and accountability is 100% on us.

InfoComm Review: You have two very strong shareholders in Vodafone and SingTel. How do you gain the maximum advantage from their knowledge?

Kohli: Both these shareholders are truly supportive of our success. SingTel has been a great partner for many years, and we have gained hugely from SingTel directly and also through its other associated companies like AIS, Globe, Optus, and Telkomsel. We have picked up good practices and products and gained experience, too. Vodafone is a great global company. I think our relationship has started well. We already have preferred roaming agreements with Vodafone in 28 countries, and now we are picking up best practices from various Vodafone countries such as South Africa.

InfoComm Review: Why did Vodafone invest in Bharti?

Kohli: Vodafone has always aspired to enter India, but it wanted the right kind of vehicle. It did its due diligence on the Indian telecom sector and found Bharti to be the most appropriate vehicle. We are integrated players, have a clean structure, enjoy a good reputation, and are transparent in our dealings. We have a strong sense of partnership. I think it's a win-win, and SingTel welcomed Vodafone as a partner in Bharti. All partners will gain from the entry of Vodafone into Bharti.

InfoComm Review: Is there a telecom or other company that you admire?

Kohli: We really admire companies that are entrepreneurial, especially those that are still

entrepreneurial despite being large. Microsoft still has the soul of a small company despite being so large. I also like a few other leading brands, such as Toyota, which leads in Six Sigma quality as well as performance.

We want to be like that. We want to have a strong base of systems and processes, topped off with entrepreneurial ability and enthusiasm. We really do not want to become like many incumbent telecom companies who are bureaucratic or hierarchical. We want to be a company that is open and positive. That means having a flexible culture, entrepreneurial ability, enterprise, and enthusiasm.

Still, we need strong systems and processes. And that's where we are trying to strengthen ourselves now because we are building a world-scale, Indian, multi-national corporation, benchmarked by other businesses.

InfoComm Review: How would you describe the culture at Bharti?

Kohli: We are building a superior and distinct organization. Hence, culturally, we discourage few things. We discourage bureaucracy; we take decisions on our feet. We don't like hierarchy; we are a very flat kind of company where employees can cut across hierarchy, speak with anyone, move fast, and make decisions.

We also don't like internal politics. We put the dead horse on the table because we believe that if you try to sweep things under the carpet, you can never be an open-culture company. Our job is to solve problems, and the more we solve the more the politics disappear.

It's an open, direct culture. We speak directly, we give feedback directly, we don't wait for appraisals to happen to give feedback—we do it everyday. But we do it respectfully. Direct doesn't mean disrespect; direct means giving feedback respectfully and sharing the reasons and logic for that feedback.

This is the culture we are building. This is the culture of a small company or a family, but we are institutionalizing it in a large company.

InfoComm Review: Is it going to take a big culture change to achieve your vision?

Kohli: We want to retain the culture we have always had—the Bharti DNA. We have added so many employees, in fact, 10,000 direct employees and many more indirect employees. They come from different backgrounds, companies, and cultures. We need to adapt them to our culture and our way of working.

The challenge is to get them on the same page. That's why the senior management team is leading

this cultural transformation and helping all the employees understand the DNA, helping them to get trained, to adjust themselves to this DNA. However, we want to add process-orientation and customer centricity to the culture. It's a big challenge, but we overcome big challenges.

InfoComm Review: Do you see any impact on Bharti from the recent mergers in the equipment vendor market, for example, Ericsson/Marconi and Lucent/Alcatel?

Kohli: I don't think so. We are quite agnostic there. We go to partners who give us long-term commitment because we give them long-term commitment. The Ericsson/Marconi merger is actually good for us.

InfoComm Review: Where do you see the 3G market in India in the next three to five years?

Kohli: The 3G licenses are under discussion with the government. We believe that in four to five quarters we should have trials and commercial launch in India.

We have two objectives in 3G. One concerns the upper crust of the customers—we need to attract the customers who love technology, who are data savvy, who are sophisticated, who love video streaming and picking up other varieties of content. We plan our value-added services [VAS] to be relevant to the Indian customer. If we launch something too sophisticated, too technology oriented, it loses relevance to the Indian customer and has low value. We call it "VAS for the masses."

The second part of the strategy is voice. Voice is still the killer application—India is a country where millions and millions of people still haven't listened to a dial tone. The voice efficiency of 3G spectrum is actually better, and we would like to have that spectrum to give us the capability of picking up much more voice.

InfoComm Review: You have not used the word *convergence* yet—how do you see convergence in an Indian context?

Kohli: We have serious plans on convergence. As I said earlier, we would like the customer to feel the delight of one telecom service provider through multiple services. If we converge into one provider giving all the services, converge platforms, converge bills, and converge call centers, then I think the customer actually will be delighted. These are the plans we have to roll out in the next few quarters.

We have "One Airtel" as a slogan in the company now that we are integrating the entire organization, primarily to achieve a converged platform. This has not been easy across the world. We are trying to

take a lead here and become integrated. One Airtel is not only for customers but also for employees, for achieving higher efficiencies and productivity.

By the time we are able to fully converge and integrate our back end, there will be more economies of scale for the company and, critically, customer delight. Then we will actually be able to achieve our vision.

Manoj Kohli is the president of Bharti Airtel Limited, the telecom arm of the Bharti group. He has been with the company since October 2002. Prior to joining Bharti, he was the chief executive officer and executive director of Escotel. He has also held senior executive positions at AlliedSignal, Tecumseh, and Daikin. Kohli was the chairman of Cellular Operators Association of India (COAI), 2001–02, and is a member of the Academic Council of the Faculty of Management Studies, University of Delhi. He is an alumnus of Delhi University, where he completed his bachelor's in commerce and law and his master's in business administration.

For more information, visit the company's Web site at www.bhartiairtel.in.

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