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Carriers head for the clouds

Carriers are turning to the provision of cloud services in droves as they seek to explore fresh opportunities. **Guy Matthews** considers the different routes carriers are taking, and picks out some initiatives that are rewriting the rules.

As the pressure to open up new revenue streams intensifies, carriers of all types are rushing to develop a cloud offer for their enterprise and wholesale customers. It is at this stage a complex scenario with a number of different models being experimented with, the choice for each carrier being driven by their intended customer base.

"Communication service providers want to become cloud service providers, but successful execution depends on several variables," believes Camille Mendler, lead analyst, enterprise services with consulting firm Ovum. She has carried out extensive research into carrier cloud initiatives and has grouped carrier go-to-market models under four headings.

The 'trusted curator', she says, makes a virtue of assembling and supporting best-in-class ICT service bundles, matched carefully to the needs of chosen customer segments: "The telco might take ICT services added to voice, broadband and mobile, and put it all together with a view to capturing as much ICT wallet share as possible," she explains. "We're seeing Telstra, Orange and some US cablecos adopt this model, mainly to attract the smaller enterprise customer." Aiming more at the large enterprise is the 'expert orchestrator': "Under this model, the telco manages multi-vendor clouds for the customer, backed by an end-to-end SLA and a single point of accountability," says Mendler.

Prominent examples of this strategy include Global Cloud Xchange (GCX, formerly Reliance) with its Cloud X platform, as well as rival Indian carrier Tata Communications with its own IZO platform. The two other models picked out by Ovum are 'national guardian' and 'business accelerator', the former typified by Rostelecom and its O7 National Cloud Platform, with its nod towards government ICT policy and the provision of a national cloud infrastructure.

The business accelerator model is concerned with enabling enterprise customers with a mix of technical and non-technical cloud-based services, examples being Singtel in Singapore and Safaricom in Kenya, offering business services in partnership with that country's banking sector.

> "Everyone is pioneering cloud right now, and we're moving at the same pace as many."
>
> **Bill Barney,** CEO, Global Cloud Xchange

There is fluidity between these models, with some service providers deploying several at the same time: "But some models are definitely better suited to specific clients," Mendler adds.

"Service providers can try to migrate between business models to boost sales or find new clients."

Carriers are differentiating their cloud platforms not only by business model, but by any useful selling point that can distinguish them from rivals and bestow a competitive edge.

This can be a commercial matter, with some preferring a direct sales approach and others a sales channel, or one of geography. GCX's Cloud X Fusion, with its direct access to the Google Cloud platform and its connectivity provided by a huge subsea network has, claims CEO Bill Barney, a unique ability to connect the enterprises of the developed western world to high growth opportunities in eastern locations.

"We understand developing markets," says Barney. "We provide connectivity from the markets of North America and Europe to a corridor, stretching from the Middle East through Asia, down to Indonesia and up to Japan."

He contends that this corridor will be the most important growth opportunity in the world for at least the next 10 years: "Technology cycles have been skipped here," he says. "Mobile technology is the first line of communication, and other technologies have been leapfrogged too. Cloud is going to empower these markets at a consumer and enterprise level. This makes it a natural place for us to play. It has around 1.8 billion internet users, and some 55% of the world's youth lives there. It's where the focus is for Fortune 500 companies for the next decade."

He concedes that it is also one of the most regulated parts of the world, and that its markets tend to be relatively closed compared to Europe: "Foreign ownership is restricted, especially in the Middle East," says Barney.

"It needs to open up, and as it does cloud is going to be a crucial area of focus. Cloud is a low cost way for people to get services. It's going to be popular with governments in the region too. Everyone is pioneering cloud right now, and we're moving at the same pace as many. But we're fortunate to have some large coverage of subsea cables and of data centres in these emerging places."

Differentiating in emerging markets

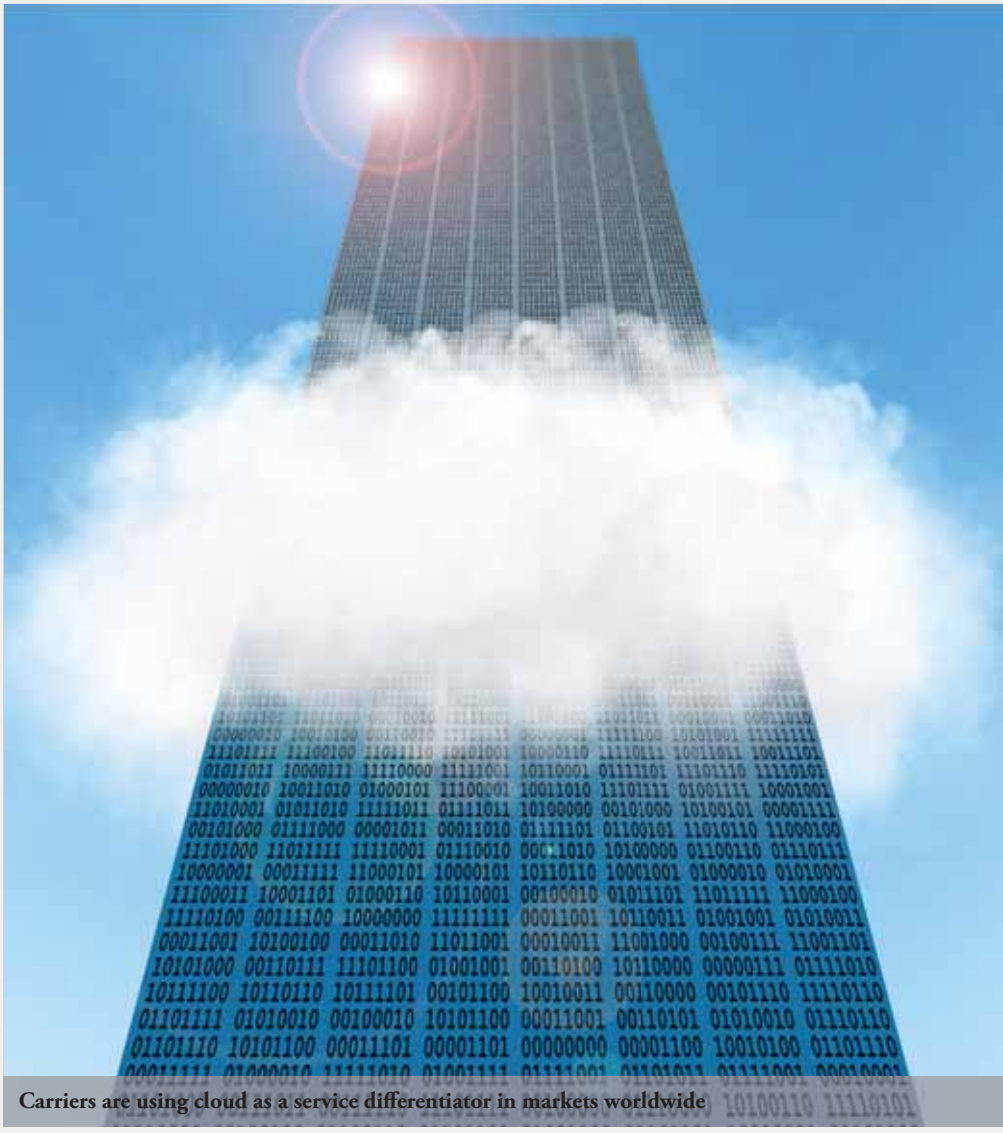
Hong Kong carrier Hutchison Global Communications (HGC) doesn't have the same undersea assets as GCX, but is starting to plough the same emerging markets furrow with its Ibizcloud services platform. Already providing cloud connectivity between China, Europe and North America, it is also investing in new markets where the cloud opportunity is less well explored, says Andrew Kwok, president international and carrier business: "We're expanding our cloud offer into countries like Cambodia and Thailand," he says. "We'll extend next in Singapore, Malaysia, and the Middle East – probably the UAE. We're in Los Angeles now too."

Kwok says HGC also differentiates by how its services are broken down, dividing them into four distinct capabilities: Infrastructure-as-a-Service (Iaas), Bandwidth-as-a-Service (BaaS), Dedicated Bandwidth-as-a-Service (DBaaS) and on-demand Virtual Leased Line (ODVLL) services. "We offer very flexible terms, perhaps where only a few days at a time are needed," he says. "ibizCloud integrates SDN on both its network and cloud services, so that customers can bind virtual machines across different network resources and thus improve operational efficiency."

Flexibility is critical, agrees Tim Bury, managing director of EMEA at US-based carrier Masergy. Its Cloud Marketplace provides a link between a range of compute and storage, data centre and managed video cloud market providers: "Some businesses will want fully managed cloud networking, others will look for hybrid deployment capabilities," he says. "Cost effectiveness undeniably affects a purchasing decision, as does the overall perceived customer experience."

Partnership is everything, says Steven Harrison, lead technologist with enterprise-focussed service provider Exponential-e: "Not being cloud-native organisations, and coming from the infrastructure background they know, most carriers are deploying very straight-forward Infrastructure-as-a-Service," he says. "Customers meanwhile are seeking more and more from platforms and comprehensive solutions. This has driven many carriers to focus their own cloud sales growth on selling to other value-add partners who can take the IaaS and create a more compelling story and solution on top."

Success in cloud is, he says, increasingly about knowing who to bring on board to fill in the gaps: "Being such a multidisciplinary technology, it is not reasonable to expect any one technology vendor or operator to be an expert in all required areas. One may have greater networking experience, another greater storage, another automation. The customers want a solution that is best-of-breed throughout, this can only be achieved by partnering with specialists in each area."



Carriers are using cloud as a service differentiator in markets worldwide

Image: Graham Taylor

Learning to 'hypescale'

An obvious choice of partner, and one that many carriers have made, is a major 'hyperscaler' cloud name like Amazon Web Services (AWS), Microsoft or Google. These big public cloud providers have an important role to play in offering the massive, low-cost, on-demand resources that certain customer applications require.

The carriers who appear to be most advanced in their evolution are those which have not tried to compete head-on with AWS, Azure, Google Cloud and others, argues Jay Gill, principal product marketing manager with vendor Infinera: "Instead, they are leveraging their networks and enterprise experience and relationships to help customers combine private and public clouds, with tailored security services, into secure hybrid cloud solutions," he says. "To succeed, they will need to offer high bandwidth, dedicated links from their own network points of presence and data centres to the data centres of the cloud service providers."

Ian Massingham is technical evangelist with AWS, and believes there are some shining examples of carriers who have achieved genuine innovation with hyperscaler partnership: "There's Telenor with its new IoT service where it is combining AWS with its own M2M and mobile expertise to let customers connect sensors," he points out. "They are doing

what they are good at, and using us to build an agile platform for a specific use case. There has been a tendency for carriers to over-rely on suppliers for innovation, but many, like Telenor, are now revaluating what they can provide. Cloud is not something they want to be developing on their own though."

There are other types of partnership. Belgian carrier BICS has launched a cloud-based hosted RCS service which allows service provider customers to quickly and efficiently deploy a full range of next-generation rich communication services. The solution combines the operator's IPX infrastructure with a traffic control platform from vendor Openmind Networks. Some operators are branding their own cloud platforms. Operator branded platforms and services have a number of key advantages over OTT alternatives, argues Chris Halbard, executive VP and international president at activation software and cloud solutions provider Synchronoss Technologies: "Firstly, operator platforms are device and OS-agnostic, and they're also capable of supporting multiple and varied file formats and data types," he says. "They offer proven carrier-grade scale and security for storing and accessing data and content, plus open APIs and an SDK-type environment for developers, content partners and other service providers to use in partnership with the operator."

Operators also benefit, he says, from having an existing direct relationship with the customer already in place. Expanding this relationship by adding cloud services allows the operator to reassert its authority in the telecoms value chain against OTT players who are imposing on their subscriber relationships.

One option here is to take more of an open source track in preference to becoming tied into anything proprietary: "OpenStack is centre stage for many carrier strategies," points out Boris Renski, co-founder at Mirantis, a vendor of OpenStack products and services. "Some are using it to build cloud solutions for their internal development efforts. This allows them to compete more directly with startups, like WhatsApp. Then you have AT&T using it to build a private cloud platform. You have proprietary and open options, and telcos are rightly afraid of lock-in like fire. Open source is the way."

Open to new ideas

Within the world of open source there are important choices to be made, says Ian Finlay, COO of Abiquo, a software developer that markets a hybrid cloud solution used by ISPs, managed hosting providers and co-location companies. "We support many different platforms – AWS, Google and now Docker too," he says. "It's open source, but different to OpenStack. Enterprises are interested in the issue of keeping control, which is what it does well. Cloud isn't simply about scale or technology. It's about helping the CIO to be a strategic part of the business, to be a kind of internal service provider. This is the challenge for the carrier to figure out. Some have the ability to add value and help the CIO, because they have that kind of relationship with the customer. Others don't have that relationship, as their model has been about 'pile it high sell it cheap'."

The cloud services market is moving fast, new technologies are emerging, and carriers must make difficult choices if they aspire to being more than peripheral connectivity providers. Mark Woodhams, managing director, EMEA with NetSuite, a developer of cloud software, says carriers must first off realise that the cloud services market had moved beyond cost reduction – very much its main role for its early enterprise adopters: "Now it's about agility and meeting changing market conditions," he says. "Cloud is the new normal, and has moved to the mainstream. Those wishing to differentiate themselves need to help enterprises take lots of little apps and glue it all together."

The real game-changers in terms of developing cloud platforms may well be the carriers who look beyond aspects like geographic coverage and at opportunities outside the comfort zone of infrastructure.

"Having a lot of PoPs does not guarantee the value or success of your cloud platform," concludes Jerzy Szlosarek, chief operating officer with wholesale carrier Epsilon. "You need performance built into the network that goes beyond today's IaaS offerings. Intelligence in the network enables QoS and QoE and that will unlock innovation in cloud services. You can't just guarantee QoS at the transport layer. Carriers need visibility from the transport to application layer and to be able to guarantee the quality and performance of cloud services end-to-end. That's what the industry is largely lacking today and will change the game when it is widely adopted."

Why having a cloud platform matters

Just how important is it for a carrier to have a cloud offer? It could be argued that the provision of cloud services is so far from a carrier's core activities to constitute an inessential distraction – a fad perhaps that won't last more than a few years. "Cloud services let operators reconnect with their subscribers and once again own the end-user experience they provide to them, in a way that adds value and reduces churn," says Chris Halbard, EVP and international president at Synchronoss Technologies.

"Operators can retake ownership of the user experience from their OTT rivals by positioning themselves in the pivotal 'enabling' role for providing all cloud-hosted content to the subscribers. They can do so by establishing and securely curating a unique digital profile for each of their subscribers that gathers together their personal information and acts as their identity in the cloud."

A cloud service works best based on a strong bond between cloud platform provider and user. The former must understand the needs of the latter in a way that is much easier for a telecoms operator than an OTT. Those Tier 1 players with a track record will already have earned and developed an established relationship with their subscribers as a reliable, trusted and secure provider. "At the same time, users today are creating and consuming ever-increasing amounts of content and data, which they want to access wherever they are, across a broad range of devices," says Halbard. "Operators are in the ideal position to meet this demand, as a trusted and highly secure means for transporting and accessing data." But don't think just conventional consumer or enterprise service areas. The cloud is set to play an increasingly prominent role in activating and enabling IoT innovations such as wearables, and new services like remote automated control of home appliances.

An investment in a cloud offer doesn't just change how operators relate to customers, but creates a new paradigm of partnership. Operators can use the cloud as the foundation for working with partners, such as developers and data centre operators, to quickly create, roll out and monetise a range of new services and features to users - and pull them down quickly if they don't pay off. An operator can establish the cloud as an effective, efficient and economically appealing channel for partners and developers to access large numbers of subscribers or paying consumers.