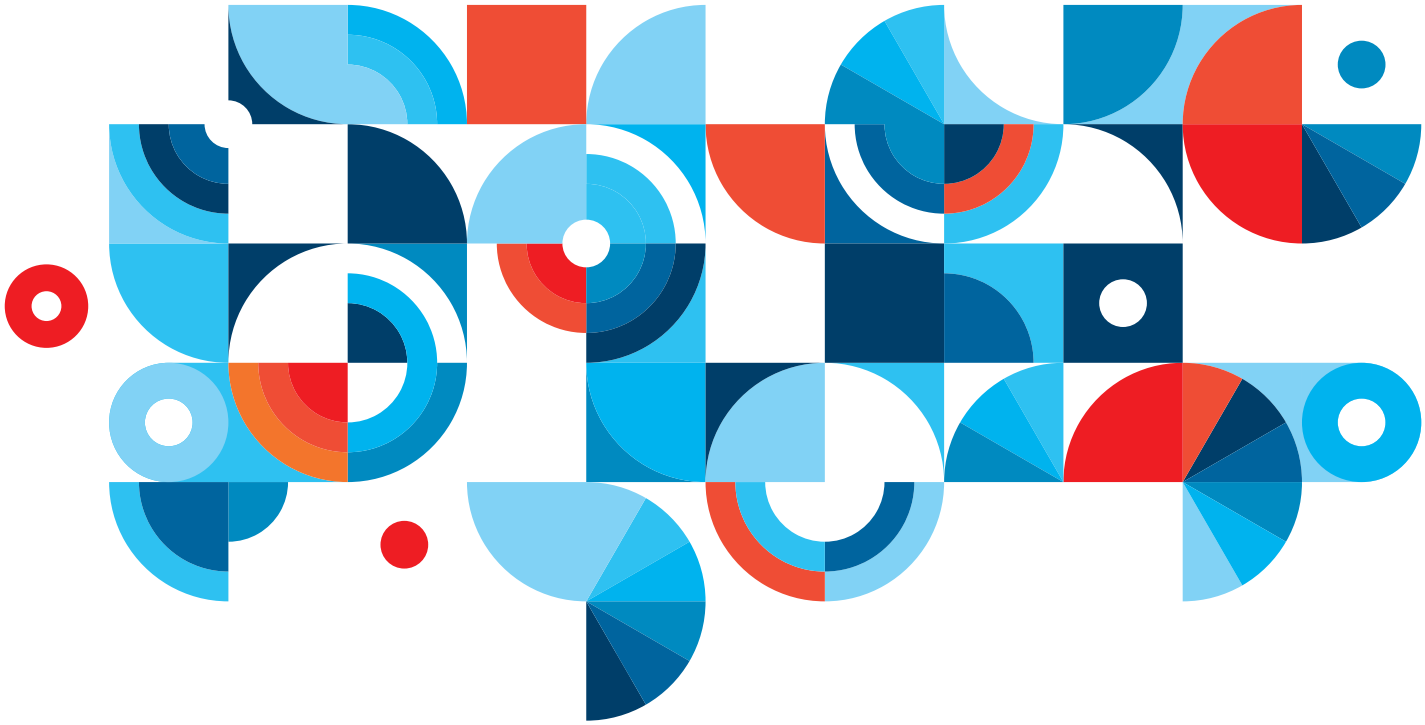
SmartCloud
Thought Leadership White Paper

Exploring the role of ecosystems in evolving cloud markets

IBM partnering for a smarter planet™



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Introduction

The signs of a smarter planet are all around us. Smarter systems are being implemented and are creating value in every major industry and across every region in both the developed and developing worlds. This idea isn't a metaphor, or a vision, or a proposal – it is a rapidly emerging reality.

Cloud computing is changing the IT landscape, impacting core technology and business directions; reshaping the relationship between service, customer, information technology and the provider of business or social outcome.

Cloud computing is providing visible acceleration towards a smarter reality, a reality that is radically changing the nature of traditional partnering and channel management models.

So what is cloud, why is it accelerating this shift and what does it mean for partnering models of the future? According to NIST (National Institute of Standards and Technology)[1] cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (such as networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

The effect of the cloud-enabled shift can be felt in many areas:

- A standardised and virtualised style of IT delivery
- Increased focus on the customer or user experience
- Shifting focus to service (business) outcome
- Flexible pricing models through self-service
- Reshaping of commercial/business models.

It could be argued that cloud computing simply reflects the accelerated adoption or increased popularity of virtualisation, specifically server virtualisation. Yet virtualisation, first implemented in the 1960s by IBM, is not new. Instead we need to look beyond IT and the infrastructure to see what is causing the cloud disruption.

Cloud enables organisations to deliver IT without boundaries. Through cloud provisioning an organisation can obtain and deliver services and business processes wherever and whenever their users want. It can hide complexity whilst making more cost-effective use of limited resources, enabling new IT and business processes that break down traditional silos and simplify access to information or services – all resulting in the delivery of better business or social outcomes.

Cloud is both a customer centric IT transformation and a new market model. At the heart of cloud service provisioning is a shift towards the wants and needs of the end customer. This increased focus on service outcome and the customer is reshaping the traditional buyer/supplier market model.

This paper considers three areas of cloud influence on an increasingly non-traditional or 'asymmetric'[2] market:

1. Cloud computing and the shift to customer centric services
2. Cloud computing and the blurring of traditional market and partner boundaries
3. Creating cloud 'stickiness' – differentiated cloud service catalogues.

1. Cloud computing and the shift to customer centric services

It all starts with the customer – a generally accepted central pillar of business. So what is new? Why is the customer coming so sharply into focus now?

IBM's Institute for Business Value research 'What the Customer Wants'[3] highlights five trends that are expected to unfold over the next few years:

- Customers will gain even **more control** over how they interact with organisations and each other
- **Relevance** will be key for attracting and keeping loyal customers
- The more expensive and traditional channels will be marginalised by mobile technologies focused on **relationship building**
- Organisations will have to provide **consistency** as channel distinction will disappear for customers who instead converge around mobile devices
- **Trust and security** will be basic customer requirements.

The IBM research concludes that within three to five years:

Customers will expect to get access to what they want, when and how they want it – enabled by invisible flexible technology.

With cloud, a new breed of customer is dictating a new set of terms, which in turn is changing the dynamic between buyers and sellers.

Customers in a 'buy' position are empowered by cloud with more availability and access to information, data and choice than ever before. In addition, cloud customers determine their own usage patterns, opting in and out at their convenience and deciding how much they want to use, when and for how long.

Aspirations from end users increasingly set the demand for cloud-enabled service ecosystems

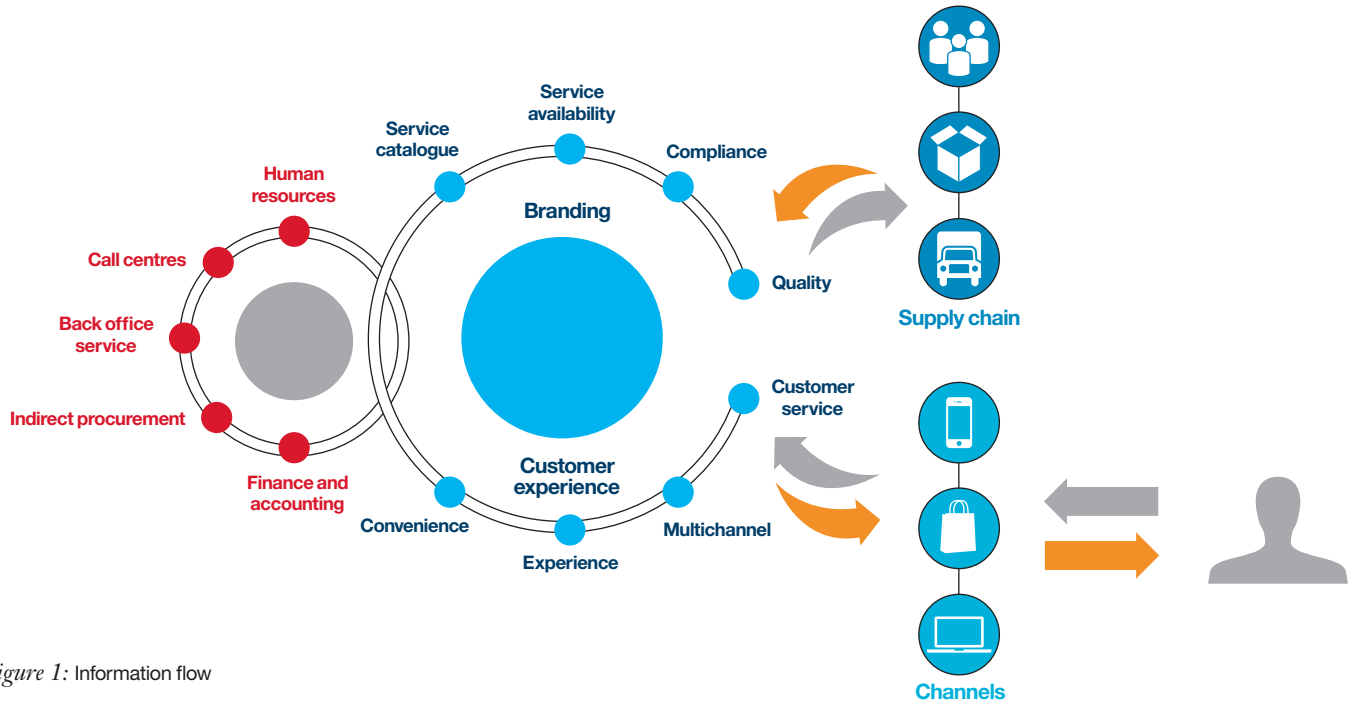

Figure 1: Information flow

Source: IBM 'Advocacy: Building customer trust in the new economy'

In the early provisioning of cloud services there has been an interesting customer shift towards 'club clouds' – a hybrid cloud model similar to the community cloud model referred to by NIST[4].

These 'club cloud' patterns start to emerge when the cloud discussion goes beyond the technology as a service, infrastructure purchase or IT replacement level and instead focuses on business outcome and the services required by the end customer.

Customers have a tendency to come together in social clusters or groups based on common interest or need. Within the public, private and hybrid cloud environments these 'self-selected clubs' meet both customer need as well as representing the logical groupings of user, workload, process or data.

Two dominant customer patterns of 'club clouds' have emerged to date:

Type one: Regional 'club clouds' – cloud provisioning for a group of customers who are bound by a geographic area such as a city.

The New York Municipal Shared Services Cloud[5] is one example. This 'club cloud' improves municipal operations by integrating services from multiple providers on an easy-to-use shared government platform, adding web-based citizen services, and enabling integrated data analysis to provide better transparency.

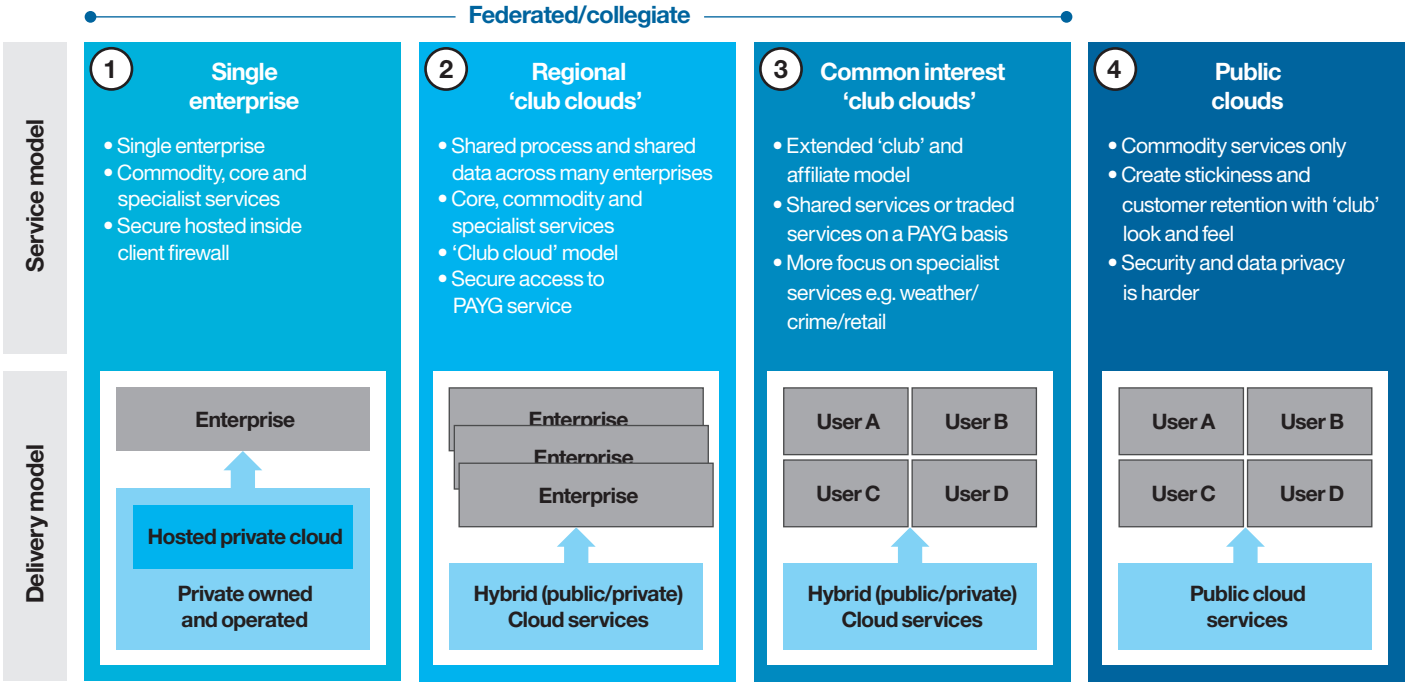

Figure 2: Four dominant cloud models have emerged in the United Kingdom and Ireland to date

Another regional 'club cloud' example is the WUXI iPark Cloud[6]. This rural regeneration cloud offers flexible and shared computing resources for Small and Medium Enterprises, lowering the barriers to market entry for new companies, local government projects and software development start-ups.

Type two: Common interest 'club clouds' – where a group of organisations have a common shared service outcome, social need or business requirement. IBM is creating smarter, more connected healthcare systems that deliver better care with fewer mistakes, predict and prevent disease, and empower people to make better choices. This includes integrating data so doctors, patients and insurers can share information seamlessly and efficiently through 'club clouds'. IBM also helps clients apply advanced analytics to improve medical research, diagnosis and treatment in order to improve patient care and help reduce healthcare costs[7].

In addition some common interest 'clubs' want to trade services not just consume them, effectively creating a virtual market or trading place for 'club members'.

This tendency towards forming 'club clouds' is not driven by the supplier but instead by the customers' wants, needs or required outcomes such as financial efficiency or regeneration and growth. 'Club clouds' do seem to address a number of cloud adoption drivers not only cost but deep seated concerns that customers have over identity, trust and security in virtualised markets.

In addition some common interest 'club clouds' want to trade services not just consume them, effectively creating a virtual market or trading place for 'club cloud members'.

Peer networks or 'clubs' form around a common social, economic or service outcome, often connecting public, private and not-for-profit organisations around the common shared outcome.

This customer led approach to 'club cloud' formation can increase the outsider perception of 'asymmetry'. Traditional sector or industry allegiances between public, private or third sector do not seem to matter as much to the customer when forming 'club clouds' to meet a pressing, common need.

This customer shift is starting to touch all of our markets and is accelerating with the adoption of cloud, social business and mobile technologies[8].

With this cloud enabled customer shift comes the increasing democratisation of data, the adoption of social computing, increased collaboration between sectors, small and medium sized business, not-for-profit organisations and much more. In turn, purchasing power devolves to increasingly fragmented and smaller customer units.

From a supplier perspective, responding to this challenge requires:

- Greater insight to meet and exceed customer expectation
- More brand flexibility to maximise market presence
- Increased speed in bringing new self-service offerings and services to market.

This is not an IBM, nor a single sector issue, but represents a seismic shift in response to a number of converging technology and social levers.

2. Cloud computing and the blurring of traditional market and partner boundaries

Changing customer demands, combined with technology shifts to cloud provisioning, enables and accelerates new ways of operating. This creates dynamic environments that support the emergence of cloud ecosystems or value-nets.

Capturing the value generated along the supply chain is a well understood approach taken by many management strategists. Applying this thinking to early market experiences of cloud computing indicates that interesting cloud value-net patterns are likely to become the new norm.

With cloud flexibility, where fixed-term contracts are replaced with opt-in and opt-out behaviours, the trust and loyalty that traditionally binds customers, buyers and suppliers together into value chains is diminished.

One response seems to be ecosystems that seamlessly tether or aggregate customers and suppliers. As the ecosystems grow in size and diversity, the cloud-enabled value-nets contribute to increasingly intelligent and interactive environments and generate enhanced collective value.

How much of this is realistic or achievable only time will tell – but there are indications that different types of partner, alliance or ecosystems are already forming within the cloud market where parties converge to offer an enhanced range of services to the market.

The Smarter Energy® Cloud partnership announced between IBM and Cable & Wireless is one example[9].

Cloud ecosystems take cloud platform thinking one step further as they enable partners and third parties to participate in and include their services within an ecosystem.

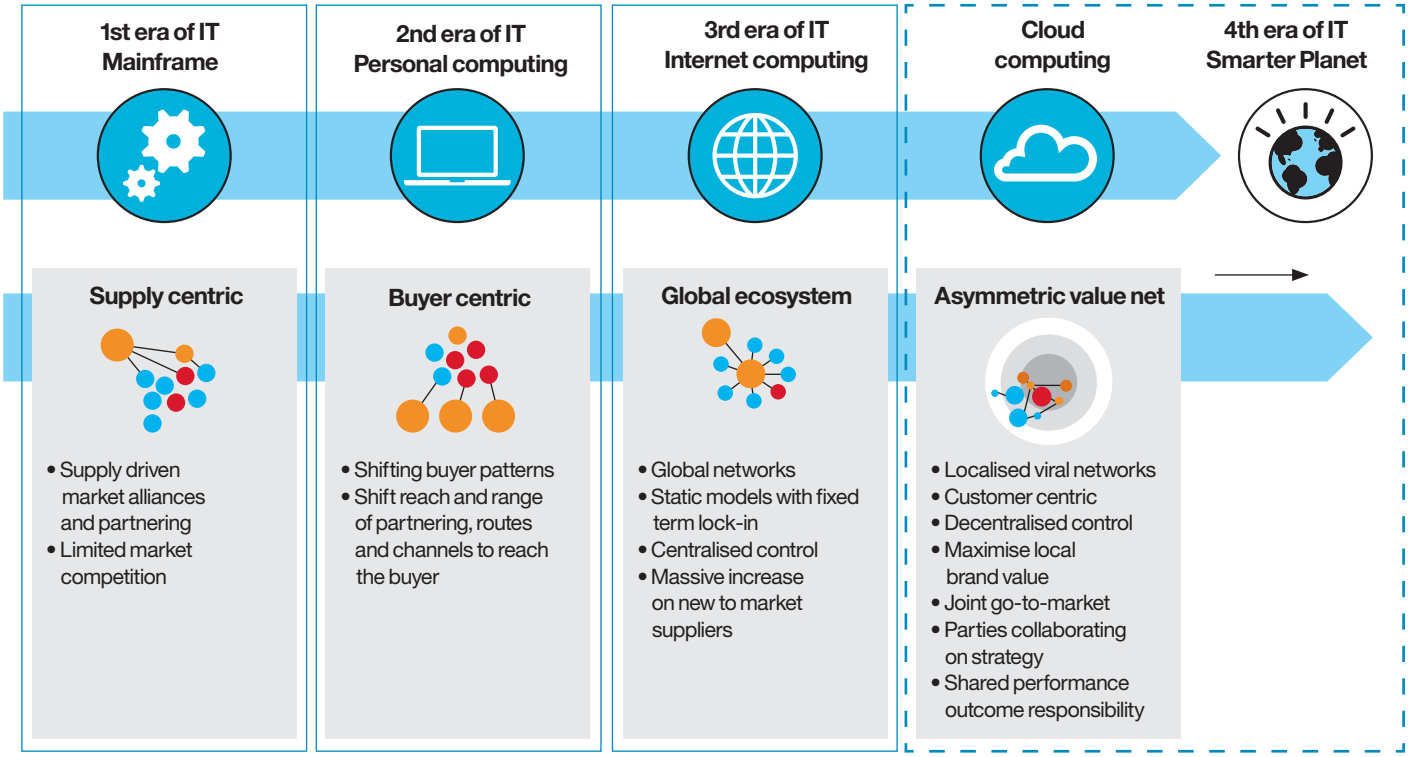

Figure 3: Shifting partnering and alliance models

IBM's SmartCloud Ecosystem brings new services for IBM partners and independent software vendors to help thousands of small and medium size business clients adopt cloud models and manage millions of cloud-based transactions in areas as diverse as banking, communications, healthcare and government[10].

The collective capabilities and services from multiple organisations, spanning multiple platforms and cloud environments together form a tethered or hybrid ecosystem that continues to grow and evolve. This may be viewed by some as simply the natural evolution of platform paradigms, where the platform with the largest and most diverse ecosystem, gets to ride the paradigm shift and enjoy a dominant position for that particular generation.

However these cloud value-nets or ecosystems have introduced some new elements to the traditional partnering constructs as well as offering more flexible terms of engagement.

According to Alex Williams in his blog, Technology Partners And What They Say About the IBM Cloud[11], "The IBM Cloud is a prototype of the ecosystem we expect to see emerge in the world of cloud services…. It is the partners that tie into the larger ecosystems, often existing on multiple platforms. The healthy platforms will resemble coral reefs in which the partners are (as) important to the cloud ecosystem as the platform itself."

IBM has created an approach to enable larger cloud multi-supplier ecosystems. Part of this approach – IBM's cloud speciality programme – enables a broad ecosystem of companies to work together and deliver a wide range of cloud computing services and technologies to clients of all sizes and across all industries.

We are seeing new cloud partner types emerge that blur traditional partner definitions and models

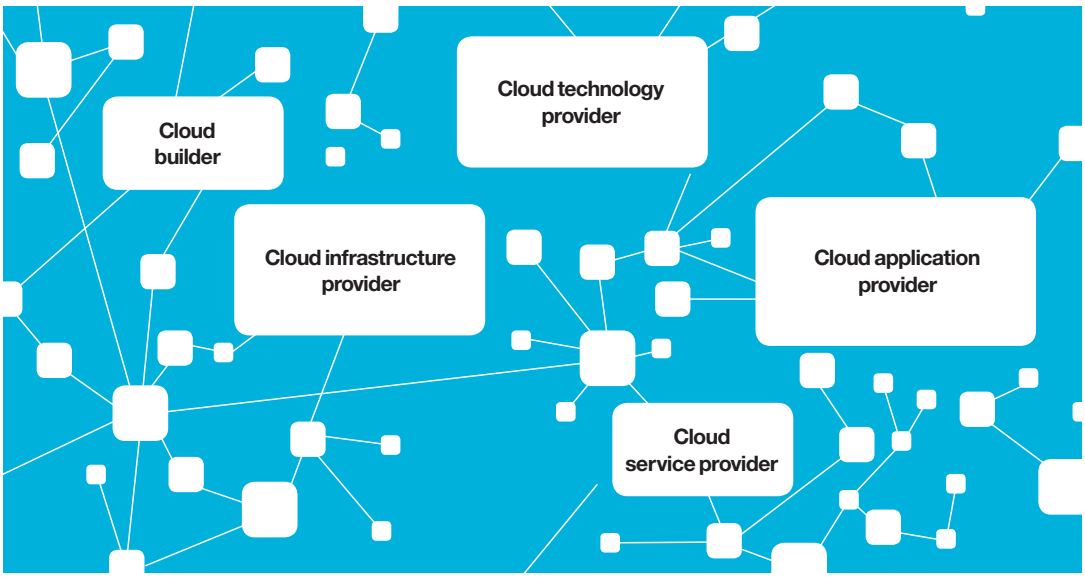

Figure 4: The IBM cloud specialties

This programme introduces five cloud partner types and offers accreditation for the ecosystem to grow cloud capability. It also provides market support in five solution areas for business partners who demonstrate their expertise and client success in cloud computing.

As a value-add extension IBM is also widening access to its global expertise and industry insight. IBM is enabling developers to build, test, sell and distribute cloud services and applications. With eight million developers in 195 countries, 28 cloud innovation centres and extensive training and development, this approach creates a different type of in-market value[12].

In addition to this progressive channel evolution some even more disruptive cloud value-nets are forming. Asymmetric value-nets are the market and competition disrupters enabled by cloud, partnering or customer constructs convene and reconvene to rapidly serve new and emerging customer requirements and market needs.

On the sell side – providing the parties with new opportunities to expand faster into new and vastly larger markets than most could hope to enter alone or with smaller ecosystems.

On the buy-side – parties can extend the reach and range of service beyond the purchase power of a single entity.

Disrupting traditional organisational and competitive constructs, asymmetric markets are represented by new, unorthodox, surprising, urgent and unfamiliar market shifts

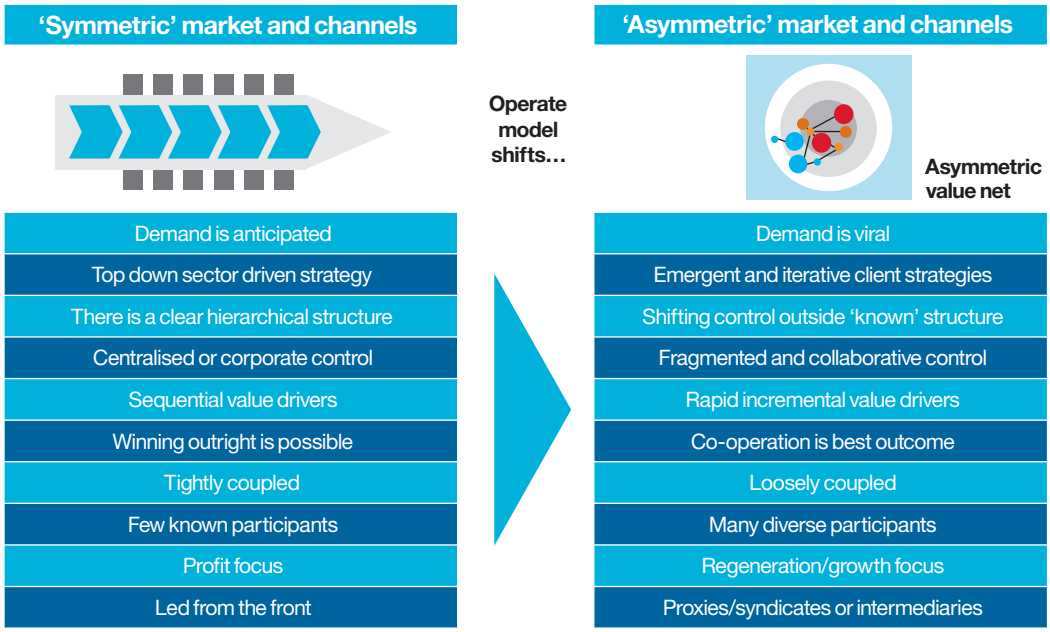

Figure 5: Cloud market and channel shift

Defying traditional organisational and competitive constructs, asymmetric value-nets are represented by new, unorthodox, surprising, urgent, and unfamiliar market shifts. As the boundaries of cloud-provisioned IT and services are removed, organisations are by-passing intermediaries and creating new, highly responsive, business models by exploiting the upstream and downstream information flowing along the value chain.

Cloud has increased the focus on creating vibrant and sustainable value-nets. Information is moving in real-time across co-operating businesses, relationships among partners, is dynamic and varies with changing conditions, and the operating targets of the business include not just efficiency but, perhaps more importantly, market agility.

No one organisation dominates, owns, leads or drives these asymmetric value-nets. They are highly responsive to market need, often localised around country or regional requirements and can convene and reconvene based on scaleable common cloud components, rapidly serving new and emerging customer requirements.

Early-in-market success from these new cloud value-nets are already being seen and will be explored in detail in subsequent papers in the IBM Partnering for a Smarter Planet series.

3. Differentiated cloud service catalogues

In these rapidly changing times, as markets shift and reform, how can organisations, agencies and companies achieve the market traction required to establish themselves as differentiated service providers?

Getting actionable insight about your customers and setting up collaborative value-nets are not the only challenge – the issue is how to create a commercially viable and sustainable cloud operating construct, offering compelling services, built on partner trust and safeguarding against opportunism.

Creating cloud 'stickiness' – so that customers and partners can opt (rather than be forced) to stay together because it makes commercial, business or social sense – is the imperative. As we've seen from public cloud start-ups such as Twitter, 'sticky' clouds are often those that 'attract' new customers that enable their own 'auto-sustained' growth. The same principles apply to private or hybrid clouds.

Just as cloud itself is evolving up the stack from infrastructure as a service (IaaS) through platform as a service (PaaS) to software as a service (SaaS), business process as a service (BPaaS) and beyond into the information and insight business intelligence as a service (BIaaS) layers so the cloud service catalogue is evolving.

Early-to-market cloud alliances and ecosystems have favoured commodity cloud service provision that offers cloud service catalogues stacked with IaaS technology offerings or commodity component products. With little clear differentiation to hosted service provision the early IaaS offerings fight for market share on price point.

As the cloud market matures, cloud buyers are posing the questions of how provisioning can support mission-critical and specialist cloud services that drive core business growth against assured outcomes.

This focuses the demand on deeper and broader service catalogues tuned to the industry or defined market – a challenge in a market where the mantra is 'standardisation'.

IBM indicated its own move into core business services with global alliance partner SAP. The SmartCloud for SAP Application leverages IBM's experience in managing over 1.5 million users of SAP to significantly reduce the cost and labour associated with SAP cloning, refreshes and patching[13].

Early indications suggest that industry-specific cloud offerings that require targeted or specialist partners will be 'business as usual' within the next few years.

In September 2011 IBM announced Smarter Commerce™ on the cloud to help organisations respond automatically to shifting customer and business market trends with new solutions for commerce-as-a-service and social media marketing. Such capabilities are based on technologies from key acquisitions such as Unica®, Coremetrics® and Sterling Commerce™ combined with IBM research and development[14].

As the market focus moves to the provisioning of enterprise-grade, mission-critical cloud services, the customer desire for pay-as-you-go commercial models needs to be balanced with required service level assurances and compliance requirements. This then needs to be measured against the 'benefit/risk' ratio of opt-in and opt-out services.

Cloud value-nets enable organisations to combine effort to better serve this changing market need.

In summary

From observations and experience gained through many cloud transformations that IBM has been involved in worldwide there is increased focus on **service outcome and the end customer**. As new cloud-enabled markets, channels and patterns for consumption emerge, the traditional buyer-supplier market models are reshaping.

It is clear that the organisations, agencies and companies who are able to understand and meet the changing demands of their customers and through partnerships, establish themselves as differentiated service providers in these new cloud-enabled markets can achieve the market traction required.

Simply looking at buyer/supplier models or channel strategies is not enough – a step change is required. One solution is to enable a multi-vendor cloud ecosystem that seamlessly integrates the products, expertise and brands of complementary organisations into compelling solutions to serve the shifting needs of a smarter planet.

This paper offers two thoughts on how to exploit the enormous opportunities with cloud:

- Choose a smarter partnering approach – put cloud-enabled channels on the strategic agenda and align your investment in customer analytics, brand positioning, target customer segments and the cloud product/service set.
- Consider your cloud ecosystem supply or buy-side and plan for a differentiated service catalogue. Consider the impact this has on security, information and data handling as you move into the mission-critical and specialist cloud services essential to driving your business or social outcomes.

Simply put, get refocused on your end customer and consider the business and service outcome of your cloud provisioning.

Author

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If you would like to respond to this white paper or ask for further information on how IBM can help you navigate the ecosystem challenge, please send an email to vickygillies@uk.ibm.com.

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4 Community cloud. The cloud infrastructure is shared by several organisations and supports a specific community that has shared concerns (e.g. mission, security requirements, policy, and compliance considerations). It may be managed by the organisations or a third party and may exist on or off-site.
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5 With a unique combination of advanced data analytics and software-as-a-service technology, government employees will save time, increase productivity and help citizens quickly get the information they need.
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