

# From video-communication to machine-to-machine - Cloud turns to business

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ADL estimates that between ten to twenty per cent of the classic IT market will move to Cloud hosting within the next five to eight years. Additionally, new applications will emerge, due to the enhanced Cloud computing power and reach, superfast broadband and smart devices. Nearly all players can get involved, with the Cloud's remarkably low entry barriers. The Go-to-Market strategies are split between IaaS, favoured by infrastructure owners, and SaaS, via the app stores models. The latter can be open OTT style or carefully crafted integrated portfolios of services. Either way, the Cloud environment will stimulate service innovations that exploit up-coming technologies with the Cloud's universal, dynamic and widely distributed delivery capability.



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In recent years there has been much hype about Cloud computing. Now the dust is settling and a second wave of business development in Cloud-based services is apparent. For some Information Communication Technology (ICT) providers, Cloud services are an intuitive growth opportunity. Yet for others, Cloud may appear an all-too-easy way to lose share in established business.

Dynamically provisioned and consumed ICT services built in a Cloud architecture give rise to a vast range of revenue-earning opportunities. Previously well-defined boundaries between software and hardware vendors and network providers, system integrators, etc., are blurring, while, at the same time, Over-The-Top (OTT) Internet players are now vying for these cherished infrastructure-based business models. The current global annual IT budget of circa 3.6

trillion dollars is on the move and Cloud is 'oiling' the wheels of this system.

Cloud market estimates vary widely from one observer to another but what is clear is that a core component of initial Cloud market value is classic IT replacement. Aspects of, hitherto own IT, are replaced with Cloud-based solutions. These are often in the form of Infrastructure-as-a-service (IaaS) (storage and servers) or applications with high common functionality, sold as Software-as-a-service (SaaS) - such as business class email, collaboration solutions and CRM (Customer Relationship Management). This IT replacement will continue like osmosis until a new natural equilibrium is established between the organisations' own IT (for necessarily individual solutions) and Cloud-based services (for the more generic tasks). Our estimate is that this equilibrium point is between ten per cent and 20 per cent of

the classic IT market that we know today (hardware, software and services) and this equilibrium will take five to eight years to establish globally.

In parallel and somewhat lagging behind the osmotic trend, there are a host of new services which will be enabled by the Cloud-based architecture. These services or solutions will do something we have not done or widely enjoyed before. These new services will evolve from the convergence that is taking place in all aspects of ICT, TV media, networks and the Internet. They will exploit smart mobile devices and location, and, most usefully, they will exploit the context of the user as understood by the end device - fixed or mobile. Combine this with computing power and application sophistication that were not practical or economic before in a single tenanted situation, add superfast always-on IP access, vast power and low unit

cost of centralised IT, and all of this together with a wide array of payment models - and a powerful platform for innovative services emerges. Applications in the area of, for example, mobile/remote worker are explored today but we believe that we will see significant extension of personal productivity and personal enablement to new levels in the near future.

Moving from the demand to the supply side - who has what opportunity in offering Cloud services? Essentially there are three clusters of providers: (i) Over The Top (*OTT*) players (the list is endless); (ii) the physical infrastructure providers - TelCos, CableCos, Utility and Municipality network operators, etc.; and (iii) the classic IT providers including hardware manufacturers, software vendors, system integrators and IT services companies - of all sizes, from global power houses to the one-person IT service provider. The incredible aspect of the Cloud is that all the technology is already here, available anywhere, and there are no significant barriers or time delays for any of these players. Winning growth or losing share is essentially a function of imagination, determination and smart and timely decision making!

In terms of driving Cloud solutions to market, many decisions on service portfolio and the Go-To-Market (*GTM*) model for these services need to be made. For larger businesses there are generally accepted and well-established best practices. At the other end of the spectrum is the vast and dynamic consumer market - currently being mostly served by free or freemium models (free entry with modest paid-for enhancements) especially from the global *OTT* Internet players. The consumer market is a major battleground worth winning but has the additional challenge of how to monetise from a free/freemium starting point that grew from the free Internet.

In between these two extremes lies the small to medium-sized enterprise (*SME*) market. For many ICT providers, the *SME* segment has become a focus area for growth beyond their mature business markets. Interest in *SMEs* is based on a general assumption that *SMEs* have been under-served and left to their own (entrepreneurial) endeavours to identify and deploy what they need for their business. This assumption needs to be constantly challenged in anything an ICT provider plans to offer. It is the very word 'entrepreneurial' that challenges the assumption. If *SMEs* can be generalised at all, then it is their ability to focus on their core business. They only spend on essential ICT, which they generally sort out by themselves or with the help of some local IT

support, and constantly keep ICT spending minimised by taking advantage of prevailing best pricing.

In terms of designing attractive product portfolios, there are wide spread opinions. However, two fundamental strategies to product portfolios tend to exist beneath all these opinions: (i) infrastructure-based Cloud services and (ii) non-network infrastructure-based application stores. Both can be offered, of course, but the difference is mainly in how the provider grows the portfolio - from what starting point and to what direction.

Infrastructure-based strategies, offering *IaaS*-dominated portfolios, clearly seek to utilise in-house assets and skills that service providers already have, for example data centres, and in the case of TelCos, the fixed and mobile networks they have. Within the infrastructure-based category, we also see two sub-strategies. One sub-category is of those who extend Cloud services to their own company first, exploiting it and learning what is usefully done on Cloud-based architecture and what sounds nice but is not so practical in real life. The second sub-category is of those who go directly to the external market with Cloud offerings, skipping the internal experience-building time period.

Within the application store approach, decisions have to be made to focus on a smaller scope of more usefully integrated applications or to rapidly build a large inventory of applications with little or no application integration. Those ICT players who go for carefully crafted solutions with useful integration, devise their portfolio through extensive market research, customer workshops and end-user evaluations, etc. The clear challenge here is being confident in building something that is broadly attractive for a wide customer base.

Those ICT players who go for large inventory of applications may have less exploitable infrastructure or make a strategic decision that *SaaS* and *OTT* are a better and quicker way to build high volumes. Here the goal is an application platform, open to third party Independent Software Vendors (*ISVs*), with the aim of building a convenient environment for their trade, albeit with the necessary revenue share models. Key to this approach is rapid growth in terms of number of potential sales points and the speed at which a high volume of diverse solutions from *ISVs* joins the platform; that is, the rate of building the partner's ecosystem. Followers of this approach are almost certainly influenced

by the famous Apple App Store and need to be aware of the strong unifying element (the iPhone and later the iPad) that led to its success. The influence these strong differentiating devices have on the app store success cannot be over-stated.

We started with how the Cloud markets are forming - initially from the osmotic shift replacing some parts of classic IT and some low-hanging fruit of those most obvious of applications to run in a Cloud-based architecture. Looking forwards, there is a pending change of gear on both fixed and mobile access networks (fibre and LTE respectfully), with continued evolution of computing power at both the core and the device ends. This technology evolution together with the Cloud environment inspires those more imaginative companies that push the boundaries of software applications into new functional areas. Consequently, Cloud-based services will deliver a functionally richer and more personalised array of solutions - an array of capabilities that can be 'dialled up' as and when needed.

We have seen experimental demonstrations of image recognition fitted into sunglasses, linked back to powerful centralised IT, connecting to personal data (photos, images in social networks/networking sites, etc.). The application provides real-time audio feedback to the wearer of those glasses (via Bluetooth ear-piece). Imagine receiving information (name, current job, etc.) as you greet that familiar face you could not otherwise put a name to...

Another example of buying intelligence could be the 'Babel-fish' application (reference Douglas Adams' book *The Hitchhiker's Guide to the Galaxy*). In this globalising world where we need to meet, work and trade with people from many places, it is valuable to have a 'Babel-fish' that enables you to converse with anyone in their language with ease. I know I would be prepared to pay for a 'dial-up, real-time, two-way audio language translator'. With advances in audio analytics, digital filtering, speech recognition, language translators with context-building algorithms, all the technology to do this is here today - just no one has yet packaged it all together. Cloud-based architecture lends itself to deliver such services. After all, Google already gives us the ability to read any web page in any language. It is only a matter of time before someone masters the same with the spoken language! TelCos gave us the ability to talk with someone, anywhere - who will give us the ability to talk to anyone, everywhere? ●