Bell
Integration

A New World
Of Colocation

Can colocation service providers evolve their service offerings to satisfy today's commercial needs

A colocation datacentre can provide IT facilities equipment, rack space, connectivity and environmental support facilities, including power, cooling, physical security and physical storage.

Datacentre colocation service providers sell or lease to both the wholesale and retail markets; typically priced on the rack displacement and the power presentation, in amps or kilowatts per hour.

The majority of colocation consumers choose a service provider based on a number of key attributes including conjunction with a high-speed communication hub, consumer to datacentre proximity, datacentre to datacentre proximity for bandwidth capability, datacentre tier and service accreditation (for example List X), regional locations or global presence, rather than just cost.

Bell Integration believes that there is an opportunity for colocation service providers to realign their service offerings to the changing market needs, demands and commercial expectations.

What are the challenges?

As the cost of on-premise datacentre environments increase, based on energy, cooling, power management (UPS), fire protection, continued refurbishment, physical security, staffing, insurance and in some instances water management; the cost of alternative service provision is reducing, however, only 1% of production platforms and applications have been transitioned to a public cloud infrastructure.

Datacentre power consumption is 1.5% of the worldwide electricity output, costing $27bn (£17bn) and creates 210 million metric tonnes of carbon dioxide. Note: on-premise datacentre economics work for very small or very large organisations.

Additionally the typical colocation service models do not provide flexibility for expansion, reduction or the capability to flex-out for rack displacement or power consumption (during predicted or unpredicted business peaks) because the typical service contracts are positioned as property leases with fixed term, fixed price and for some fixed capability. A portion of this is driven from power presentation to large datacentres, prohibiting scalability, growth and capability.

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Inaccurate assessments and customer guestimates of their power requirements force customers to predict and over-procure to the maximum capacity, including a risk percentage to ensure service availability.

If future planning is not accurate the complexity of changing contracts, logistics and connecting two isolated areas can impact the time to provision, creates risk and could increase costs. The colocation services market has suffered in favour of emerging and established hosting services, however, many organisations still favour colocation datacentre services as their requirements align to this service model including the following requirements:
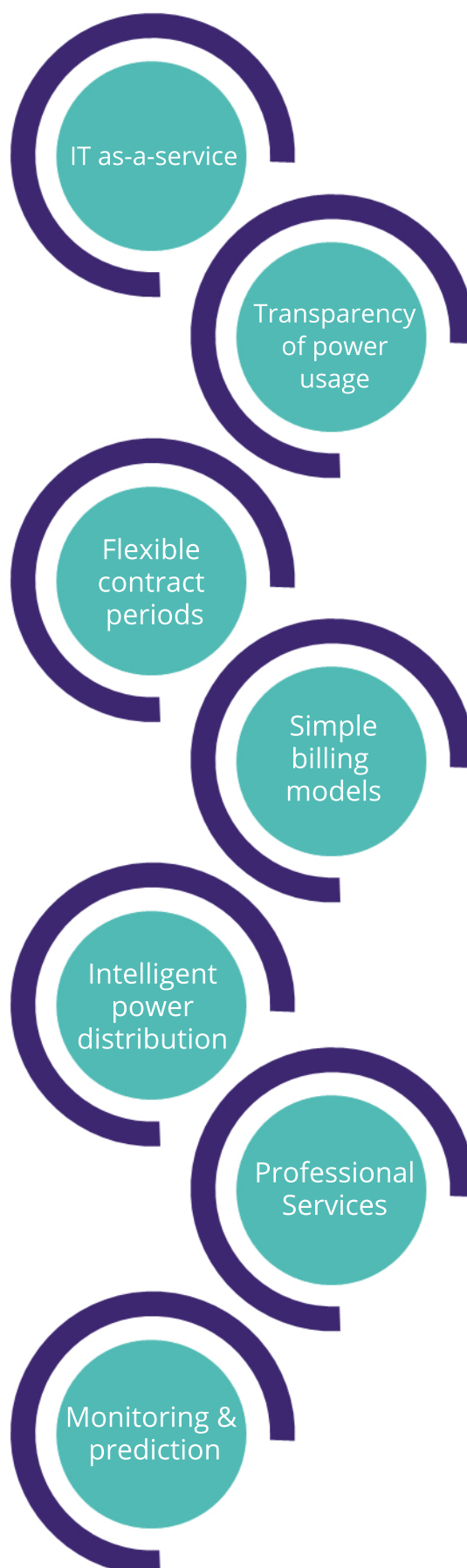
- Maintaining full control of applications and infrastructure; in a trusted environment
- Data assurance and asset protection
- Regulatory compliance; for data location and processing
- Unsupported Cloud platforms
- Application functionality, complexity and readiness
- Security concerns
- Desire not to convert premium cost office space to datacentre facilities
- Business strategy and policy limitations; for business units, partners and customers
- Cloud service model inhibitors; application complexity, resistance to change, economics and security

What is the potential roadmap to change?

The economy has changed the way IT is procured and datacentre service providers should take the opportunity to differentiate themselves from their competition, providing more compelling reasons to use their services.

With the knowledge that customers still have requirements aligned to external datacentre services and choose to use colocation services, how can service providers mature their services and evolve the colocation market?

Colocation roadmap to change

- IT as-a-service
- Transparency of power usage
- Flexible contract periods
- Simple billing models
- Intelligent power distribution
- Professional Services
- Monitoring & prediction

Service providers could innovate with the following:

1. The datacentre is simply a component of the IT service and should be procured, consumed and treated as such, by both the service providers and customer communities; moving towards an IT-as-a-Service consumption model

2. Transparency of consumer power usage, datacentre power consumption an availability, power changes, maintenance and administration fees; via a customer (retail) or partner (wholesale) portal

3. Flexible contract periods allowing IT service aligned contracts; examples include:

- Fully flexible; a rolling three month contract with one month renewal termination points
- Short fixed-term with a rolling renewal; an initial six months and on-going three month rolling renewals
- Medium term fixed; three to five years
- Long term fixed; five years plus

4. Simple billing models using standard fixed and Pay-as-you-Power (power consumption) utility models; examples include:

- A fixed (guaranteed) power contract, catering for a predicted and well defined power requirement, where the customer pays a fixed price, irrespective of actual consumption
- An elastic (PAYG) power usage contract; catering for unknown and unpredictable power requirement , where the customer pays for only the power consumed with no fixed or minimum amounts
- A committed power usage contract, where customers pay a combination of a fixed rate for a percentage of their perceived power consumption and an elastic rate for their peak power consumption
- A stepping power usage contract: using a rolling three month baseline assessment (actively calculated and set each month) to determine an on-going average power usage, where small peaks and troughs are rolled into the next two months average
- A minimal power usage contract; catering for standby, burst (into a colocation datacentre) and disaster recovery power consumption

...with the following additional capabilities within the billing models:
- A burst power capability: providing additional power consumption, using a fair-use policy where contention above the guaranteed rate occurs
- A space rental capability: allowing customers to acquire and guarantee adjacent rack space for future expansion
- A billing transition capability: enabling customers to move sections or contract between billing models but within the same contract

5. Intelligent Power Distribution Units can be used to determine what outlets have provided how much power, with usage recording, predictability and peak/committed notifications; whilst using software agents to baseline and predict changes in power consumption and potentially assign power usage to internal customer cost centers

6. Professional services for customer on-boarding assessments (space, power and billing requirements) and readiness activities; improving the requirements accuracy, customer experience, transition governance and increased time-to-consume

7. Monitor and predict energy price changes notifying customers of projected power costs based on their historical consumption

What are the additional use cases?

With the datacentre services improvement, the following additional colocation use-cases become feasible:

- Rapidly expanding businesses or IT services; including start-up organisations
- Multiple development, test and re-production environments; where enterprises have multiple and staggered development cycles
- Disaster recovery environments; with the majority of recovery platforms powered off, or low consumption , during normal operation
- Storage only environments; to support backup, archiving , data protection and big data initiatives
- Complex application and infrastructure environments
- Flex-out resource environments; from an on-premise datacentre to increase capacity during predicted and unpredicted peaks on IT infrastructure
- Heterogeneous Cloud and colocation environments; to support business IT strategy/model and migration or transformation scenarios
- Return the use of premium cost office space to the business

What are the benefits?

Many benefits could be realised by an evolution of the colocation service offerings, for both the service provider and consumer communities, at a financial, development and innovation level.

With the capability to use less power and benefit from consumption only billing, this will encourage consumers to assess usage and become power efficient; by introducing power efficient technologies and effective power management policies, within a fit for purpose datacentre environment with a lower PUE. This could be achieved by manually or automatically powering down unused platforms. In turn, this behaviour should see a steady decrease in the overall cost of IT services to the business.

The ease of steady consumption and flexible consumption billing models will remove the risks of performing rapid migrations and associated high costs when transforming an infrastructure.

This re-invigoration would naturally lead to customers consuming more cost effective datacentre colocation services; allowing service providers to fill their datacentre space, improve annuity revenue, drive continuous innovation, improvement and efficiencies.

The potential of introducing additional revenue generation through professional services, managed services and service readiness and customer retention base on quality services from the datacentre operator.

The level of competition will hopefully lead to global datacentre efficiency and innovation standards and certifications; used by customers when selecting potential service providers.

Conclusion

The widespread utilisation of datacentre space and power consumption will decrease and become consumed in the controlled and secure manner required by the customers' business; whilst driving efficiency, datacentre standards and stimulate the datacentre market.

The inevitable outcome for consumers will include a lower cost of ownership.

Amongst all the benefits of the points of evolution, the most significant is that it will drive good behaviours for green and clean datacentre hosting; hopefully leading to a reduction in power waste, IT service cost and IT's impact on a business' carbon footprint.

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