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SOFTWARE AS A SERVICE
Understanding your options

The 'as-a-service' delivery model can deliver real efficiencies. But many organisations have concerns about the lack of control that comes from outsourcing key applications. This introductory paper looks at the issues involved, and asks: is there better value in accessing critical applications from a hosted, centralised software specialist provider, or should organisations continue with internal IT application delivery?

The use of centralised applications has been around for a long time – going back to the early days of mainframe computers. At that time, computing resources were limited and highly expensive to build and run, so it made sense to 'timeshare' services by using mainframe bureaux to 'host' applications.

The 1970s saw the emergence of the mid-range computer (DEC VAX, IBM AS/400), the PC server and the Unix server. These systems provided further choice as to where to run business applications, and many companies chose to run their own systems. The rise of the IBM Personal Computer further drove the adoption of local software purchased and operated by users or businesses at a local level.

These days, the computing power available on the desktop or even on mobile devices is much greater than the old mainframes could offer. But there are still significant overheads involved in powering,

cooling and managing the equivalent centralised server IT systems. In addition, the applications that IT provides today are much more important to operations than they ever were in the mainframe era. Mainframe applications were used to automate people-intensive processes, whereas most modern businesses have IT applications at the heart of key activities (for example, payroll, finance and logistics are heavily driven by business software). These drivers, coupled with the availability of Web standards and good Internet connectivity, have led to the revival of the idea of centralised hosting of business-critical applications.

> ❝ *Is there better value in accessing critical applications from a hosted, centralised software specialist provider!* ❞

So what does it all mean?

The ICT industry is awash with jargon that everyone wishes to apply to their solutions. It's useful to consider what is meant by some related terms.

- **Cloud computing** – The delivery of computing as a service over a network to remote users. Typically, this means a service delivered over the Internet or high-speed communications networks.

- **Private cloud** – The delivery of cloud computing entirely within an organisation, i.e. the ICT services, the communications network and the end-user devices are all owned and operated by the organisation.

- **Public cloud** – The delivery of cloud computing over the Internet or through shared communications links.

- **Co-location** – Conventional computer hosting services (cooled, powered and connected server racks) in which customers can install their own servers on a rental basis. In this way, customers can get the benefit of a high-quality data centre infrastructure without the costs of constructing their own facilities.

- **Infrastructure as a service (IaaS)** – Access to raw computing resources to customers via the cloud. This can be either conventionally hosted servers on which customers install their own software or, more often nowadays, a share of a 'virtual' computing infrastructure based on hypervisor technology to allow software-based servers to be loaded and made available from the cloud.

- **Platform as a service (PaaS)** – The next level on from IaaS, PaaS offers not only cloud infrastructure, but also a software environment in which applications can be developed and implemented. This will typically be a Web services and database environment into which applications can be assembled and operated. Examples of this form of provision include Microsoft Windows Azure, Cloud Foundry and Amazon EC3.

- **Software as a service (SaaS)** – these are applications from a cloud provider. Key examples include Google Apps (including the Gmail Web-based email product), Microsoft Office 365 (which provides SharePoint document management and Exchange email as a remotely hosted service), and the Salesforce.com customer relationship management product. Products beginning their lives as in-house applications (such as SAP) are now available as SaaS.

The SaaS approach for large corporate applications

SaaS is an attractive approach for large corporate applications. It is, in effect, an outsource arrangement or managed service for part of a business, but rather than outsourcing a complete function (such as IT as a whole), it focuses on function groups (email, collaboration, payroll, finance, etc.). Taking this approach, a business can reduce its overall IT resource requirement for hardware, software, maintenance, and the staff required to support the software that drives that business function.

A successful SaaS implementation can deliver the benefits outlined below.

- **Reduced capital spending** – SaaS removes the need to own server hardware and network infrastructure required to operate a critical software application, as this is provided by the SaaS supplier. As such, the spending on capital ICT equipment is reduced significantly.

- **Reduced management costs** – because the hardware and software for the application are provided by the SaaS supplier, it is responsible for operating and maintaining the base ICT infrastructure and ancillary services such as power, cooling and local networking.

- **Elimination of software** – the operating system and server-based code for the software platform are provided by the SaaS supplier, and, as such, they are responsible for all software licensing costs. This also allows for a simple 'per-user-per-month' revenue cost model, without the complexity of traditional direct software licensing.

- **Defined service levels** – availability and performance of the solution is contractually guaranteed by the provider, backed up by financial penalties should a service level not be achieved. This contrasts from internal IT provision, which is often on a 'best-endeavours' basis.

- **Reduced resource** – SaaS can reduce the need for ICT staff related to the provision and management of the software. In addition, any need for the SaaS platform to be scaled up for additional users or functions can be handled without a need to increase the internal ICT staff who are managing the SaaS provision.

Building a business case

A full business case will need to consider tangible and intangible benefits as they apply to a particular organisation, and will need to identify the route to realising these benefits. Just as importantly, the risks to the business must also be identified, quantified and mitigated in order to justify the SaaS approach.

In Mason Advisory's experience, there are some key considerations in developing an SaaS business case.

Preparation

Moving to SaaS is like moving to any other ICT managed service. The aim is to reduce costs while providing the equivalent (or better) functions and service levels that the business requires to operate effectively. Achieving this requires a comprehensive and accurate understanding of the current functions, services and costs of the system to be outsourced.

Specific technical, business process and security requirements for the SaaS system will need to be defined and documented. Metrics may not be readily available as part of 'business as usual', and, instead, may need specifically to be analysed and quantified.

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Procurement

The financial model for the SaaS platform needs to be determined, and will be predominantly revenue spending rather than a conventional combination of capital investment and associated revenue.

The evaluation of suppliers at the procurement stage must incorporate function and cost on an equal footing with service, support and availability. Moving a software function to a third party prevents an organisation from using financial or staff resources to remediate system performance, and contractual remedies (such as service credits) can be unsatisfactory compensation for the loss of a key system.

Other considerations include:

- examination of regulatory and legal issues
- understanding of the business impact of moving corporate data to a third-party organisation
- assessment of how that data will be protected and maintained
- clarification of the legal jurisdiction that will apply to the data.

Deployment and migration

Understanding how legacy data from existing systems will be migrated so that it can be accessed under the SaaS system will involve retaining the legacy system; moving data in a static, unchanging historical form to the new system; or migrating and translating data to populate the live system. In all cases the appropriate processes of verification for data integrity must be applied.

Any ICT dependencies associated with the SaaS system must be dealt with – typically other systems that need to exchange data with the SaaS application.

User access mechanisms for the SaaS system must be determined (local client software, browser software, thin client etc.), and these must be flexible enough to accommodate a changing end-user landscape (such as trends in mobile computing and 'bring your own device').

Organisations must also be confident they have the appropriate levels of resilience and bandwidth in the corporate network and/or remote mobility connections to allow effective access to the SaaS system.

And consideration must be given to the ICT staff resources required to configure user devices to access the SaaS system – this includes installation of software on devices, configuration of firewalls and network links, and administration of user accounts and access controls.

Training

There will be new/changed business processes around an SaaS solution. This means end users need to be trained in any differences in the applications or processes. There must also be training for management staff in the importance of maintaining data and network access associated with SaaS, as loss of network connectivity disconnects the entire business from its IT applications.

Maintenance and renewal

Although the provider/supplier is responsible for service delivery, there needs to be internal management of support issues and their resolution by the supplier. There must also be internal management of data integrity, quality and back-up.

In addition, an organisation will need to gather, assess, and justify the costs of any functional change requirements (and any associated contractual issues) with the SaaS supplier.

Finally, management of the contract will need to be considered, particularly towards the end of the contract where consideration of renewal or migration to an alternative supplier will be needed.

Summary

In summary, moving a major corporate application to an SaaS delivery model can deliver tangible, quantifiable benefits in terms of cost control and reduction of resource spending, and these can be demonstrated in a business case. However, this approach should be undertaken carefully and methodically, addressing the key issues raised in this paper, to ensure that the benefits are actually realised.

About Mason Advisory

Mason Advisory is trusted by the public and private sectors to provide independent advice and support. As an IT consultancy within the Datatec Group, we understand that technology can transform the way organisations operate and perform – but only when it's designed and deployed effectively. You can be confident that we'll help you get those critical decisions right, with over 20 years' experience of supporting organisations from strategy development through to implementation and assurance.

Contact us

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