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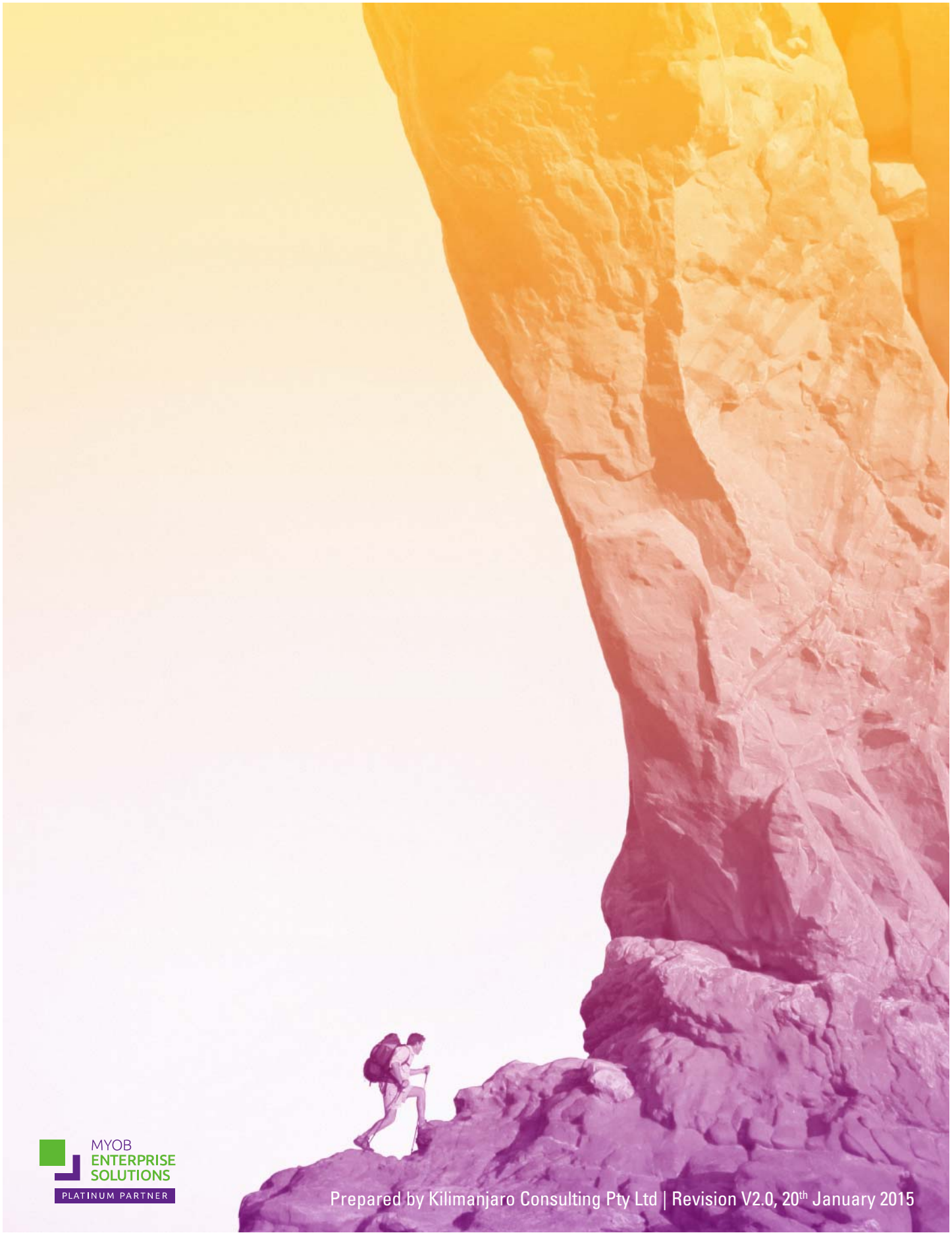
The Plain English Guide to "Cloud"



MYOB
ENTERPRISE
SOLUTIONS
PLATINUM PARTNER

Prepared by Kilimanjaro Consulting Pty Ltd | Revision V2.0, 20th January 2015

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Everything you wanted to know about "Cloud"

There is a lot of confusion about "Cloud", much of it caused by companies eager to capitalise on the excitement or "buzz" that surrounds any new product. The word is deceptively simple and there is great opportunity but also material downside risk if the right approach isn't taken.

The suitability of your business to "cloud" in one form or another will depend on your own business requirements.

This article is aimed at providing some basic information to clients that are looking at "Cloud" solutions, or are considering moving their Enterprise Resource Planning (ERP) system from "On-Premise" servers, to the "Cloud".

Opportunities are available to businesses with an existing ERP system to gain rapid improvements in efficiency by linking their existing system to cloud services. These are covered in a separate White Paper: Connected Services: Building a bridge to the Cloud.

This White Paper should help to dispel some of the myths, and clarify some of the terminology about the "Cloud".

Terminology

"Cloud"

Cloud refers to your server or Cloud service being hosted somewhere other than in your own server room. You are dependent on an internet connection to access it. Because resources and costs such as premises, technicians and electricity are shared across a large number of companies (the tenants), this results in better services and sometimes lower costs.

Cloud does not suit every business.

Private Cloud

Private Cloud means the server in a data centre is your own server. This is known as "Private Cloud" or co-hosting. The server is not shared with anyone. It is used exclusively by you, and you have administrator access.

MYOB EXO can be hosted in a Private Cloud.

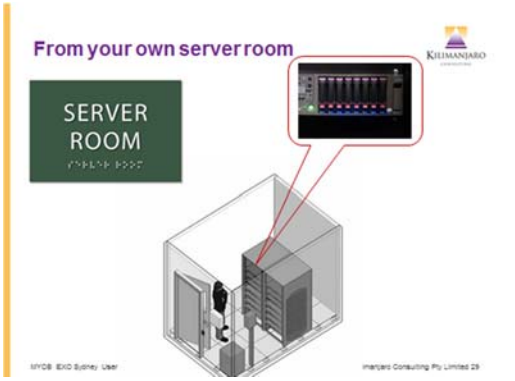
Hybrid Cloud

Modern software does not really care where the components are located, so a combination of On-Premise and Cloud is often a good solution. This is called "Hybrid Cloud".

With "Cloud" it is not all or nothing. Various options are available, and should be evaluated on the basis of your own business requirements.

Hybrid clouds are used to build a bridge between old and new infrastructure. Businesses are able to utilise the benefits of the Cloud while keeping the convenience and familiarity of their old systems.

In this way, companies are gaining the benefit of both old and new infrastructures.

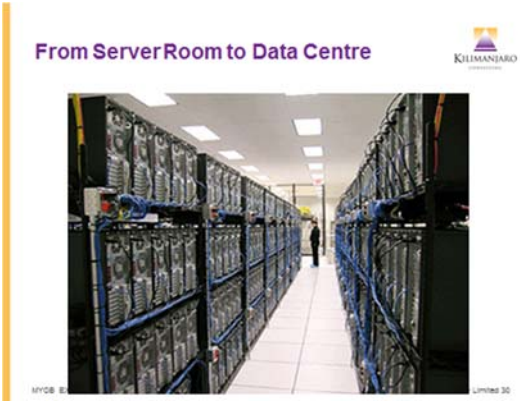


"On-Premise"

On-Premise refers to your server being used on your own premises, in your own server room or office, and not dependent on an internet connection. Until a few years ago, all hardware was On-Premise.

The software used to manage your business (your ERP System) runs on this On-Premise server.

The software is purchased from a software house like MYOB, and would usually carry an upfront purchase price, and thereafter require annual licence fees.



Other computers in the office are usually connected to your On-premise server via a physical network (e.g. cables or wireless).

Don't be fooled by people saying you are investing in old technology. Only 25% to 30% of new implementations over the next few years will be in the Cloud. That means 70% to 75% will be On-Premise and may be the most viable option for your business.

"Infrastructure as a Service" (IaaS)

The server in the data centre belongs to someone else, and you "rent" it. The load on servers can be balanced according to usage, and you can scale up or down as required. This is also sometimes referred to as Infrastructure as a Service (IAAS).

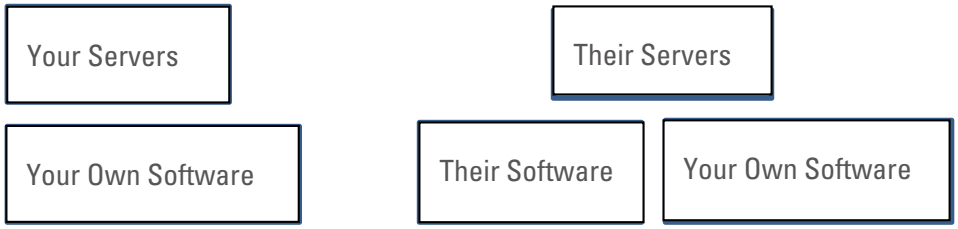
"Software as a Service" (SaaS)

In some cases, you may "rent" not only the server, but the ERP software as well. This is known as Software as a Service (SaaS). Examples of SaaS are MYOB Advanced and NetSuite.

"Co-location"

A colocation centre is a type of **data centre** where equipment, space, and bandwidth are available for rental to retail customers.

Think of it in the same way as you would a storage facility like Storage King or Kennard's Storage. They provide the facilities (Power, Security, Space, Pest Control etc.) and you put your own goods in that environment.



The Basics

To run any ERP system, On-Premise, in the Cloud, or Hybrid, you need five things:

1. ERP Software
2. Processing Power
3. Memory (RAM)[1]
4. Data Storage
5. Implementation and Support services

You need these five things whether you are in the "Cloud" or not. So before we look at "Cloud" versus "On-Premise", a basic understanding of each one is required.

1. ERP Software

ERP is the name given to integrated systems which deal not only with accounting, but Production Planning, Job Management, Inventory Management, Customer Relationship Management, Manufacturing, and all other aspects of the organisation. An ERP system is more than bookkeeping or accounting package. It becomes the single source of truth for all of the operations in your organisation. At the end of the day, the Debits must equal the Credits. It provides verifiable management information to decision-makers.

The test for true ERP software is:

- Is the software configurable to my unique processes?[2]
- Does the software require specialist implementation services?

[1] Random Access Memory
[2] See article http://kilimanjaro-consulting.com.au/myob-exo-review/whats-the-difference/

- Can the system give me customised reports?

The answer to these three questions must be "yes".

Examples:

ERP Software

MYOB EXO; SAP B1; Sage; Microsoft Dynamics; NetSuite; MYOB Advanced, Acumatica, Sybiz; Attache; Arrow; Greentree; Jiwa; Pronto; and Epicor are considered true ERP software in the mid-market space.

Not ERP Software

Other software packages such as MYOB AccountRight, QuickBooks, and Xero are not considered ERP software. They do not require specialist implementation services, and can be used in their "off-the-shelf" format. They do not meet the tests for ERP software above.

2. Processing Power

Processing power is provided by your hardware. Inside the computer "box", you will find the Central Processing Unit (CPU)[3] . Some computers have multiple CPU's. The CPU can only handle a certain number of commands per second. This is called the processing speed.

As software becomes more sophisticated, it starts to use more processing power. The result is that your old hardware may not be able to cope with new software.

When the situation arises that you need to upgrade your server(s), you are forced to make a decision: Do you buy a new, more powerful server, and deploy it On-Premise, or do you look to renting a server(s) in the "Cloud"?

This choice relates primarily to the processing power and costs, and should be thought of separately to the choice of ERP software.

Don't assume that new On-Premise ERP software can run on your existing hardware. It may require more processing power.

Be wary of low-cost Cloud hosting options. You generally get what you pay for. Low cost hosted options may not have sufficient processing power for your new software, and you may not have administrator access.

[3] The CPU (Central Processing Unit) is the part of a computer system that is commonly referred to as the "brains" of a computer. The CPU is also known as the processor or microprocessor. The CPU is responsible for executing a sequence of stored instructions called a program.

The Operating System

In addition to your hardware, your computer requires an operating system[4], and some additional programs to run the ERP system. These are usually provided by Microsoft (in the majority of our client's cases) or Apple or may even be open-source[5] such as Linux.

An example of an Operating System is Windows Server. An example of an additional program required is Microsoft SQL Server[6]. The cost of these is often not taken into account when you purchase an ERP system, as it is assumed this is already in place.

When you move to the Cloud, the cost of these is bundled into your monthly fee.

Microsoft and other software companies may cease supporting older versions of their software. An example of this is Windows XP,[7] which was widely used, is no longer supported by Microsoft. This does not mean you can't continue using it. It means that Microsoft will no longer release patches, security upgrades and bug fixes for this product, so it becomes high risk.

If you are using a Cloud solution, the cost of the Operating System is factored in to your monthly fee. Most providers will make sure all patches are applied and that the Operating system meets the requirements of your ERP system.

For an On-premise solution, you should factor in the cost of upgrading to a supported version of the Operating System.

3. Memory (RAM)[8]

As software becomes more sophisticated, it starts to use more RAM. Evidence has shown that memory requirements double every two years as applications become more complex. The result is that your old hardware may not be able to cope with new software.

If your ERP system runs on a Microsoft SQL Database, as is the case with most mid-market ERP system, the more RAM on the server, the better. As a bare minimum, you should have 4GB of RAM available for the SQL Server.[9]

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[4] An operating system (OS) is software that manages computer hardware and software resources and provides common services for computer programs. The operating system is an essential component of the system software in a computer system.
[5] Open source software is usually written collaboratively by hundreds of developers across the world, giving their expertise for free.
[6] Microsoft SQL Server is a relational database management system (RDBMS) that creates, retrieves and stores data for medium to enterprise sized businesses.
[7] Windows XP is an operating system for desktop computers produced by Microsoft.
[8] Random Access Memory (RAM)
[9] RAM required for any company will vary depending on your requirements.

It is likely that you will be running other applications on the same server, in which case you need to increase the amount of RAM to take into consideration the RAM requirements of each additional piece of software.

We recommend that you invest in RAM to meet your current and future needs.

With SaaS, you won't have any control over the amount of RAM allocated to your instance. With hosted or co-hosted (your own or rented servers in a "Cloud" environment), be sure to take RAM into account. More is better.

4. Data Storage

Most ERP systems accumulate enormous quantities of data over time. You may want to report on the sales of a particular stock item over the last 5 years. Previously, this was almost impossible, whereas today, it can be done at the click of a button. This is because the data is saved in a "granular" way. Older systems kept only a summary of the data, whereas modern systems keep every little detail. This requires a lot of storage. As the system gets older, the data accumulates because you probably do not want to purge it. Even though data can be archived, it still needs to be stored somewhere. Hence, the data storage requirements of an ERP system are likely to be exponential.

This data is stored on a hard drive. A bare minimum requirement for data storage would likely be 30 GB, but it is suggested you add 10MB per user to that. Data storage capacity can be added by purchasing additional hard drives or newer hard drives with more capacity.

This is one area where there are huge benefits to the Cloud. It provides large amounts of data storage at very low cost.

This Cloud data storage is available whether or not your ERP system is in the Cloud. Companies like Dropbox will give you 2GB of data storage free. 1TB (1000GB) will only cost $10.00 per month.

This is because the infrastructure for storing the data is shared.

Cloud data storage is cheaper than On-Premise. However, you should watch out for hidden costs for additional storage, as the amount of your data increases.

5. Implementation and Support services

There is no difference between implementation and support services for On-Premise or Cloud ERP solutions. It can be argued that Cloud solutions are generally more stable, as they are being looked after by highly specialised teams of technicians, compared to your local network administrator.

It is important to make sure that in a co-hosted environment, you have administrator access to your server. This is a special log-in with elevated access privileges. Without this, your implementing and support partner will not be able to support your ERP system.

With the Cloud as SaaS, you will not be given Administrator access to the server, as the resources are shared between many users.

Now that we have covered these five essential elements required for our ERP system to work, (ERP Software; Processing Power; Memory (RAM); Data Storage; and Implementation and Support services) we can compare On-Premise versus "Cloud".

There are two common methodologies for deciding on which software to implement: Risk / Benefit assessment and Total Cost of Ownership

Risk / Benefit Assessment

Risk Considerations

Distilled down to the most basic elements, your choice will be based on how much efficiency improvement you can get and at what cost. This is a cost / benefit analysis, or sometimes a R.O.I. (Return on Investment) calculation.

But you will also need to look at a risk / benefit equation.

There are 3 main risks to be aware of when choosing an ERP system: Software Risk; Implementer Risk; and Self-inflicted risk. These risks should always be considered, whether you are considering On-Premise, Cloud, Private Cloud, Hybrid Cloud or SaaS. They are slightly different for each of these.

1. Software Risk

Your choice of software should be based on your own business's requirements, and not on the features that each package offers. The decision of how the solution will be delivered (On-Premise vs Cloud) should be a secondary consideration.

There is no point in moving to the Cloud if the ERP software you are moving to does not meet your requirements.

Carefully review your requirements, as these may have changed over time. There are always efficiency gains to be had by identifying your requirements and then applying the functionality available in newer versions of your existing software package. With technology changing at the rate it is, business focus changes and direction, it is always a good idea to constantly look at how one can "sharpen the spear" specifically around your processes and ERP systems. If your existing ERP system can be reconfigured to meet your requirements, the savings will be immense

It is a common mistake to assume that a new Cloud based system will have everything your old system has, plus more. It is a competitive market, and you get what you pay for. A $29 per month Cloud solution will not give you the same functionality as a $200 per month Cloud solution. In the same way, a $29 per month Cloud solution is not going to give you the same functionality as your current on-premise ERP system. You can expect to pay about $150 - $250 per user per month for the equivalent system to MYOB EXO. Note that this will be named users (not concurrent users) as each person needing to access the system will require their own login and password, in the same way as required when logging into a computer on a network, or to internet banking.

If you are running MYOB EXO as your ERP system, it is likely that this has been highly configured over many years. For example, an area which often takes time to perfect is the custom reports you use to run your business. In many cases, it will take effort to get the new system to simply deliver what you currently have

in your On-Premise system. There is no out-of-the-box Cloud solution that can match a configured On-Premise system. Your Cloud solution will also have to be configured.

Once you have reached the point where an On-Premise solution can clearly no longer satisfy your requirements, or where the efficiency benefits of a SaaS solution is obvious, a move to the Cloud should be considered.

This may be due to multiple locations, multiple companies, operations in many jurisdictions, multi-currencies, or complex accounting requirements such as multiple ledgers etc. Most Cloud ERP solutions are for larger, more complex businesses. However, technological advances may change this. Smaller businesses might find it cost effective and more efficient to move to the Cloud if it becomes feasible.

With Cloud solutions as with On-Premise, stick with the market leaders in your market space (mid-market) like MYOB, SAP or NetSuite. Beware of solutions that over-promise and under-deliver.

There is no simple answer to choosing between Cloud and On-Premise. Be sure to take the future requirements of your business into account as well. Once you have made the decision, you will be locked into a system for years depending on the contractual arrangement.

Users are often influenced by sales talk. Avoid purchasing over-complex and expensive solutions with functionality you will never use, as this will push the price up, perhaps beyond the point where the expense can be justified.

2. Implementer Risk

Well implemented ERP systems, will give you a competitive edge and efficiency improvements. Badly implemented ERP systems can cause significant damage to your business.

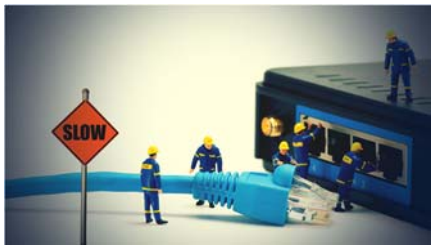
Cloud-based solutions are no easier to implement than On-Premise solutions. Make sure you select an implementer that has a good, solid reputation in companies of similar size to your own. Ideally, look for industry experience. Ask the software vendor who their best implementers are, and be prepared to pay a bit more for skills and experience. Be wary of negotiating the cost of the implementation down on price, as the implementer will be forced to use lower cost resources on your project, and this simply increases the risks. Again, you get what you pay for in this competitive market.

If you decide to move to the Cloud, consider the advantages of staying with your current implementer, provided they have given you good service. Most software houses like MYOB now have an On-Premise and a Cloud solution. In the case of MYOB, it means choosing between MYOB EXO and MYOB Advanced. Most implementers of the On-Premise software would be certified to implement the Cloud solution.

Based on a survey by Gartner, current customers were least satisfied with the lack of predictability of cost in SaaS implementation. This primarily is because of the unpredictability in post-sales support and maintenance services.

If you have a relationship with an implementation and support consultant, your risks in moving to the Cloud are reduced. You will only change the software component from On-Premise to Cloud or SaaS.

3. Self-Inflicted Risk



Internet Connectivity

If you are thinking of moving to a Cloud solution, check your internet speed first. The most common internet connection is ADSL. This means that the speed is Asynchronous: the download speed is much faster than the upload speed. This is good when you are downloading data, but when you have 15 users on your ERP system and the data flow is both ways, your system may become congested. The average download speed in Australia is about 16 Mbps but the average upload speed is only 4.5 Mbps. If you are going to have more than 5 users on your system, depending on offer demands, ADSL 2+ is unlikely to be sufficient. Allow between 0.5 mbps and 1.0 mbps bandwidth per user.

A simple speed test will give you an indication if you need to upgrade.

The test can be found here: http://www.speedtest.net/

When evaluating the cost of Cloud, factor in the cost of upgrading your internet connection to DSL. The faster, the better. Look at alternate providers like Pipe Networks or the NBN. Price differences between providers are significant.

A list of providers and comparative line speeds can be found here by typing in your address

http://www.adsl2exchanges.com.au/

4G, Satellite and Wireless (Big Air) are options where a fast line speed is not available, but are not yet commonly used with ERP systems.

Once the NBN has been rolled out, line speed should no longer be an issue, and Cloud will really come into its own.

Figure 1: Download Speed

Figure 2: Upload Speed

Remember to factor the cost of upgrading your internet connection in when looking at Cloud ERP systems.

Be wary of low cost capped plans with penalties for high usage.

Reliability of the connection becomes important if your mission critical processes[10] depend on your internet connection. It is worthwhile considering having a back-up connection such as a 4G mobile plan to be used when the line goes down.

Latency

As data is stored in Cloud far away from end users, it may take more transactional time as compared to a firm's internal network. The SaaS model is not suitable for applications that demand response times in the milliseconds. This is dependent on browser efficiency, change management processes and connectivity of MS Office or Exchange to the ERP.

Other Considerations

Security

Remember all that stands between someone and your data is a password. This will become the single greatest vulnerability with Cloud ERP solutions, and it is entirely in your hands to deal with it. But it requires some discipline.

Users must be forced to use strong passwords, and must not write them down.

Shared passwords must not be allowed.

Factor this in to your costs as the number of licences required will be based on the number of named users, not the number of concurrent users.

Enforce regular changing of passwords, especially when staff leave your company, or contractors have had access to passwords.

Factor in to the cost the number of "Named" users of your ERP system. Avoid sharing logins and passwords with others in your organisation. Permissions are likely to be set up per user.

While security was frequently mentioned as a concern about SaaS, we think control and ownership of SaaS deserve more consideration.

Ownership

Because you are out-sourcing the Cloud system, you do not own the system itself. This may mean a loss of control and management (See Control below.)

[10] "Mission critical" refers to the processes or systems that, when disrupted or fails to operate, results in the failure of business operations. They are the processes or systems that are core to the company's operating system and without it, the company fails to run as required.

Vendors may claim to "own" your data by limiting your rights to access your own data. You must be aware of any such clause in the SaaS contract. However, it is very unusual for vendors to claim they fully own your data, although it is something to watch out for.

Control

Often companies are hesitant to hand over control of their business critical applications to outside vendors. This is because they don't own or control the systems themselves.

Although the SaaS vendor controls and manages the maintenance and upgrades of the system, you still retain access and control over your data. However, when issues arise, support is provided by the provider themselves, and not through your internal IT department.

Data Portability

Changing Cloud vendors or moving from Cloud to an on-premise system is not simple. Once you ar ein, it's hard to get out. Before deciding on the vendor, consider the following questions:

- How long has the vendor been in business?
- Are they stable and profitable, or are they losing money?
- How do you get data off the system? [11]

A question commonly asked is "What happens to my data if the data centre hosting my ERP goes out of business?" In reality, there is an inherent risk of losing valuable data if the vendor goes out of business. Avoid providers who do not provide a clear explanation about how to retrieve your data.

There is no precedent for this yet, but the most likely scenario is that the Administrators would continue to run the data centre and you would have an opportunity to find an alternative.

A similar question is "What happens to my data if I don't pay my monthly premiums"?

Most SaaS providers have robust debtor collection processes in place to make sure that non-payment does not happen by omission. If you pass all deadlines and still have not paid, you will lose your data at some point depending on the exact wording of your contract of service.

If you are concerned about privacy, make sure that your hosting is local (Australian) where it has to comply with Australian Legislation. Overseas hosting is subject to the laws of the country in which the datacentre is located.

Peripherals and Integrations

Beware of the associated costs of having to upgrade other unrelated software. For example, if you move to the Cloud, you may need to upgrade to Office 365, which is also Cloud based.

Most Cloud software includes an API[12], which makes integration easier than in the past. Integrating Cloud-based software with other Cloud-based software is possible, and Cloud-based software can also be integrated with On-Premise software.

[11] Is your data safe in the cloud? Security and data loss concerns are widespread By Jesse Lipson VP & GM of Data Sharing , Citrix ShareFile

[12] Application Programming Interface provides a mechanism to integrate diverse software packages.

If you are already using 3rd Party or companion software with EXO, this will have to be re-integrated into your Cloud solution. Very few clients would be able to manage the building of these integrations in-house, even with API's, so again, there are cost implications here.

Integration has become simpler with the emergence of API services such as JitterBit and Azuqua, but will still require the technical knowledge of your implementation partner.

Reporting

Connecting directly to the database is usually not an option for SaaS customers, as you will not have direct access to the database.

Make sure that there are reporting options that allow you to create and configure custom reports. The single most common reason for businesses changing ERP systems is the flexibility of reporting. No matter how many standard reports a system has, you are guaranteed to want something slightly different.

User Training

One of the greatest risks is allocating insufficient budget for end user training. This is true for all new software packages.

Take into account the level of computer skills in your company. If a user is familiar with a browser (Internet Explorer, Chrome, Firefox, Safari etc.) they will adapt to a Web-based solution like MYOB Advanced much more easily than a user whose only experience with computers is desktop software.

More sophisticated users of web-based applications will be familiar with having multiple Windows open at the same time. They will be more tolerant of the slight delay in sending and receiving data from a remote server. They will also be aware that once you press the "Process" or "Commit" button, there is no going back.

Over time, software companies like MYOB will give attention to the User Experience, to make for an easier transition of users as companies move from one product in the range to the next.

Upgrades

All upgrades tend to cause some disruption, but the benefits far outweigh the costs. Upgrades fix bugs in the software, and also introduce new functionality.

With On-Premise software, the decision as to when (and indeed if) to upgrade your software is entirely in your hands. Upgrades can be scheduled to take place in quiet times, and testing can be completed, staff trained, integrations tested, before going live.

With SaaS solutions, bugs will be addressed and upgrades rolled out continuously, even daily. There are enormous benefits to this, as many bugs will be addressed even before you experience them. The downside is that upgrades will be done in the timeframe dictated by the vendor. In some cases, you may have the option of upgrading in a "window" between two dates.

With SaaS solutions, you will be forced to upgrade, and will always be on the latest version of the software. It will not be in your hands to choose.

Benefits

We have covered the risks quite comprehensively in this document. What about the benefits of SaaS?

In some situations, SaaS will clearly give efficiency benefits. In other situations, the benefits may not add up to much, compared to the risks.

For most businesses, there are many potential benefits by adopting a SaaS model.

Cloud software has many benefits. You need to be sure that you can take advantage of the benefits, and are not simply swapping one system for another.

Rapid Deployment

When you sign up for a S.a.a.S. subscription, the software is already deployed in the server environment, and you will have access as soon as your username and password is provided. The software still needs to be configured, but the deployment of the software in the environment is generally much quicker that with On-Premise solutions.

Improved Scalability and Capacity

Here again, the Cloud comes out a winner. You can increase RAM, Server Capacity, and storage simply by requisitioning (and paying for) more of their servers. Cloud solutions offer limitless scalability. On SaaS, this is automatically allocated. In some cases you can even scale up in busy times and scale down again in quiet times. You need only pay for what you use.

Backup and Maintenance

Cloud solutions offer maintenance and backup advantages over On-Premise solutions. The responsibility for backups or replication is usually taken over by the supplier of the service. With SaaS, the provider will make sure that all data is replicated to multiple geographic locations as well as locally.

It is recommended that you keep a backup or snapshot of your own data.

With On-Premise solutions, you are responsible for applying patches, hot-fixes and upgrades/ updates of Operating Systems, and providing your own Anti-Virus software etc. Most mid-sized businesses are not particularly good at any of these tasks, so a move to the Cloud is likely to lower the risk in both these areas.

The cost of maintenance, backups and replication is taken into account in the monthly fee you pay for SaaS.

Support Advantages

Because SaaS providers deploy the exact same version of the SaaS to all users, it is generally less complicated to navigate. A generic instruction manual will allow users to figure out how data is updated and structured on the Cloud.

With SaaS, there is reduced demand on your IT department to maintain the system. When an issue arises, most providers offer 24/7 on-call support. You are able to free up your IT department to focus on in-office support and maintenance and leave the online stuff to the Cloud experts.

Anti-Virus Protection

There is no need to install a separate anti-virus system as most SaaS providers include this in their package. However, an anti-virus system is still required for each and every device utilising the local system.

With SaaS, companies should have decreased data exposure and loss, fewer malware incidents, fewer website compromises and less security-related downtime.

Integration Through Web-based API's

A web-based application programming interface (API) is the instructions and standards for accessing and writing to a web-based application.

It is a software-to-software interface. All SaaS solutions provide API's that allow companies to seamlessly integrate SaaS into their existing systems, or other SaaS systems.

If you need to integrate, be sure that the API provided has the necessary "end-points" to extract or write the data you need. Don't assume that someone must have done it before you. You may be the first, and with that comes high risk and high cost.

Upgrades

SaaS vendors update their software regularly, sometimes even daily. Because they operate externally, the management of the upgrading process is out of sight. This takes the onus away from users to install or upgrade cumbersome new applications or servers as required by On-Premise ERP systems.

Upgrades are usually conducted during minimal downtime and off-peak hours allowing users to log into a new and improved system without affecting data and customisations. This minimises interruptions during working hours.

SaaS vendors usually offer automated upgrading as part of their subscription package. This relieves businesses from the hassle of approving updates as they become available.

As the cost of upgrades is included in the subscription package, businesses are not presented with a bill upon each upgrade.

Total Cost of Ownership (TCO)

In certain circumstances, TCO is a better way to calculate the costs and to compare On-Premise with SaaS. TCO takes into account the total cost of purchase, training, maintenance, support and upgrades over a period a relevant period.

For example, if you are a start-up business, or do not have existing servers, or would need to upgrade or replace your On-Premise servers to accommodate your new ERP system, then TCO would be a valid calculation.

Cost Considerations

SaaS. software solutions remain owned, managed and controlled by the software vendor. By providing access to their own software, vendors are in effect offering it "as a service." SaaS. solutions are most typically offered on a recurring subscription basis (although a one-time implementation service cost will apply).

In contrast, vendors of On-Premise software sell a perpetual license to use their software, plus an Annual Licence Fee. This licensing model involves a transfer of rights as consideration for a one-time payment by the customer.

The "pay-as-you-go" pricing structure of SaaS solutions will change the way in which businesses budget their spending. This means that businesses may change their organisational structure to respond and adapt to the Cloud and its costing arrangements.

Cost Comparisons

When comparing the cost of an On-Premise implementation with a typical SaaS solution, you will need to make some assumptions. The answer will depend on how correct those assumptions are, the circumstances and the time horizon.

Be careful not to underestimate the costs associated with data and bandwidth, time, compatibility, and integration requirements with cloud migration.[13]

Cost savings may include the (no longer required) building or hiring a server room, purchasing the computer hardware, purchasing associated network related hardware like switches and backup devices, and hiring additional network administrators. All these are included in the cost of the SaaS solution.

1. Time Horizon

It is difficult to compare Initial Investment Costs and On-going investment costs, so the best way is to look at it over the anticipated lifespan of the ERP implementation. The time horizon plays a material role in total cost of ownership.

Many companies don't replace an ERP system after 5 or even 10 years if the system continues to deliver meaningful value. When ownership cycles extend beyond a standard lifecycle, (about 7 years) On-Premise systems generally deliver lower Total Cost of Ownership than their SaaS counterparts.

2. Number of Users

On-Premise solutions often calculate number of concurrent users, (i.e. users logged in at the same time) whereas SaaS solutions work on named users (Users registered for access to the system – everyone with a username and password). Be aware that in both cases there are likely to be different licences available, e.g. Sales Only, CRM, Job Costing User etc.

3. Internet Connection

As explained above, your existing internet connection may not be fast enough for the SaaS solution and extra costs will then have to be incurred to secure a faster connection. This can come at a high price compared to a standard internet connection. As an example, unlimited ADSL2 may cost less than $100 per month, while DSL may cost up to $10 000 per month. [See 3. Internet Connectivity above.]

4. Implementation

The initial implementation and Configuration costs will be about the same for SaaS and for On-Premise or Hybrid. While a pre-configured system will be much less expensive to deploy, remember to take your functional needs into account. [See 1. Software Costs above.]

[13] http://www.forbes.com/sites/moorinsights/2015/06/29/this-isnt-your-fathers-midmarket-enterprise-system-5-trends-you-need-to-know/

5. Accounting Preferences

The recurring subscription payments for the SaaS application are treated as operating expenses and appear on the Profit and Loss statement, whereas the purchase of a server and On-Premise software appears on the Balance Sheet and is depreciated annually. The depreciation expense appears on the Profit & Loss Statement.

Myths

There are several SaaS-related myths.

Myth 1: Maintenance and upgrade Costs are eliminated

On-going costs like maintenance and upgrades are not eliminated, but are simply built in to the subscription. Because the costs are shared over many users, they are likely to be lower than On-Premise.

Table 1: Example of Annual Server costs

	On-Premise	Cloud
Server Maintenance	1500	Included in subscription
Upgrades	2000	Included in subscription
Total	2700	N/A

Myth 2: SaaS solutions are inevitably less expensive than On-Premise solutions.

Using the assumptions from above, let's look at the cost differential over the standard lifecycle of 7 years.

Table 2: Comparison of Implementation, Training and Licence Fee Costs in Year 1

Year 1		
	MYOB EXO	**SAAS. Solution**
Initial Implementation	$23 000	$23 000
Staff Training	$2 000	$2 000
Initial Licence Purchase	$23 000	$ NIL
Annual Licence Fee	$5 270	$ NIL
Monthly Fees @ $150 per user per month	$ NIL	$18 000
Total Cost Year 1	**$53 270**	**$43 000**

On this simple comparison, the SaaS solution is almost $10 000 less expensive than the On-premise MYOB EXO solution in year 1.

Let's now look at the next 6 years (years 2 to 6).

Figure 3: Comparison of Implementation, Training and Licence Fee Costs Following 6 Years

Year 2 onwards [Year 2 to Year 7]		
	MYOB EXO	SAAS. Solution
Annual Licence Fee (x 6)	$31 620	$ NIL
Monthly Fees @ $150 per user per month (X 6 years) including server maintenance and upgrades	$ NIL	$108 000
Total Cost Year 2 to Year 6	*$31 620*	*$108 000*

Total Cost over 7 years	**$84 890**	**$151 000**

So, on our simple comparison, the On-Premise MYOB EXO solution is about $66 000 less expensive than the SaaS solution over a lifetime of 7 years.

We still need to adjust this with the server maintenance and upgrade costs of the On-premise software in Table 3. You are likely to upgrade 3 times in the 7 year period.

Upgrade Costs over 7 Years	$6000

That still leaves a $60 000 cost savings for the On-Premise compared to the SAAS solution.

The table below gives an example of what may be taken into account in a TCO exercise:

Figure 4: TCO example over 7 years

	On-Premise	SaaS
Hardware Purchase	15000	-
Software Purchase	15000	-
Service Contracts	1000	-
Set Up & Installation	5000	2000
Training	1500	1200
Maintenance & Support	1200	-
Unit Energy Consumption & Cost	4000	-
Upgrades - Hardware & Software	7000	
Staff Resources	1000	
Administrative overhead	1000	
Backup Hardware	2000	
Backup Software	1500	
Network Administrator Costs	12000	3000
Total	**67200**	**6200**

In this example, the SaaS solution comes out on top, but by a slim margin of $1000.

In most cases, you will still have to maintain some servers On-Premise (Exchange servers, FTP servers, VoIP phone systems) making it hard to estimate what portion of existing fixed costs will be saved.

Total Cost of Ownership is therefore not a meaningful way to compare SaaS to On-Premise.

Myth 3: SaaS is less secure than On-Premise

Concern over security is one of the biggest reasons for companies resisting the change towards SaaS. The Cloud Security Report 2013[14] proved that the threat of security on SaaS and On-Premise are the same.

Hackers will attack data no matter where it resides because they are opportunistic in nature.

SaaS providers typically focus more on security than you would on your own On-Premise systems.

In the case of security, your own security strategy is more important than the choice of platform.

[14] Cloud Security Report 2013 by Alert Logic< http://www.cloudtp.com/2015/01/12/3-arguments-enterprise-saas-fall-flat/>

Conclusion

More and more companies are making the change to Cloud-based systems.

To understand the Cloud, consider this analogy: some homeowners choose hire gardeners to manage their garden, while other homeowners prefer to handle the maintenance themselves. The Cloud is therefore an out-sourced service that allows businesses to get the job done, without doing any of the hard yards themselves. The decision to out-source any work is dependent on the risks, benefits and total cost involved.

The decision-making process of choosing between a Cloud-based system or an On-Premise system is lengthy. You must decide whether the productivity gains made by using a new piece of technology are worth the investment. Ask yourself:

- Does it give me mobility?
- Reduce risk?
- Simplify my life?
- Ease my pain?
- Does it increase productivity?
- Does it increase flexibility?
- Does it increase innovation?
- Does it increase responsiveness?

And then ask – what am I prepared to pay to do that?

If you are ready for a change, adoption of Cloud should happen at your own pace.

It is relevant to take the risk/benefit assessment into consideration. The risks associated with SaaS solutions can almost always be avoided or mitigated through skilful negotiation on the contractual terms. Where the provider remains inflexible on the terms, you must consider whether to walk away from the agreement and accept the risks to attain the benefit, or find another service provider.

It may not always be possible, or desirable, to move everything onto the Cloud. The question is: Why rip out something that works and disrupt the business? The smart answer is to keep your original On-Premise system and utilise the benefits of the cloud as you see fit. "If it ain't broke, don't fix it. "

Although it may be tough to give up control of your data, a SaaS system can provide benefits that are not available with traditional On-Premise systems. You must determine whether these benefits are in line with your business model and your needs before committing to the Cloud.

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