



Cloud Computing:

- ◆ Even when you delete the screaming headlines and mix in a healthy dose of realism, the business case for Cloud Computing is strong enough that it can still remain compelling for many SMEs.
- ◆ The Cloud isn't technology breakthrough; it's simply the economics of scale and market size in operation. IT services are commoditising—and the big players are joining in.
- ◆ IT service as a commodity takes some aspects of IT provision to the next level of risk. This additional risk can have cross company impact. Risk mitigation is no longer just an IT Department responsibility.



Rowallan Software Services

Rowallan Software Services is the trading name of Rowallan International Ltd and was established in 1994 in response to a need for realistic and practicable advice for busy IT departments and, in particular, development teams.

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Cloud Computing & Your Company

by David Williams

The Silver Lining

If we were to accept the claims of each IT pundit at face value, then everything that isn't actually built into the walls of the corporate office will eventually be outsourced.

The helpdesk is often already located in a remote call centre, software development is frequently conducted in some even more remote offshore location and the servers are more than likely housed in a remote data centre. But now, all the applications are said to be migrating to the Cloud. The IT Department, claim the pundits, is ceasing to exist.

Even wearing our reality spectacles, there is clearly a migration towards the Cloud taking place. A number of very large players, making huge investments, have entered the Cloud arena. This is the best indicator we have of a trend becoming standard commercial practice.

Besides market pull, the Cloud does make a lot of sense for some types of applications, and for many SMEs. There are sufficient savings of both cash and effort to make the migration seem attractive.

However, the Cloud isn't a smartphone. You don't have to embrace it for reasons of fashion. There needs to be a set of valid business (and indeed technical) reasons for doing so. Cloud migration is a straightforward business decision, much like any Board makes many times a year.

The critical balancing factor in all this, except for the need to have geography lessons, will be the ability to analyse those business reasons and the need to carefully manage a range of projects, contracts and service agreements.

Many companies are not yet ready to take on a project of this sort. Either they are marooned on a technology island and can't see their way to the mainland, or they simply don't have the resource and

capability to conduct a successful Cloud project.

This note is about throwing them a lifeline, and briefly outlines the steps of a Cloud migration project.



We're in this together

For some time now, we have been helping our clients adopt a holistic approach to IT strategies.

More especially, how to integrate the activities of the IT team into the business decision making process, such that they become part of a fast moving and effective stakeholder team, and not just an isolated outpost of the enterprise.

We wouldn't expect one of the builders to decide how many offices our new HQ building will have. Why therefore should we assume the adoption of our new Cloud Computing application will be solely the responsibility of one of our IT staff?

These are both clearly examples of key client requirements that can impact the very nature of the business. This makes it vital that all parts of the business collaborate to arrive at an appropriate, and correctly informed, result.

This need is even more acute for Cloud Computing - because we are now dealing with all the additional risks that accompany early adoption.

Not only do we still need the holistic approach to software deployment, we now also need to understand these risks. It is a simple truth that the strategy for mitigating Cloud Computing risks is a collaborative exercise that extends far beyond the technological.

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Cloud Computing The Risks:

Cloud Computing introduces some risks that may not currently be present in your IT organisation. For example:

Suppliers

Your company is now dependent in a very direct way on the capability of your Cloud supplier.

Availability

Key parts of your business may now be dependent on the availability of not only your Cloud supplier's application, but also the Internet connecting you to that application.

Security

How secure is Cloud Computing? Are you exposing your business to unreasonable risk?

Capability

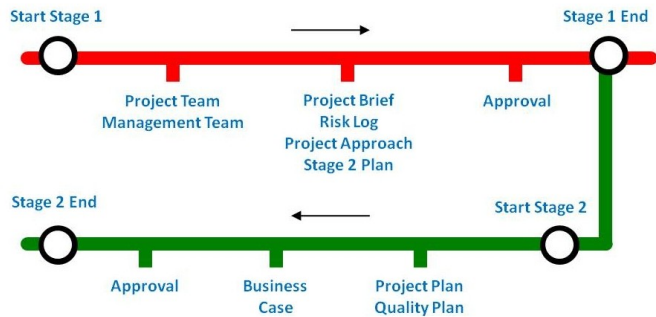
Do you have the right team for the job? Will it be necessary to restructure before or after the deployment of Cloud Computing?

Consistency

Will the new applications allow you to conduct 'business as usual' for your customers?

Loss of Control

Is there a return path? Will you be able to migrate to another supplier or back out of the Cloud?



The journey starts.....

Clearly the compelling reason for embracing Cloud Computing has to be reducing costs. Aside from minor technical decisions that add little risk, the overarching business decision instantly becomes:

"Can we mitigate the associated risks well enough and cheaply enough to still take benefit from the reduced cost of supply?"

Equally clearly, in order to answer the question, you need to understand, to a sufficient level of detail, the whole-company impact of the deployment and the risk mitigation.

Game set and match! A go no-go decision on Cloud Computing is no different from that for in-house application delivery. It's just harder.

.....With a plan

Spending what amounts to a small fraction of your total project costs on an initial investigation is far more likely to produce a successful outcome than leaping into the void that is Cloud Computing.

The diagram above is our recommended path for dealing with this. It is based very loosely on PRINCE2, although the important thing is to have a process. Which flavour is of little consequence.

We have divided the project into several stages. The rationale is that the project spend should be incremental, and that at each stage management approval is required to proceed to the next stage. If a

project is not going to be viable, this is the cheapest way to find out.

Although it is important to do at least something at each step, the effort expended can realistically be scaled to the size of the project.

Moving most or all of your key applications is obviously deserving of more initial analysis than running a pilot excursion into Cloud Computing.

The Management Team

Your company first should appoint a Management Team whose only role is to drive the business vision of the project.

The 'team' should comprise one or more senior company managers, each required to devote only a small amount of time to the project.

Their principal activity, executed at the end of each project stage, is to decide whether to continue with the project or not.

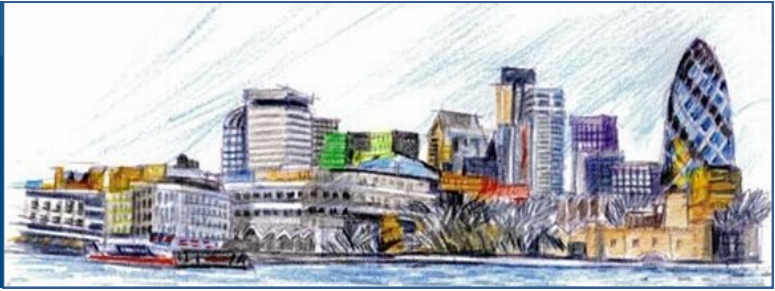
The Project Team

The Management Team should appoint a Project Team to carry out the tasks of the project.

As well as the prime movers, who are likely to be IT, it is also vital to have representation from each of the key stakeholder company departments.

The Management Team should also appoint a Project Manager, with overall responsibility for the day to day running of the project.

By setting up this (initial) Project Team the Management Team is authorising the first stage of the project to proceed. Typically the first stage might range in duration from a day or two up to a month.



Cloud Computing The Business Case:

Delivery of a new application through the Cloud is undoubtedly less costly than deploying the same application in house. Simple economy of scale ensures that.

There are however a number of related costs that need to be factored into your Business Case when you are actually migrating an existing application to the Cloud. It's important to include all of these in your analysis:

Project Costs

The migration project itself has costs. This is money you wouldn't have spent if you didn't do the project, so these costs should be included.

Deployment Costs

Deployment costs should include items such as user training, data migration and recruitment.

Consider also potential costs for terminating leases on existing hardware, and possible redundancy costs for some IT staff.

You may require a network upgrade to deploy what is effectively an Internet based application.

Supplier Costs

As well as the supplier fees for the new application there may also be configuration, training and support fees to the supplier or one of their partners.



Stage 1 - Project Brief

This initial project deliverable aims to provide a short description of what the project is trying to achieve. It becomes the core instruction from the Management Team.

The content is project dependent, but for a Cloud Computing project it might well address the limits of expenditure that are envisaged, the extent of any (business) disruption permitted, and desirable timescales.

The Project Brief should constrain the project to remain within boundaries set by the Management Team, and establish the criteria for the success of the project.

Stage 1 - Risk Log

We would recommend that the first draft of the Risk Log is visited at this initial stage. No matter how seductive the Cloud marketplace can sound, there is risk here - and it is currently higher than for conventional in-house projects.

Our approach would be to take the risks outlined on the previous page and briefly evaluate their impact on each of the stakeholder Departments.

You are still in the decision making stage of the project, so great detail is not required. You simply need to expose all the risks, and their mitigation strategies, that will have to be dealt with.

The Risk Log should be continuously updated and reviewed.

Stage 1 - Project Approach

The Project Approach is a birds eye view of the project itself. What tasks need to be achieved, and what choices have already been made about how to accomplish them?

Typically, for a Cloud Computing migration project, you will be replacing an in-house application with a hosted version. The Project Approach will not only include tasks such as supplier selection and data migration, but also any new capabilities needed, and any capabilities and equipment no longer required.

The Project Approach will form the key input for a more detailed project plan.

Stage 1 - Initiation Plan

The final task for this first stage is to produce a plan for the next stage. This plan is effectively asking the

Management Team for authorisation to proceed to the second stage of the project - informed by the material that has been made available from the first stage.

Stage 2 - Project Plan

Based on the Project Approach, the boundaries of the project as outlined in the Project Brief, and the risk mitigation strategies a detailed Project Plan is now produced.

Clearly, depending on the details of the project itself, there could still be some unknowns at this stage. If there is isn't sufficient information to plan a task, then not only produce a 'plan for a plan' but also insert a realistic budgetary estimate for the Business Plan to work with.

The Project Plan should be continuously updated and reviewed.

Stage 2 - Business Case

This is the final and most important piece of analysis that needs to be done before the project actually goes live.

By this point you should know all we are going to need to know about the project to produce a Business Case which aims to answer the question we posed earlier:

"Can we mitigate the associated risks well enough and cheaply enough to still take benefit from the reduced cost of supply?"

Many companies have existing procedures for making business cases to senior management, so our view would be to use those if they exist.

At this point in the project, the numbers are more important than the document or the process used to produce them.

The overarching issue is to leave no stone unturned. Make sure that all of the project costs and benefits are included in the analysis, and that the result is as accurate as can be reasonably achieved.

Stage 2 - Management Team Approval

The Stage 2 work should have produced sufficient material to allow the Management Team to make an informed business decision to proceed (or not to proceed) with this project.

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Cloud Computing The Landscape:

'Cloud Computing' has been used to cover a variety of deployment scenarios:

Software as a Service (SAAS)

This, for the purist, is true Cloud Computing. An enterprise subscribes to a networked application.

Not only is the subscriber relieved of almost all operational duties save that of managing their own list of users, but the charging model is invariably scaled to the number of users. This accrues benefit from both the lower cost per user, and from the flexibility of paying only for what you need.

Examples: Salesforce.com, Office365

Platform as a Service (PAAS)

In the PAAS scenario an enterprise outsources everything except deploying and operating the actual application. Servers, operating system, and database can all be part of the rental package.

This scenario accrues benefit from economy of scale (in part from the data centre size, in part from virtualisation) and some scalability as needs change.

Examples: Microsoft Azure

Infrastructure as a Service (IAAS)

The IAAS scenario is essentially what most of us have been doing for years, and renting remote server capacity as an alternative to in-house servers.

This scenario accrues much the same benefits as PAAS, save that larger operational costs are incurred within the enterprise.

Examples: Many



Begin by.....

Once the project has been authorised by the Management Team it ceases to be a paper study and becomes a live project aiming to deploy one or more Cloud Computing applications.

The work leading up to signing with a Cloud supplier has been placed in a separate stage from that of preparing for live operation. If nothing else, this reflects the different tasks and skills involved.

Both stages are subject to final approval by the Management Team to ensure they are meeting the requirements of the Project Brief and the Business Case.

.....selecting a supplier

Purchasing a software product to run on an in-house system, more often than not, means buying from the product portfolio of a global software vendor. No matter what form the distribution chain takes, the product that is delivered to you is a known entity of known quality.

Now transform to the volatile and fast changing world of Cloud Computing. Here is a market, destined to be large, but currently in its infancy. Whilst the applications may be even be the same as the ones you are currently running in-house, the environment is not.

Your applications are now one of many such sets of applications deployed in a remote data centre. You are sharing space, compute

power and support bandwidth with many other companies.

Data centre build outs are completing at an unprecedented rate. The overall Cloud capacity is both growing and consolidating at the same time as new players enter the market and existing players merge.

This hugely increases the need for care in vendor selection and very careful monitoring afterwards.

Someone else is now running a key function of your business.

Stage 3 - Supplier Selection

In a general paper it's hard to be especially prescriptive about supplier selection; there are too many options.

If you are migrating to typical SAAS applications (e.g. E-mail, database, document storage, CRM) then you should find a number of relatively obvious contenders.

If you are trying to replace an aging, but specialist application, then you could be looking at a PAAS offering and some bespoke configuration of a generic application.

If your application was originally written in-house and has no SAAS equivalent then you could look at IAAS or even PAAS - but this could be expensive and the work in Stages 1 and 2 needs to be augmented to include additional development costs. This may not be the right time for you to go to the Cloud.

A cloud supplier is also likely have a partner programme which could enable you to outsource an even larger portion of the deployment project.



Cloud Computing Project Summary:

This is our summary of the full set of steps to deploying a key Cloud Computing application in an SME .

(N:B Those steps marked with a '' could reasonably be omitted for a non-key application or in a smaller company)*

Stage 1

- ◆ Agree the Management Team*
- ◆ Appoint the Project Team
- ◆ Produce Project Brief
- ◆ Produce Risk Log
- ◆ Produce Project Approach*
- ◆ Produce Stage 2 Plan*
- ◆ Get approval to proceed*

Stage 2

- ◆ Produce Project Plan
- ◆ Produce Business Case
- ◆ Get approval to proceed

Stage 3

- ◆ Supplier selection
- ◆ Supplier qualification
- ◆ Supplier contract
- ◆ Get approval to proceed

Stage 4

- ◆ Data migration
- ◆ Training
- ◆ Support
- ◆ Get approval to proceed
- ◆ Switch to live operation

Stage 4

- ◆ Post deployment
- ◆ SLA monitoring



Stage 3 - Supplier Qualification

This task is not that different from qualifying any software supplier. You are trying to ascertain if that particular supplier is not adding any unacceptable risks to your business:

- ◆ Check for the existence of appropriate operational procedures
- ◆ Get some hands on experience with their service
- ◆ Check recent service delivery records
- ◆ Run a standard company check

Talk to the supplier or their partners. Ask for positive proof of their claims on service and integrity. Ask for one or more customer references.

Stage 3 - Supplier Contract

The contract between your company and the Cloud supplier now has the same status as any internal agreements you might currently have between IT and its client Departments. The important difference is that now you have virtually no direct control over the supplier, other than as enshrined in the contract. You should therefore ensure that the contract clearly establishes:

- ◆ A definition of the service to be delivered
- ◆ A defined SLA
- ◆ A definition of penalties for not meeting the SLA
- ◆ Pricing levels for numbers of users within your foreseeable range.
- ◆ Terminations conditions that mitigate your company being unreasonably locked in
- ◆ The right to retrieve and own your own data.

Finally, ensure that a suitably qualified legal expert is brought into the loop. They will have insight into the agreement beyond just the technical schedules.

Once you are sure that you have done everything you can to ensure success then the details of the selection and the contract should be put before the Management Team for final signoff on the monies.

Stage 3 - Management Team Approval

You are now committing the company not only to recurring expenditure, but also to a legally binding agreement. This should be approved by the

Management Team, as well as any local company processes.

Following a path similar to this should enable you to find an appropriate supplier and to ensure you have a mutually acceptable agreement.

There are no guarantees. However, following a process will very considerably reduce the risk of subsequent operational failure.

There's still lots to do

We aren't there yet. Selecting the supplier takes care of the external portions of our migration to the Cloud.

Stage 4 deals with deployment and introducing change that may impact many parts of your company. This is where the 'whole company' approach is at its most critical.

The stakeholder members of the Project Team, working with the Project Manager, should be responsible for the liaison back to their own Departments , and for mobilising any activity required therein.

Stage 4 - Data Migration

Clearly migrating an existing application will probably require that any existing data is also migrated.

For many of the global brands there is going to be supplier support for this, and effort is likely to be limited to using the supplier migration tools, or getting one of their partners to do it for you.

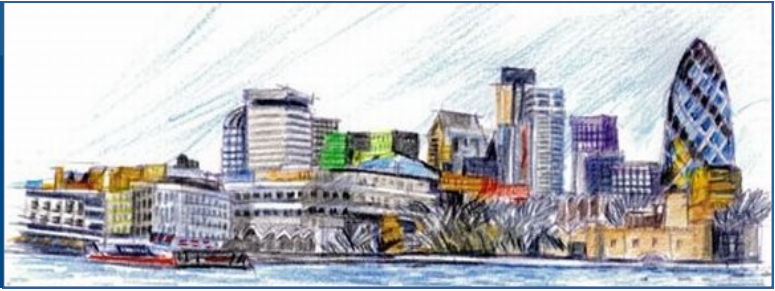
If this is not the case then you may need to treat data migration as a major sub-project of the migration. An especially difficult and complex data migration could destroy the business case for going to the Cloud in the first place.

If you think there is a migration issue then check:

- ◆ Is the cost of data migration near or in excess of the operational costs of the current application?
- ◆ Will I be able to migrate all the data, or will the new application either introduce new data, or omit some existing data?

If either is not true, then your application may not be a candidate

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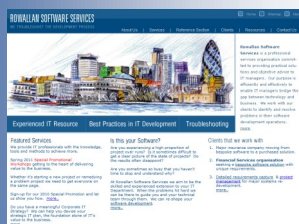
Any Questions?

- ◆ **Cloud Computing** – Can my Company benefit from Cloud Computing?
- ◆ **Contracts** - Do you have the skills and experience available in-house to manage a range of key contracts and service level agreements?
- ◆ **IT Skills** - Does your existing IT skill base need refreshing to supply your needs going forwards?
- ◆ **Projects** - Do you have the experience to initiate and manage a project of this nature?
- ◆ **Cohesion** - Is IT still an island?
- ◆ **Future** - Will your strategy get you locked in to a specific cloud supplier, impeding the evolution of the business?
- ◆ **Timing** - Is this the right time to migrate to the Cloud?
- ◆ **Stranded** - I'm stuck with an obsolete application. How can I get to the Cloud?

Get Answers:

Getting help to answer your questions is cheaper than guessing the wrong answers. Rowallan Software Services is ready to help your company.

Contact us at:



for Cloud Computing at this time. It's important to keep this in mind during the Stage 2 planning work.

Stage 4 - Training

It's easy to organise and therefore easy to ignore. Don't. There is nothing more disruptive to the business than to roll out a new application that nobody knows how to use. Provide training in advance of deployment for:

- ◆ Application administrators
- ◆ User support staff
- ◆ Users

Stage 4 - Support

The support arrangements may vary considerably dependent on the supplier and the size of your user base.

By and large your existing helpdesk organisation will probably need to support your own users, but the supplier will support the helpdesk.

Stage 4 - Management Team Approval

The Management Team should give their approval before the application is permitted to go live.

Their main responsibility is to ensure that all reasonable precautions have been taken to ensure that any subsequent disruption to the business will be both minimised and anticipated.



Your application should now be fully operational from the Cloud.

Check the result....

There are still two sets of tasks that need to be completed. First you have to ensure that an accurate picture of the new application's service quality is compiled.

Secondly, you can now also start the planned decommissioning of systems that may no longer be required.

Stage 5 - Post Deployment

If your Cloud application replaces an existing in-house application, then it's now time to start decommissioning any assets that are no longer needed.

The plan of how and when assets are to be released is going to depend not only on how you have ramped up the Cloud deployment, but also on the status of those assets. However there are some general guidelines:

- ◆ Of paramount importance is that you are not tempted to increase costs at this stage. If you have to leave even a small, but permanent, user community on the old system, then you could dangerously erode the original business justification for the cloud migration.
- ◆ You will also face the far more sensitive issue of staffing levels. Decommissioning major in-house applications will change staff requirements. During the planning phase you will need to have established an agreed policy on relocation to other work, or even redundancy.

Stage 5 - SLA Monitoring

The supplier should provide you with a regular report outlining the service delivery performance over the preceding period. This is certainly an important piece in checking that what has been contracted for is being delivered.

At the same time it would be prudent, especially during the early life of the new application to gauge the user experience. You could usefully follow two tracks:

- ◆ Look at key 'before and after' measurements. For example any volume metric, such as a count of E-mails sent over time, would show if users are having any unreported issues with the new application.
- ◆ Encourage feedback from (a sample of) users. Try to understand if the new application is having any kind of undetected impact on the business.

....and enjoy the Cloud