



Taking the pain out of upgrading

The case for component based upgrades

Written By: ICCM Solutions
☎ +44 (0) 1666 828600
✉ enquiries@iccm.co.uk

Executive Summary

Whatever your experience or opinion of the current economic environment, a result is that IT organizations have come under increasingly focused scrutiny as to the value they bring to the business and the costs they incur providing the services required for the business to meet its objectives.

IT organizations that have already embarked on the ITIL® 'journey', having reached a level of maturity, are likely to have been operating an ITSM tool for some time to help them achieve this. However IT organizations are now being asked to prove the value they return to the business, demonstrate ROI and business benefits achieved, which include the ongoing costs for just 'keeping the lights on' their ITSM tool.

As part of this focus, organizations are now forced to examine the maintenance and ongoing upgrade costs of their IT Service Management (ITSM) solutions, which in many instances involves a lengthy and expensive project with no tangible benefit other than to meet the support requirements of their ITSM tool vendor.

The introduction of additional feature/function in one process (for example Incident Management) is also forcing adopters of many ITSM tools to upgrade their ENTIRE product suite including completely unrelated processes they may have deployed (for example Change or Release Management).

This is especially frustrating if different processes are utilized by different organizations within the business, the upgrade then effectively requiring an effort similar in scale to the initial ITIL® adoption project.

This situation has occurred simply due to the inflexible and antiquated technology platforms leveraged by many ITSM vendors in the market place today. On top of these platforms the applications, at their core, are inherently nothing more than ticketing systems that have grown through the addition of 'bolt on' modules to provide different functionality. The consequence is they incumbently do not have the architecture to allow for simple and flexible upgrade options.

This white paper examines this situation within the ITSM market place and the pain and risks that, until now, most organizations have had to go through, not through choice but through necessity. This paper will also examine an alternative way, through the adoption of component based upgrades, which not only reduces the risk and pain, but also has seen significant reduction in costs and hence the total cost of ownership of ITSM tools.

Introduction

To understand how upgrades to ITSM tools are causing many organizations issues, it is important to understand how the various components and architecture used to design them are used and bolted together. Most ITSM tools adopt a tiered approach similar to below:

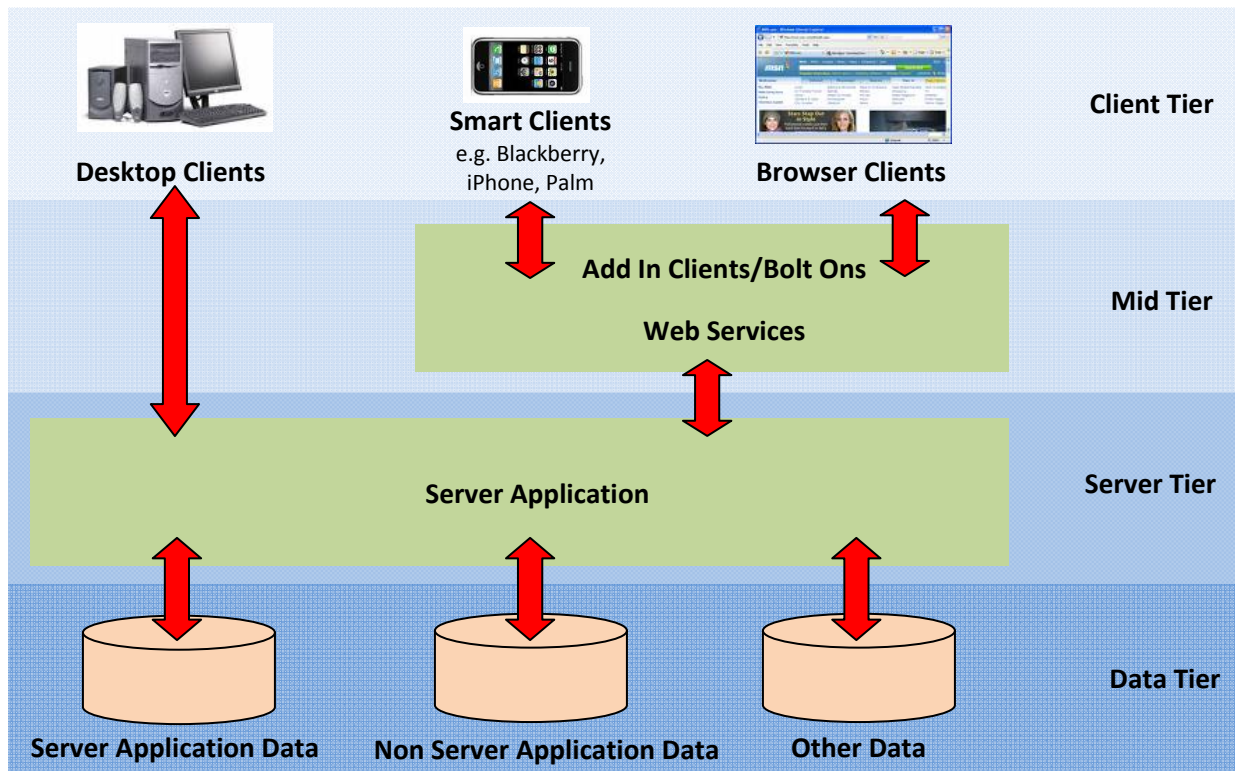


Figure 1 – Typical ITSM Application Tier Architecture

Client Tier

Many ITSM applications require the use of a desktop client as they have adopted Server/Client architecture.

In enterprise organizations the need to upgrade/migrate desktop client applications on potentially thousands of desktops is, in itself, a massive undertaking requiring involvement of Change and Release Management. This process is not as easy as some would like to make out due to incompatibility of the new desktop client with other installed applications or different hardware.

This cannot be avoided to the diverse nature of desktop hardware and installed software that is inherent across enterprise architecture. In an organization with large teams of people this process in itself has been known to take many months (and in some cases never as the upgrade project has failed!)

Other clients can also exist in the form of mobile devices such as smart phones or palm devices which in itself cause issues with different devices, and the speed with which this technology advances causing compatibility issues where vendors cannot keep pace.

Mid Tier

To tackle the server/client architecture issues and with the growth in demand for web-access over the last decade, some ITSM vendors deployed the capability to applications over the web through browsers like Internet Explorer or Mozilla Firefox .

The Mid Tier contains web services applications which provide the interface between the browser client and the server application within the Server Tier.

However these 'bolt-on' mid tier applications still cannot hide the fact that the core product was never designed or intended to be a thin client application.

Although this tier typically tends to be a presentation layer, an upgrade to the Server Tier is more often than not still required to be carried out to support an upgrade to the Mid Tier as they are not mutually exclusive.

Data Tier

This is the most important tier which technically stores everything from data entered into fields contained within forms to configuration data relating to the application.

The Server Application on the Server Tier interacts with the database to fetch/store/edit/delete data which is stored in it, but the way in which data is stored and how it is used is controlled by the Server Application. The Data Tier is also important with consideration to the CMDB especially if a federated approach is being taken. For many ITSM applications integration capability into this data tier can be especially problematic with custom API's requiring to be built at significant cost and time.

Integration capability is also frequently embedded within the Server Application, therefore if improvements are made to this capability then the entire Server Application requires upgrading.

Server Tier

Within the Server Tier the Server Application acts as a gateway between the system users and the database.

More critically, it can also be the actual place where all the processes that are defined in the applications or any custom code is executed and necessary changes are made on the database. The results of these are shown and passed to the client tools.

It is this server application that is effectively the 'engine' for the ITSM tool that creates the upgrade issues that many organizations face. This is simply down to the programming language and architectural design of this engine, which in many cases is over 20 years old and is in effect a 'black box' whose components cannot be changed (at least not very easily) without changing the others.

The Pain Points – Why upgrades/migrations cause so much trouble

It is over the course of the last 10 years, especially since the emergence of ITIL® as the 'de facto' good practice framework, that has seen serious pain points emerge for organizations wishing to upgrade (or migrate) to their vendors latest offerings. These pain points have focused around several areas:

The development of customer requirement for Service Management tools to become completely web-based as opposed to server/client based (thin client as opposed to thick client).

Vendors responding to feature/function advances in competitors products introducing 'bolt-ons' to their products rather than fully integrated technology.

The recognition that the single, all-encompassing CMDB, is realistically not achievable with a movement towards adoption of a federated CMDB model requiring advanced integration capability with other back office systems or databases. This frequently requires the build of custom API's with many ITSM vendors not really offering inherent integration capability, resulting in lengthy integration projects and re-integration (or non supported API's) come upgrade time.

Many ITSM vendors technology is still, at its core, nothing more than a 'call logging' system which has been added to over the years to pretend to be a full ITSM suite aligned to the ITIL® framework, but can actually contain modules written in different ways, or with different technologies, requiring a product specialist or consultant just to get it all to work together.

ITSM can encompass multiple business units (different departments cover Incident Management to Change and Release Management). Frequently these business units are at different levels of ITIL® maturity and also have different needs in terms of migration (i.e. some business units may not have a need/requirement to upgrade at all!).

Redefinition or re-alignment of business processes may be required as part of the upgrade process. Unless a business unit is looking to redefine their process as part of a Service Improvement Program (SIP). It can be especially frustrating to undertake this process again to gain no net benefit. An organizations processes are exactly that; THEIR processes, so to have to redevelop these processes again to gain feature/function benefits of a new version such as improved performance, enhanced integration capability etc is costly resulting in having to make a cost/benefit analysis of adopting new feature/function, an exercise which in itself can be expensive!

These pain points are frequently focused around (but not limited to!) the Server Tier of an ITSM architecture.

This is simply due to the technology and architecture that many ITSM vendors leverage, namely technologies developed for IT not a business.

Because these technologies are IT focused and not business focused they do not lend themselves to the goals of IT Service Management, i.e. alignment to the business.

There is another way – by adopting a business focused technology, rather than an IT focused technology as the foundation of your ITSM tools you can almost completely reduce the pain points identified above as upgrades or migrations focus around business components, not an application component.

Component Based Upgrades – How they work

Previously Server Tier technology effectively operated as a ‘black box’ or ‘sealed unit’ in that if you wished to upgrade/migrate to the next version you had to upgrade the entire application. This application contained the application technology, your business processes, any custom API’s that may have been built, any changes to forms for data capture etc.

Consequently, this meant migrating this ‘black box’ meant losing all of these components resulting in any enhancements/customization made to be rebuilt from scratch.

By utilizing a business focused technology such as business process management suites the Server Tier Application works in a fundamentally different way displayed below:

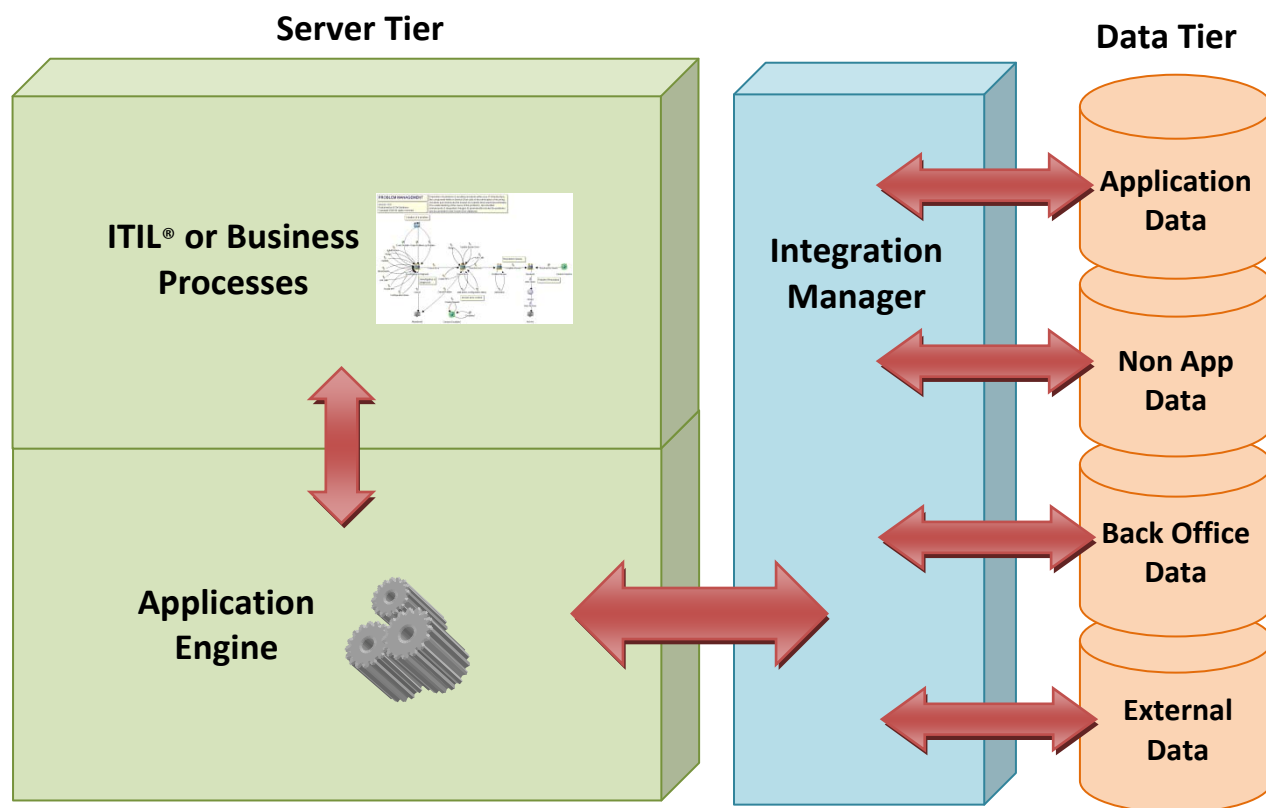


Figure 2 – Server Tier Architecture based on BPM Suite

By leveraging the architecture of a Business Process Management Suite the Server Tier takes on a very different dimension.

To understand why this architecture is fundamentally different we first need to understand how organizations have adopted the implementation of their ITSM toolsets.

The way things are now

As part of an ITIL® adoption and deployment, one of the first things that organizations are advised to do is to define their processes (Incident Management, Change Management, Release Management etc).

After many workshops and requirements gathering exercises the output from this is typically to use some sort of visual work flow tool such as Microsoft Visio, to produce a graphical representation of those processes.

It should not be said that analyzing, understanding and consequently communicating these processes is not a beneficial exercise, however process diagrams, although being useful as a visual representation of process, do nothing to demonstrate compliance to the process, never mind ensuring enforcement of compliance.

Once this graphical representation has been produced the next step a business frequently undertakes (after assessment of current toolsets and it is identified a replacement is required) is to conduct a procurement exercise to identify a product which is the best fit to their requirements and process. Typically, even once a 'best fit' toolset had been identified, there are frequently gaps in requirements or functionality.

This is becoming a common problem; with the introduction of ITIL®, ITSM vendors have been forced to ensure their products 'align' to the processes described in the framework in order to achieve certifications from external bodies and remain competitive.

The result is although each vendor claims to be unique in some way (such as having a different Service Catalogue, or a visual representation of the CMDB etc) this has resulted in many toolsets, certainly in regards to a feature/function perspective, being very similar to each other.

However, as ITIL® has always been a framework, and hence prescriptive, this leaves an organization looking to implement a tool facing a conundrum:

- After spending time and effort defining your ITIL® processes do you ditch them and adopt the 'to the letter' process defined in the ITSM toolset even though it is not the best fit for your organization?
- Do you spend time and effort customizing the toolset to meet your process requirements?
- What if your service management processes incorporate processes outside of the IT organization and the ITIL® framework? Do you either purchase another toolset to meet these requirements and spend time and effort on developing integration capability within the ITSM toolset or, do you spend time and effort customizing the ITSM toolset?

For most organizations option a) is not an option at all and seems counter-intuitive to what an adoption of the ITIL® framework is all about which leaves them facing option b). For organizations also facing option c) the problems are still the same and it is these problems which contribute the most pain to the migration process.

The way things should be and Galliford Try – A Case Study

Once the decision has been made to embark on the road of options b) or c) organizations then spend a significant time with their vendor conducting further process analysis and refinement, defining requirements, producing statements of work before actual customization work commences on their chosen toolset, which produces an application that is aligned to the organizations process.

However, the consequence of this approach is that the organizations processes are then intrinsically embedded within the ITSM application. Should, for example, improvements in application performance be realized in a newer product release, or more seriously support for the application is ceased due to its age, then this typically involves upgrading/migrating the ENTIRE application, resulting in losing all of the customization work done to those processes (unless the customization work is carried out again resulting in more time and expense).

This leaves the organization asking the question “But if they are our processes, and they are still fit for purpose, why should we have to go through this whole customization exercise again to re-align our process into the tool?”

Of course processes should be subjected to analysis and review as part of any good Service Improvement Program, but a process should not be lost, or require re-engineering back, simply because you have upgraded/migrated to the latest version of your ITSM application.

By introducing a subtle, but significant shift in the application architecture this can be completely avoided.

As ITIL® is very much a process aligned framework, it makes sense to leverage a process aligned technology to build an ITSM application to help adopt it. Business Process Management (BPM) technologies are perfectly suited to this requirement, with the additional benefit in that the scenario given above is effectively non-existent due to the inherent architecture of a BPM platform.

As can be seen in *Figure 2* the actual business processes are completely independent from the actual application engine. There processes however are more than just ‘maps or diagrams’ or a graphical representation of tasks, but actually form part of a process execution layer within the BPM suite.

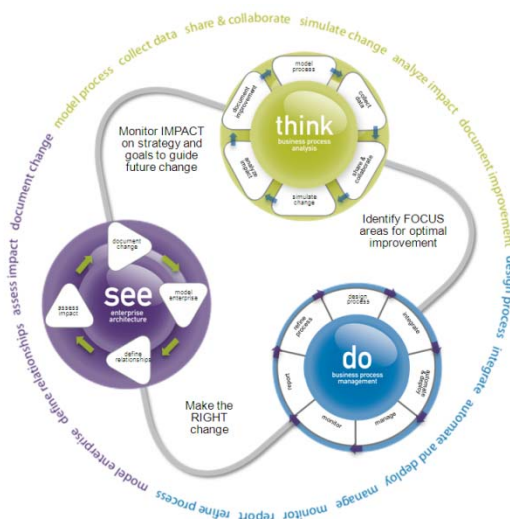


Figure 3 – BPM Suite

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The process execution layer is, in fact, just a part of the BPM suite, which includes an Enterprise Architecture Layer, Business Process Analysis Layer, and the Business Process Management/Execution layer.

This allows complete end to end process enablement across the entire organization integrated at an Enterprise Architecture level, something that ITIL® has been criticized for being weak at in the past.

For further information on this concept see further whitepapers at <http://www.iccm.co.uk>

With the processes designed and built in the BPM suite Process Design tool and Execution Layer, they are effectively safe and are not affected by any changes made to the underpinning Server Application or Integration Manager.

This means that any upgrades made to the Server Application or Integration Manager can be carried out without any impact on the organizations processes at all.

In fact, the only time an organization would make any changes to its processes are if they come about from the Continual Service Improvement Program or if there has been a fundamental change in the process framework itself (i.e. from ITIL® V2 to ITIL® V3) which happened to be the case for Galliford Try.

Galliford Try is one of the UK's leading construction and house building groups with revenues of £1.5 billion and for several years have been using e-Service Desk from ICCM, built upon Metastorm BPM, a Gartner recognized industry leading BPM tool. Galliford Try took the decision to upgrade their version of e-Service Desk with new feature/functions and alignment to ITIL® V3.

The upgrade was completed in a matter of days with the Group IT Operations Manager, Andrew Ralph, commenting:

“The Overall process to upgrade was surprisingly simple considering we had modified our system. A very good training package had been provided to our end users who found the upgrade seamless”.

The BPM architecture also lends itself to very advanced integration capability. Again, as this is carried out on the Server Application and Integration Manager level, there is no impact on process. As Ralph noted

“Our data migrated over to the new system with 100% accuracy and we maintained full availability to the system in our core service hours. Changes to the agreed upgrade were able to be modified at very short notice to suit requirements and the Consultant who carried out the deployment had a very good understanding of our system and processes and was able to provide a valuable steer on decisions”.

There is an additional advantage to this approach; because each process can be independently published through the Process Execution Layer, and managed by Server Application, each process can be effectively run as an application in its own right. Therefore in the scenario where different business units are owners of different processes, one process owner can make changes to its process with absolutely no impact on any other process because they are not embedded within a Server Application.

On the occasions that improvements are made to feature/function at a process level these can very easily be incorporated into the core process map in the Process Design Tool and published via the Process Execution Layer.

Because the Server Application and the Business Processes are also independent to the Presentation Layer improvements in the user interface, look and feel etc again are completely independent to the actual Server Application.

Consequently this allows organizations the flexibility to pick and choose their upgrade strategy and adopt any enhancements that benefit them, without impact on any other process areas, and, most importantly, without having to re-engineer their processes back into their ITSM application and commit as much time and pain as the initial ITIL® and ITSM tool rollout.

Adopters of this approach and architecture have been able to carry out upgrades measured in hours not weeks or even months. Where significant process changes have been made (i.e. migration from ITIL® V2 to ITIL® V3) organizations have typically been taking migrations lasting only 2-3 weeks whereas those who have traditional architectures 12-18 month upgrades are common (if successful at all).

Andrew Ralph of Galliford Try confirms and summarizes:

“The overall implementation finished early and we were able to provide a list of additional enhancements to be carried out”.

An ITSM tool upgrade that was finished early allowing additional work to be carried out?! You heard it here first.

This common sense approach is radicalizing the ITSM and ITIL® world and is displacing those applications whose architecture is not fit for the agile and flexible requirements that businesses need today in order to remain competitive where massive and costly upgrade/migration projects are simply not an option just to remain standing still.

ABOUT ICCM

Extraordinary Service Desk Software created within the leading process improvement architecture

ICCM Professional Services Ltd. was originally established in the mid 1990's to provide consultancy services to organisations wishing to improve their Service Desk function. ICCM realised most solutions on the market did not offer the level of functionality being demanded by the industry, and for that reason researched other technologies to deliver benefits over existing application vendors. ICCM identified Metastorm BPM® as an exciting process enabling technology that seamlessly delivers a high performing orchestration engine and web interface that ensures compliance and adherence to any underpinning process. This enabling technology incorporating ICCM's e-Service Desk truly transforms the way in which Service Management applications deliver value to a customer.

Today, ICCM's core objective is to provide revolutionary software and superior services to organisations aspiring to Best Practice Service Management. Rather than the legacy “application development” driven approach that many vendors in the market have adopted, ICCM's forward-thinking approach blends their first-class Service Desk tool with the functionality of business technology in the form of Metastorm BPM®. This collaboration delivers unparalleled Service Management capabilities across all industries and business functions in almost every geographical region.

For further information on ICCM and what we can do to help you visit our website at <http://www.iccm.co.uk>