

Purchasing a Packaged Solution: Adopt vs Adapt



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Introduction

When looking to improve a business process, automation can be a viable and attractive option. Of course, not all processes will be candidates for automation or semi-automation, but for those processes that are repeatable and predictable, automation can yield significant benefits.

These might include efficiency savings, cost savings, as well as helping to ensure a more consistent customer experience. Automation can free up staff from tedious manual work, and free them to work on more valuable and productive work, often work that is more valued by the customer.

When considering the automation of fairly standard and predictable processes, one popular approach is to select, purchase and implement a Commercial Off-the-Shelf (COTS) software package. In the right circumstances, purchasing packaged solutions provides a number of advantages – the software is tried and tested, there is a ready supply of support, and so on.

In fact, COTS packages can sound like a panacea – and it may be perceived by some that implementing them is a simple case of ‘lift and drop’. With this mind-set it can be tempting for organizations to run head-first into these projects without fully understanding their existing processes.

In this article, we discuss the importance of understanding the existing situation and making conscious choices about what to ‘adopt’ and what to ‘adapt’.

The "No Requirements Needed" Myth

As alluded to above, when purchasing COTS packages, it can be easy to think that it is not necessary to focus on analyzing the organization's requirements.

After all, when you're buying a package, you are – by its very nature – purchasing a standard offering. Indeed, the very fact that COTS packages are standard is one of their many advantages.

In the right context, a suitable system, supported by a vendor, will (in theory) require less maintenance and oversight than a home-grown system.

There is often an underlying (and sometimes unstated) assumption that the implemented package will be kept as near to standard as possible. However, for the package to be successful and useful, it must meet the high level business objectives and requirements as well as more detailed stakeholder requirements.

There are two very important factors to consider here. Firstly, if a COTS package is to enable value, we need to ensure that we have chosen the right package in the first place. This is typically achieved through a robust vendor assessment process – perhaps a Request for Information (RFI)/ Request for Proposal (RFP) or Invitation to Tender (ITT) process.

Each of these relies on a sufficient understanding of the organization's requirements and processes to enable an objective scoring of various competing packages. Knowing the current situation, what could be improved, and the overall aims for the automation initiative is crucial.



This allows the project team to objectively recommend the best package, and avoid being blind-sided by the best sales pitch. Martin Tate, in his 2015 book *Off-The-Shelf IT Solutions: A practitioner's guide to selection and procurement* articulately states this point:

“The fact that a solution is off-the-shelf does not mean that you can abandon the process of thinking about what you want. You must not become a passive consumer of technology, bowled over by the ‘wow factor’ at demonstrations. You must stay in control of what constitutes a good feature for your organization. Your requirements provide the anchor for this stability.”

(Tate, 2015)

Secondly, and of equal importance, once the package has been selected it will be necessary to have an ongoing discussion over which solution components can be adopted and what needs to be adapted. This statement may sound rather abstract, so further explanation and an illustration follows.

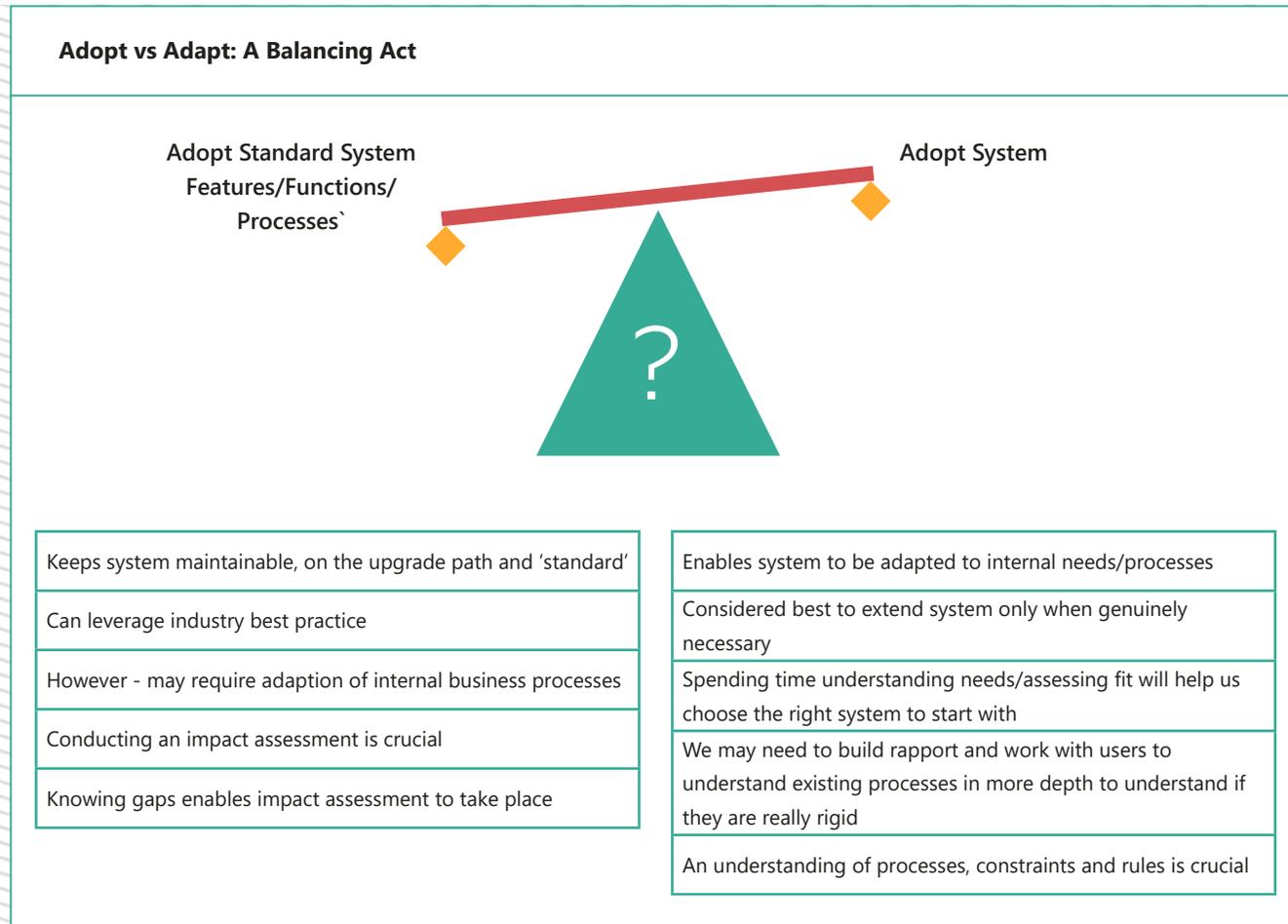
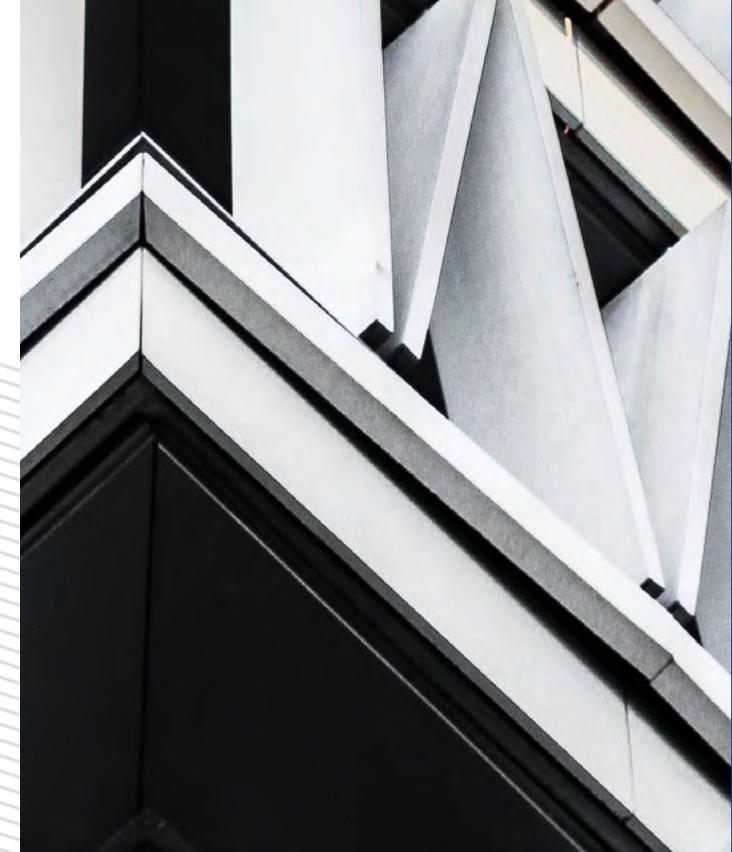


Figure 1: Summary of adopting and adapting: A fine balancing act
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Like all standard solutions, packaged software will 'drop out of the box' with certain standard features and system capabilities.

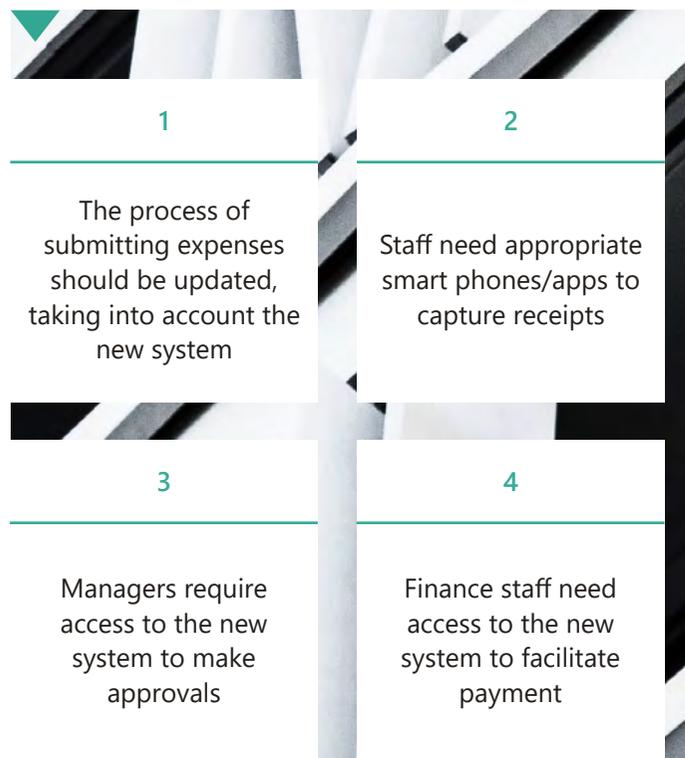
Depending on the nature of the solution, it may even be designed to support standard industry practices – an accounting package, for example, may support the charging (and recording) of Value Added Tax (VAT) and may even be pre-populated with the relevant tax rates for different jurisdictions.

Adopting standard functionality like this is advantageous; we quickly achieve the benefits of using a standard system.

However, a decision will be needed on how much of the standard functionality and how many of the 'out of the box' business processes are adopted.

This may be technically desirable, but it is important to realize that adopting standard functionality and 'stock processes' may require the adaptation of our business processes. Imagine the hypothetical accounting package mentioned earlier.

Perhaps its standard expenses approval process involves employees taking a snapshot of a receipt on their phone, categorizing it, and submitting it for approval. If the current process involves the physical retention of receipts, then in order to adopt the standard process a number of changes will be required:



In this case there may be a clear case for adopting the standard process from the package, and it's therefore important that we benchmark and understand the impact on existing systems, processes, people and organizational structures.

Doing this requires a thorough understanding of the current and desired processes. If we simply implement without considering the wider process implications, we'll cause confusion as the existing processes cease to work.

Even worse, we may find that end-users adapt the existing processes in ad-hoc ways to fill the gaps we have left them. Whilst this is completely understandable, it may end up with processes that are less efficient and less consistent than if they were consciously designed.

Additionally, in many cases, there will be times when it is necessary to adapt the solution to ensure that a specific business need is met. Drawing on the accounting package example, there might be a complex grading structure that affects who can approve expenses.

It is unlikely that these complex business rules can be simplified in the short term, so the system must cater for this complexity and will likely require relevant configuration to do so. Knowing this in advance and consciously choosing a solution that can cater for the required complexity is crucial.

There may even be places where extension (otherwise known as "bespoking") of the package is required. It is considered prudent for us to avoid this wherever possible – as it is often the case that a package that is extended becomes less easy to maintain and upgrade – but there may still be cases where it is necessary.

Perhaps it is necessary to integrate, interface or exchange data with a home-grown system using an organization-specific message format. Or perhaps a function is required that isn't offered by any off-the-shelf solution, so it must be carefully 'bolted on'. In any case, it is important that we 'look before we leap...'

Look Before You Leap: Mind the (process) Gap!



As anyone who has ever worked in or visited London will attest to, you can't travel on the London metro ('tube') system without getting used to hearing the regular warning 'Mind the Gap!'.

This useful precaution helps prevent commuters from falling into the gap between the train and the platform.

A similar fate awaits those that do not mind the process gap. Implementing a COTS package without understanding the core business needs – and the standard processes, features and functions offered by the chosen solution, will mean that you are likely heading firmly (and unknowingly) into a dark and undesirable process gap. Without this insight, we risk implementing systems that are incompatible with our existing processes – leading to disappointed and disenfranchised users and stakeholders.

"Caveat emptor. The majority of COTS solutions require extensive customization to meet the needs and support the business processes of the Federal environment. Federal agencies must make major business process reengineering changes to use COTS solutions as delivered. Often, COTS packages provide only a partial solution and require an interface to an existing system..."

(ITRB, 1999)



These types of risks can be mitigated by undertaking a suitably thorough gap analysis exercise.

The term gap analysis can mean different things at different times in the project lifecycle. In this context, we are referring to the discovery and discussion of both functional and process gaps. Questions that we should ask include:

Functional Gaps: Does the system perform the necessary functions; will it surface the necessary features and undertake the relevant processing to meet the needs of the users and stakeholders, whilst also meeting any wider business objectives? Which 'out of the box' features will we adopt? Where might adaptation (configuration or extension) be required, and what is the impact of that adaptation?

Process Gaps: How will the package support (or conflict) with our existing processes? Which of our processes will be retained/sustained, and which will be changed or updated? What is the impact of those changes, and are the relevant business users and stakeholders ready and willing to absorb those changes?

Assuming we are not starting from scratch, and do not intend to throw away all of our existing systems and processes, there is a strong and compelling argument to spend time understanding the status quo.

Understanding how our processes currently work, where the pain points are, and the areas that are ripe for improvement will help us assess those areas that will help (and even delight) our users and stakeholders.



If we have access to an existing repository of processes, this need not necessarily be a massively time consuming activity. If there is no process documentation, we may need to plan for a burst of effort documenting the key 'as is' processes.

It is worth considering whether this could contribute towards a future process repository, where the updated processes (and other processes) are managed, to save time in the future.



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Later in a project, having established which package is best, it may involve a deeper and more detailed analysis of where process differences exist between the package and the current state, driving useful conversations on how this can be managed (i.e. how we can 'mind the gap!').

These conversations are often made easier if both vendor and client are using an industry standard modeling notation (such as BPMN), which allows complex detail to be conveyed very precisely and concisely.

Activities which will be automated can be suitably annotated, and any gaps can be visually highlighted. A range of tools and techniques from the world of business analysis will be useful.

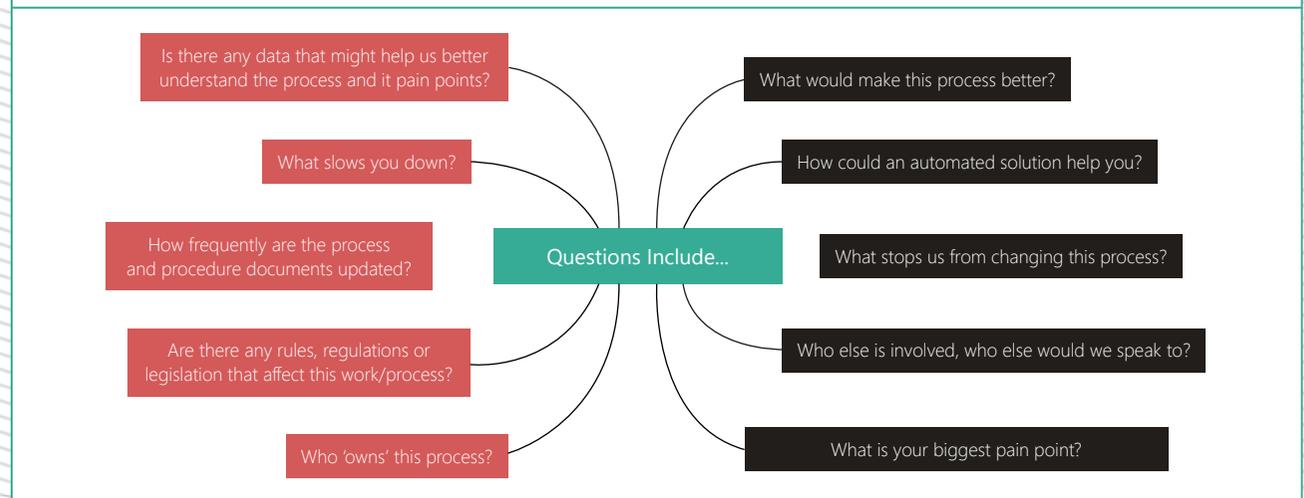
Bridging the Gaps: Technical, Process, People.

As with any type of change, life isn't easy and there are multiple dimensions which require our attention. When considering how to plug the gaps, there is a careful balancing act to be struck.

On the one hand, business stakeholders might want to keep their processes similar to the current state – and may be reluctant to accept 'out of the box' suggestions.

In situations like this, it is crucial that we work closely with our business colleagues to understand the underlying process goals, and business rules, which may constrain or guide the process.

Figure 2: Useful Questions for Gaining Process Insight



There may be specific policy or legal constraints that prevent the process from being adapted too much. Equally, we may find that some processes are steeped in myth and tradition – and nobody can identify exactly why they work in the way that they do. These are processes that are ripe for step-change and improvement, but it is crucial to do so in a way that is aligned with the end-users' needs.



As well as people and process considerations, when it comes to automation it is important to acknowledge that there are a number of interrelating jigsaw pieces that need to fit together in order to make an effective and efficient solution.

We must also consider the technical implications of how any gap is addressed. It is good practice to work with the relevant technical architects and ensure that any architectural constraints are uncovered early.

Some organizations have an architectural design principle that off-the-shelf solutions should be extended as little as possible – knowing if this applies in advance is crucial as it may impact how we manage expectations and manage the options open to us for bridging any gaps.

Equally, architects – both client and vendor side – can help us understand the feasibility as well as the impact of any customization or extension that is considered.

The pros, cons, costs and benefits should be considered, with a firm and clear aim of maximizing business value. Alongside gaps, we should have a firm eye on transition.

The Forgotten Art of Transition

Even during the early stage of a change it is worth thinking about how the transition will take place. There are several areas of transition planning that will require the project team's attention, including:

Data Migration:

Does data need to be migrated from one system to another? If so, what is the quality of the existing data? Will a (temporary) data-cleansing/transformation system process be required? If so who will write the rules for this? If a manual information system is being replaced by an automated one, will the manual (paper) records need to be scanned or captured into the new system somehow?

Cut-Over Approach & Work in Progress:

Difficult decisions must be made over when to 'cut over' to the new system, which will impact how work in progress is handled. Imagine moving on to the new accounting package mentioned earlier – it probably makes sense to do so at the end of a financial year, so that all data about the new financial year is entered into the new system.

Yet in other cases it might not be possible to have such a clean break. If incoming post is scanned into a document management and work-flow system from a particular date onwards, thought must be put into how the existing (paper) backlog is handled, and this may lead to multiple variants of the process existing in parallel for a period of time. In situations where multiple versions of the process (deliberately) co-exist for a period of time, care must be taken to ensure that customer service is not affected.

Implementation Approach:

As alluded to above, it's necessary to carefully choose how we implement the system and the amended processes. Some systems may lend themselves to a 'big bang' implementation – but this may come with significant risk.

It is often desirable to de-risk the implementation with a pilot program, ideally iteratively showcasing parts of the system to users allowing regular feedback and testing.

Many other implementation approaches and methodologies are available, interested readers will find useful follow-up resources in the 'further reading' section of this eBook.

Training and Communication:

A broad and crucially important area, it is vital that we consider how the new process is communicated and trained out to the relevant stakeholders and users.

There can be benefit in engaging relevant users early, which will not only ensure that we tap into their insight and expertise, but also that they are well positioned to be 'champions' of the new system once it goes live.

Conclusion: Compare before you Implement

There is no doubt that automation and the use of COTS packages has attractions. In the vast majority of cases it will be beneficial to examine the status quo, and analyze how current processes work.

In doing so, we can understand the organizations' existing processes and requirements against the features and system capabilities provided by the COTS package, and enable our stakeholders and sponsor to make an informed decision about how to handle the relevant gaps.

Process modeling, using a shared and commonly understood notation, such as BPMN can help us convey information concisely and precisely, and can help us spot relevant gaps. Having spotted and catered for the relevant gaps, it is also crucial that we consider the relevant transition requirements, including data migration, training, communications, implementation approach, and so on.

Keeping these core principles in mind will help us avoid getting stuck in the 'gap' and delivering solutions that don't solve the underlying business problem that we set out to solve.

References

Martin Tate., (2015). *Off-the-shelf IT solutions; a practitioner's guide to selection and procurement*. 1st ed. Swindon: BCS, The Chartered Instit.

ITRB archived in CyberCemetery, University of North Texas Library & U.S. Government Printing Office., (1999). *Assessing the Risks of Commercial-Off-The Shelf Applications Lessons Learned from the Information Technology Resources Board Preview Version*. [online] Available at: <http://govinfo.library.unt.edu/npr/howto/cots819.pdf> [Accessed 20 Dec. 2016].

Further Reading

Readers interested in the topics discussed in this paper may find the following resources useful:

Cadle, J., Paul, D. and Yeates, D. J. (eds) (2014). *Business Analysis*. Swindon: BCS Learning & Development Limited.

IIBA, (2015). *Guide to the business analysis body of knowledge*. Toronto : Ontario: International Institute of Business Analysis.

Pullan, P, Archer, J et al (2013) *Business Analysis & Leadership : Influencing Change*, Kogan Page, London

Reed, A. "Vendor Selection in the Real World" [Online] <http://www.adrianreed.co.uk/downloads/>

Reed, A "Adrian Reed's Blog" [Online] <http://www.adrianreed.co.uk>

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