White Paper

Process, People, and Content

Working in a Synergistic Environment

Butler Group ▶

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Important Notice

► EXECUTIVE SUMMARY

Business Process Management (BPM) is fast becoming one of the most important tools in the attempt to tie together technology innovation and business requirement. The recent past has seen wave after wave of 'solutions' that promised to create faster more agile working environments, that promised to slash costs, and that would turn organisations into lean, mean fighting machines.

The reality has been disappointingly different. The bright new futures of ERP, CRM, and Knowledge Management only created a flickering into light rather than blazing out in glorious wonder; leaving IT and business professionals still groping in the gloom for the answer to the numerous problems with which they were beset.

If BPM is to be that answer, then it has to take on the mistakes of the past and address them. There was nothing inherently wrong with the solutions of the past; no-one would deny that ERP, CRM, *et al* provided some of the answers; they just never fully delivered on the promise – create expectations that are too high, and disappointment is the only possible end result.

BPM may not be the wonder-drug of the 21st Century, curing all ills, but it can become the Aspirin; removing many of the headaches. Where BPM essentially differs from other attempts to create the ultimate organisation is that it attacks the problem from the right direction. Instead of attempting to map business organisation to technology it utilises technology to mirror the processes that essentially define the business.

Where BPM will fail is if it is allowed to exist in isolation; if this happens then it will turn into another ERP or CRM; something of benefit but falling short of the possibilities.

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Business processes do not exist in isolation, they are part of a larger picture that includes other elements that reside within an organisation; most notable of these being content and people. This is why BPM sits so naturally within an Enterprise Content Management (ECM) solution. Whether one wants to take the view that ECM or BPM is the controlling application is, to a large extent, immaterial. What is important, however, is the understanding that there is a synergy between content, process, and people.

To expand on the final element of this trinity, many BPM solutions provide the facility for introducing the human element into the process flow. This, to a large extent, is the major differential between Business Process Automation (BPA) and BPM. Yet not every solution goes far enough down this track to create a true differentiator between BPA and BPM.

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One of the problems is in understanding the different types of processes that exist, and how best they can be handled. Processes range from highly structured, rules-based that require little intervention in their ongoing flow to the other end of the spectrum with *ad hoc* processes that exist for various reasons. Although one clearly understood reason is that *ad hoc* processes exist to correct some failing within structured processes, that is not the only reason (and not necessarily the main one) for the requirement to have *ad hoc* processes.

These *ad hoc* processes also exist in order to provide a more flexible total operational environment. Despite a natural desire to structure processes with a minute attention to detail, this is not always the most effective manner of controlling a business function.

The proof of this lies in the number of failed implementations, and the less-than-expected benefits that were obtained with Business Process Automation (BPA) solutions. BPA attempted to apply too rigid a structure to all and any of the processes that were in operation. Clearly, this is in a number of cases a counter-productive solution. Highly structured and loosely structured processes both have an important part to play in the overall operational excellence of any organisation.

Viewing *ad hoc* processes as a way of only handling failings within structured processes, commonly termed 'exceptions', fails to take full advantage of the range of process types.

These process types do not just exist as structured or unstructured (*ad hoc*), they also fill a range in between the two extremes. Many BPM solutions are geared to work within the exception area of failed structured processes to bring added value. Whilst this is not a completely incorrect view of the process world, it does raise some points of concern. If we deal with process failings or anomalies as exceptions then we are limiting the possibilities in the way that we handle them – as something that exists outside the mainstream. This leads to denying the possibilities of value for *ad hoc* processes in their own right, and also failing to recognise the range of process types, where mixing elements becomes important.

If, on the other hand, we treat these exceptions as just another process, we can bring them more effectively under the BPM umbrella. These exceptions or *ad hoc* processes are those that require the largest degree of intervention. Therefore, it makes sense to work within an environment that allows easier intervention, bringing people and content (which helps with resolution) into a process framework. This White Paper discusses this in more depth, and looks at Open Text's solution in this area.

▶ PROCESS TYPING

An issue arising when giving consideration to Business Process Management (BPM) is the vast range of different process types that exist within any given organisation. To talk glibly about BPM without recognition of this basic over-riding factor is to reduce the subject to the level of a kindergarten debate. This has been shown in the past with the focus given to the best language to use for BPM, as though such a complex subject could be reduced to one simple constituent part.

This factor of recognition of different process types gains even greater importance when one comes to implementation. Without recognition of different process types it becomes impossible to evaluate a solution effectively. These different process types that exist within organisations have two disparate end points (the ultimate expression of a given type).

At one end of the range are the highly structured processes; driven by clearly defined (and definable) rules, with understood and accepted touch points that exist as part of the proven process. These individual processes represent the rigidity that exists within the total organisational structure. BPM is often promoted as a means of creating dynamism within processes, and whilst this is true (in a properly implemented solution), it should not be taken to mean that every process requires this change-management element. The availability of a solution does not make the solution applicable to everything.

At the other end of the scale are the *ad hoc* processes, that exist transiently within an organisation. These may be considered as 'one-offs', but they still need to come under the auspices of BPM; in fact they are more allied to the new world of BPM than those processes that exist at the other end of the scale. These process types are inherently non-rigid in that there exist no rules for their completion; they rely on other factors that are not easy to codify within an implemented rule set.

Before we come to examine some of these other factors that affect these *ad hoc* processes and how we can deal with them, it is necessary to understand how this range of process types will exist within a typical organisation.

▶ PROCESS RANGES

The process range described previously can be thought of as existing on a horizontal scale. It is quite feasible to define any number of distinct points along this scale and provide them with definitions. Thus, we could have *ad hoc* at one end, with highly-structured at the other. In between we might delineate them in any fashion that represented their degree of structure. As language is easily misunderstood, it would be as well to create a simple numbering structure. Highly structured rigid or immutable processes could be 10, whilst free-form processes could be 1.

Whilst it might be possible to construct such an ontology, it is doubtful whether it would serve any great valid purpose. It would be a relatively simple task to discover those processes that rate 10, but impossible to discover those that rated 1, as these exist outside of a definable framework.

These numerically low-end processes are typically lumped together, not as processes *per se* but as process exceptions. Considering them as exceptions rather than as distinct processes in their own right, creates a strong element of negativity. As exceptions they become inherently impossible to pre-define. They are unknown problems simply waiting to occur, and when they do happen then a reactive act has to take place.

By considering them as distinct processes, albeit still impossible to pre-define, there is a shift in the mind-set as to how they can be handled. Even the word 'exception' creates an aura of something unforeseen and therefore difficult to manage. If we treat them as just another process we are better placed to handle them quickly and efficiently. Likewise, as another process we can map them to an existing process management infrastructure more easily than if we treat them as something that exists outside of this infrastructure.

This is not a denial of the existence or importance of exceptions, merely a way of ensuring that their existence outside of the mainstream does not create a more difficult handling routine than is really necessary. If we treat what are commonly considered exceptions as merely *ad hoc* processes we can, with the right technology, build up a process management infrastructure that can be adapted for future use.

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There are two alternatives to this. Firstly, each exception (as they would be thought of), can be handled as an individual non-recurring element within a process. This would create a situation whereby repeating exceptions, and more importantly synergistic exceptions, exist, are handled, and then discarded as a completed task. Clearly this is a waste of time and resource, leading to increased costs and a decline in service levels (many of which are dependent upon speed of process throughput).

The second alternative is to embed each exception as it occurs into the parent process. This is more effective in terms of ensuring handling of exception repetition, but also impacts resource in terms of time taken to implement the new 'improved' process. It also fails to address the issue of synergistic exceptions – those exceptions that have many elements in common, but which differ in a small number of ways.

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If we accept that neither alternative offered is of greater benefit than building the aforementioned adaptable process management infrastructure, then we are also left with the acceptance that these 'exceptions', although they exist, have to be treated as *ad hoc* processes.

There is another reason why process types and ranges are important, and that is to do with the inter-relationship of processes. There are two possible scenarios. Firstly, a process can exist in complete isolation untouched by any other process. Secondly, any given process must have a dependency for its existence and/or operation on another process.

The first instance is all but discountable. All but a very few processes exist in isolation when they come under close examination. They may appear to run isolated from other processes, but the data used within the process flow will, again in the vast majority of cases, be the result of another process. The accuracy of this data used in the 'isolated' process is dependent upon the operational accuracy of the providing process.

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The co-dependency of processes demands an infrastructure beyond the accepted definition of exception handling if it is to become truly workable. A co-dependent process set is only as structured as its least structured process element. Therefore, even after examination of individual process elements and a classification of degree of structure along the horizontal scale, the picture will be inaccurate. When consideration is given to the co-dependent or inter-related process elements, each individual process will move closer to the *ad hoc* part of the scale.

The control and management of these process types becomes important for two reasons. Firstly, they are the most difficult to pre-define. Secondly, they are likely to contain the two external factors that are most difficult to control and manage; these being content and people.

▶ CONTENT AND PEOPLE

One of the defining elements of highly structured, and structured processes are those that use content that is easily specified and obtainable, and people (where necessary) in a rigid workflow and task-based environment. As we move towards the more *ad hoc* type of processes, the use of both content and people becomes less clear-cut.

It may not be that easy to pre-define the content needed to progress the process flow, nor might the tasks associated with the human element be easy to codify. Similarly, which people to involve within an *ad hoc* type process also becomes less clear. One other element appears at this point, and that is the inclusion of more than one person in a parallel capacity within the process flow.

One of the major benefits that BPM brings to an organisation is the flexibility in which external factors (especially people) can be brought to bear upon an individual process.

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Although it is easy to consider these as part of a linear process, which reflects a task-based workflow model, true BPM has to extend past this to include an element of parallelism. The simplest way of considering parallelism within a process flow is to consider a task that requires collaboration between two or more people.

It is worth considering, for a moment, exactly what we are trying to achieve with the introduction of people within the process flow. In the vast majority of cases we are asking them to carry out a task that involves a decision. Moreover this decision-based task is one that cannot be easily codified into a rule set (hence the requirement for the human intervention). The importance of this should not be overlooked to create business and operational differential.

This last point is worth expanding, as it cuts to the heart of why BPM, with its inclusion of the human element within process, is so important, but is often ignored; being used simply to handle the 'exceptions'.

Most organisations recognise, or at least pay lip-service to the fact that the greatest defining differentiator between themselves and their competitors is the level of service provided. Price and features, even within traditional manufacture for retail businesses, have an ever-decreasing window to provide differentiation with these two factors.

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This level of service is provided by the efficiency of the processes that are implemented within an organisation. The more rapid the process, the quicker the throughput, and the better the level of service. At least this is conventional thinking, but it does not hold true for all processes, and this is where the differentiation can be made.

As an example we can take a loan application. Most financial organisations that offer this service will have a highly structured rules-based approach to the process. This will involve the setting of parameters such as applicant's income and outgoings, residential area (an oft-misused metric), credit score, *et al*. These parameters create clear-cut boundaries that affect whether a loan will be offered, the amount of the loan available, and the interest rate for the loan.

The worst examples of these structured processes will have each parameter set as a defining rule, with the worst risk element being taken as the over-riding defining factor for the outcome of the application. Better examples will allow a trade-off to be taken between parameters to provide a more holistic view of the risk involved, which will ultimately provide a better service to some customers.

Level of service as a business differentiator has to be viewed across the whole customer base and not just those that fit neatly within these pre-defined parameters. The only way to extend this level of service to those potential customers who exist on the periphery of the pre-defined parameters is to introduce new elements into the process flow. Certainly, for those potential customers it might slow down the process to a certain degree, but at least they will be assured of an *overall* better level of service.

The introduction of this type of less-structured process (it would still not be considered *ad hoc*) would have no negative impact on those customers who fall within the pre-defined parameters and the organisation would be providing the same level of service to them, based upon the standard speed-of-process model.

This more flexible process is only manageable within the right technology infrastructure.

This more flexible process is only manageable within the right technology infrastructure. This infrastructure has to have access to people, who individually or in collaboration can redirect or re-parametise the process boundaries. It also has to have access to content. In the above example the decision on a peripheral loan application could be influenced by access to documentation. This content access will not only help the people make the right decision, it will also mitigate the risk of that decision.

Within this process infrastructure where processes can move across the scale from structured to *ad hoc* in a free-form manner dependent upon circumstances lies a true business differentiator. The limitations of a structured rules-based mentality when it comes to processes are amply demonstrated by a personal experience.

I recently applied for a loan to carry out some building extension to my house. I filled in several forms applying to several companies for that loan. Two of the positive responses that came back are of interest. Both offered me the asked-for amount. One was from a major financial institution which quoted me a rate of 11.9%, the other was from a supermarket chain which quoted me a rate of 7.4%.

It does not take a great mathematician to work out which was the better deal (all the other factors surrounding the granting of the loan were equal). Surprisingly, when the paperwork came through, I discovered that the supermarket chain were offering the loan from the very financial institution that wanted me to pay an additional 4.5% for the pleasure of dealing directly with them.

This real-world example is highlighted for the following reason: It is almost inconceivable that the financial institution is unaware that it is being undercut by one of its partners, yet on the surface this appears to be the case. This is a clear indication that the document and content storage it has in place is divorced from the mainstream of the business processes. Within that financial institution will lie thousands of documents relating to loans that its partner has granted at a rate of interest substantially less than it is offering, yet it is the financial institution's money that is being used. Given the fact that there are limitations in terms of liquidity ratios in the total amount of money that can be lent, the financial institution is in direct competition with itself.

If, as appears to be the case here, the content that exists within an organisation is divorced from the processes that could utilise that content, then the content is undervalued. Similarly if processes are not touchable by people then the processes are under-utilised.

Processes are inherently tied to content and people.

Processes are inherently tied to content and people. Even those structured processes that appear to have reliance only on a pre-determined small content set and (usually) very little human interaction should not be ignored.

Simply stating that a process is structured should not be used to ignore the possibilities that lie within proper understanding of the process and the possibilities that might exist by making the process more open and giving it a greater degree of interaction with people and content.

▶ REQUIRED INFRASTRUCTURE

If we take this view of BPM; the bringing together of processes, content, and people in a synergistic fashion then we have to ensure that the infrastructure will properly support such a model. There are two key elements to consider, one of which has already been touched upon; that is parallelism or collaboration within a process framework. The second element is integration of what may possibly be considered three distinct elements of this total framework – BPM, ECM, and collaboration.

Before considering a specific solution that already contains those elements within a single implementable environment, it is worth giving some further consideration to the collaboration element and also the handling and extensibility of those processes that exist towards the *ad hoc* end of the horizontal scale.

Just as content can bring information into a process that can be used to both commence and drive that process, so can human interaction be used in a similar manner. Information from content is limited to the data within that content. To a certain extent this can be as limiting as a rules-based rigid structure. True extensibility of process comes from information held within the human experience.

Whilst this is quite well understood and practiced within a serial flow, by routing decision-based tasks to a human operator it is less well implemented in a parallel sense; where more than one experience is used to add value to the process. This is where the requirement for the collaborative framework is essential.

Another essential element when going down this route of process management and understanding, is to ensure a high level of reusability. Every process *ad hoc* or structured has a determined lifespan. Management of *ad hoc* processes requires this lifespan to be as short as possible. With these *ad hoc* processes that are often classed as exceptions, the process element is most effectively handled when it is resolved quickly.

These *ad hoc* processes exist as an entity for the simple reason of waiting for resolution, they are not necessarily processes that are repeatable or repeating. However, many of these *ad hoc* process types will have elements of similarity and it is most cost- and time-effective if the task-oriented parts of the process can be stored and re-used (either in their entirety or by re-assembly with additional tasks into a new process).

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These task-oriented parts would typically identify both the people and the content that are the best fit for resolution of the issue. Therefore, collaborative groups formed for *ad hoc* process resolution should not be discarded, a record of their make-up should be maintained and should be logged against the content used for resolution, and the process that required resolution. In this manner, future instances of this or related process types can be more quickly resolved by building the most effective team and providing them with the most effective content.

As BPM, ECM, and collaboration can also be considered as three separate elements that contain inherent synergies, the decision has to be made as to how these may be best implemented. Firstly, consideration should be given to the BPM element. This is for no other reason than this is the latest technology and therefore the least mature of the three; yet for provision of business differentiation it can be considered the most important.

Another reason why BPM should take such a high position is Butler Group's contention that integration of disparate systems is best considered from a process standpoint. There is nothing within an organisation that better describes the functional role and requirements of that organisation than its processes.

Having an ERP system and a CRM system, for example, does not inherently demand a tie-in between the two. The arguments for integration between these two dominant pieces of the technology infrastructure that exists within many organisations do not take into account the usage to which these technology elements are put.

Integration can be undertaken on many levels, and if overdone can create too rigid a structure that is not easily accessible to changing requirements. Abstracting the integration requirements to the process level creates a more loosely coupled infrastructure where multiple elements can respond to change and reflect that change both as individual elements and as a whole.

BPM solutions come in many shapes and sizes, ranging from poor implementations of extended workflow solutions, to the detailed and highly effective development and deployment environments that mirror Component-Based Development (CBD) models and methodologies.

Lying between these two extremes are a whole raft of products and solutions that to a greater or lesser degree answer the needs of BPM. However, if we extend out from pure BPM into the associated worlds of ECM and collaboration the picture changes.

What is required here is a more all-encompassing infrastructure that effectively has carried out the pre-integration by bringing together the disparate parts. As we extend even further and look at the requirements for Record Management (RM) solutions, that also need to be tied into this whole process/content/collaboration environment, then the argument for a total solution becomes more persuasive.

▶ LIVELINK FOR BUSINESS PROCESS MANAGEMENT

The Livelink for Business Process Management is a solution from Open Text Corporation, one of the leading providers of ECM products, is designed to handle 'traditional' BPM scenarios, but also to extend the capability to include resolution of the issues discussed within this White Paper; namely, to bring together content, people, and processes within an holistic environment, where the efficiencies of one element can be applied to the other parts in a virtuous circle.

The traditional BPM space is well-served with the inclusion of the following elements:

- The ability to create graphical workflows with a highly-usable GUI. Within the GUI the user can create dedicated steps and assign people to each of these steps within the process flow. Content can be attached to the process in the form of adding objects to the flow. Hierarchical structure is supported with the inclusion of sub-processes, and conditional loops can also be defined. Finally, control over process delivery can be maintained by setting milestones, due dates, and defining process outcomes.

- Easy creation of electronic forms, using a non-programmed drag-and-drop methodology for HTML and/or PDF forms.

- Integration into underlying databases to apply validation criteria or pre-filling these electronic forms. As well as the ability to pre-fill elements within a form from the underlying database, drop-down lookup lists can also be created and used within the form based upon database content.

- The electronic forms can be automatically integrated into a process, with routing based upon field content.

- E-mail notification of unresolved tasks and late-running processes.

Livelink for Business Process Management also provides full audit trail capability with complete tie-in to corporate policy-based metrics, which provides the strong foundation for statutory compliance requirements.

▶ LIVELINK ENTERPRISE SUITE

The Livelink Enterprise Suite consists of a range of products, modules, and services that bring corporate knowledge and resource sharing to a wide market. The heart of the solution is the Livelink Enterprise Server, which is a standards-based three-tier architecture implementation.

The Access Tier supports all standard Web browsers, giving access to the organisational Intranet or Extranet (subject to authorisation). Developers use the Access Tier to connect to the application services, described below, through the API.

The Server Tier has a multi-threaded architecture, and is made up of the following services:

- Document Management.

- Knowledge Management.

- Project Team Collaboration.

- Information Search and Retrieval.

- Group Scheduling.

- Business Process Automation

There is also a Software Development Kit (SDK) that allows users to develop new features and functionality. The Server Tier also includes the administration functionality.

The Data Tier supports both relational and flat file systems, and allows access, through additional modules, to popular data-intensive applications such as ERP and CRM solutions through Livelink XML Workflow Interchange. Content connectors, or "Doorways", also enable users to connect to content from a range of repository types.

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Open Text has provided the scalable architecture and the development and deployment platform that will allow all organisations to maximise their investment in terms of content, people, and processes. This is the real strength of Open Text's Livelink platform; no longer is there a disjoin between the important operating elements of any organisation. Within a single integrated platform businesses can create a flexible infrastructure that operates within all expected requirements.

A customer example demonstrates how the elements of content, people, and process come together to form a cohesive, holistic solution.

Genzyme Corporation, one of the largest and most well-established biotechnology companies in the world, has embraced collaboration and knowledge management technology to help support FDA compliance and improve overall operations.

Ensuring careful management of information for FDA submissions is a major undertaking for life sciences companies – compliance is critical to meeting time-to-market demands. Genzyme needed an ECM solution that would help project teams work together, manage and share information, while providing processes and controls to ensure careful management of that information for compliance.

Within Genzyme's Biomedical and Regulatory Affairs, there are more than 20 separate project teams operating simultaneously, each focused on a different investigational or marketed drug or device. Virtual project areas provide the ideal, secure on-line environment for these teams to post meeting minutes, project documents, templates, and forms, preventing reinvention of the wheel to improve efficiency and speed time to market. Genzyme's information library provides a secure, central place where users can access regulatory submissions under development, as well as correspondence, filings, and other critical documents. Document management capabilities support Genzyme's compliance with the FDA's mandate for electronic records requirements, while the development of on-line workflows to automate and standardise business processes across the organisation is essential to improve efficiency and speed approval processes.

"ECM is becoming a fundamental part of the way we work at Genzyme. Developing innovative treatments directly affects the quality of people's lives, so time to market is always foremost in our minds in the pharmaceutical industry. Having key information immediately accessible online improves our efficiency and productivity, enabling us to fulfill the commitment we've made to patients that much sooner." *Fran Ross, Contract Associate, Genzyme*.

▶ VENDOR PROFILE

Open Text™ is the market leader in providing Enterprise Content Management (ECM) solutions that bring together people, processes, and information in global organisations. Throughout its history, Open Text has matched its tradition of innovation with a track record of financial strength and growth. Today, the company supports more than 17 million seats across 13,000 deployments in 31 countries and 12 languages worldwide. Open Text's flagship product, Livelink® seamlessly combines collaboration with content management, helping organisations transform information into knowledge to provide the foundation for innovation, compliance and accelerated growth.

▶ CONCLUSIONS

The convergence of technologies is gathering pace. Not many years ago (relatively speaking) it was considered enough to implement a solution that addressed a specific area of business concern. Early examples of Supply Chain Management (SCM) solutions are a prime example of this. Realisation that these could not exist in isolation from other areas of the organisation led to the rise of ERP, but even these solutions were doomed to be isolated from the business as a whole.

BPM is an abstraction of technology that aims to overlay the independent technology pieces, bringing them into a cohesive whole. However, if the influencing factors that have been discussed in this White Paper, such as content and people, are left out of the planning, then there is a danger that BPM will end up as another ERP; something that is effective, but which failed to reach its true potential.

Process, content, and people have a synergistic relationship and inter-dependency that should not be ignored. By implementing a technology solution that leverages this synergy, business can create this whole-world view.

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