BPR and ERM Implementation Methodology and Approach

Just as BPM (business process management) technology is markedly different from conventional approaches to application support, the methodology of BPM and ERM (Electronic Records Management) development are markedly different from traditional software implementation techniques. Application of ISO 15489 standards becomes an integral part of the process. With CPI (continuous process improvement) as the core discipline of ERM, the process models that drive work through the company evolve constantly. This approach applies to government, healthcare and commercial work environments. The point is that there is no such thing as a "finished" process; or final document process it takes multiple iterations to produce highly effective solutions. Every working process is just a starting point for the future. Moreover, with multiple processes that could benefit from BPM-style automated support, the issue becomes how to support dozens or even hundreds of departments or agencies in the process. As the intervals of change get shorter and shorter, departments and agencies need to develop effective methodologies to get around the business optimization cycle quickly enough.

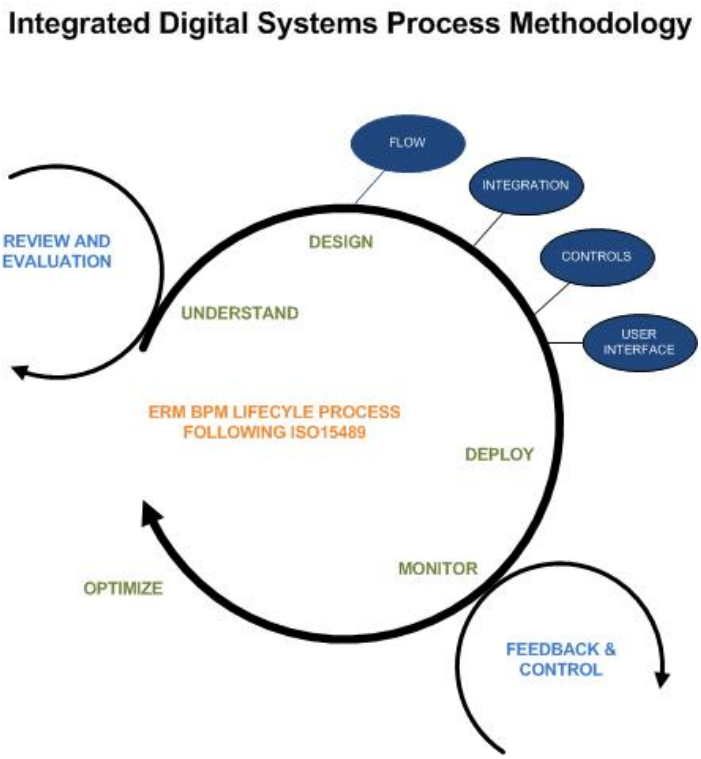

Figure 1 above depicts a way of organizing activity and ensuring that a project stays on track.

To achieve this, it is necessary to time the different phases of activity. Establishing a Review Team with specific goals and review completion target times is extremely important as is the involvement of the Participants on the Review Team. Otherwise, the temptation is always there to spend more time dragging out the review process which encourages scope creep and increases the risk of project failure.

Process Discovery and Understanding

Every department or agency has a different starting point and, as a result, different needs. Some already have a defined process; others are not as well developed. Some want to emphasize automation of the process (workflow), whereas others need better traceability, visibility, and performance measurement. Either way, the first objective is to understand the process. Break up the function area that is the target of the review into logical processes or steps to be defined Instead of developing a 100-page requirements document with every detail tightly specified, you need to focus on tying down the core functionality that will deliver the most value. Filing structures, metadata, and information gathering techniques will change within process steps even within a well defined department structure.

There is always a need to capture the as-is process during the BPR (Business Process Review). In many cases when developing an ERM implementation strategy this is the best method to use when assessing the project requirements. The as-is approach does not threaten the Participant or change the way they have managed records over the years but instead merely moves the paper process to an electronic process. The underlying requirement is the ability to step outside of the process and understand it fully. There will be time to assess the as-is during the design phase and make informed improvements. Secondly, the models developed will form the underlying structure to underpin the capture of baseline metrics. It is important to gather reference metrics to ensure that the team can later prove the performance improvements. This methodology applies to establishing the requirements for an ERM system or when assessing a business process.

To achieve a rich appreciation of the process, it is necessary to model the process at a high level, from a number of different, complementary perspectives involving the Participants (users). Assessing the business situation using a set of questionnaires and techniques that allow Participants to comprehend the fundamentals of the process better usually yield the best results. The ideal techniques for this phase are:

- High level DCQ (Document Control Questionnaires) to prompt Participants.
- Process Flow diagrams to look at the order of activities
- Role activity diagrams to focus attention on role interactions of the Participants.
- Object Flow diagrams to focus on how objects are move through the process.

- Capability models to look at the process as sets of reusable business components. A capability may be composed of other capabilities or implemented by a procedure.

The emphasis here is on understanding the process, not building models for transformation into code to apply to a particular ERM application. This then enables both the business analyst and the Participant to step outside of the business-as-usual view and see the process differently.

Given suitable access to subject matter and Participants, a good rule of thumb is that this phase of activity should complete within a week or two for each defined area impacted by the ERM System. Although this will be challenging, it is feasible. The trick is to ensure that the reviews are at a suitably high level. The team should always keep in mind the purpose of the modeling and the intended audience. Models should be detailed enough to drive understanding and discussion, but no more detailed than is necessary to support this aim.

POSITIVE

- Identify Participants for each area of the business affected by the process. Often there are assumptions made by those in related roles that prove to be incorrect.
- Remember that the emphasis is on understanding. Use complementary BPR techniques to help the stakeholders step outside of the box and see things differently. The techniques suggested are not the only ones available. The team should test different design approaches and assess for themselves the ones that work best for their department or agency. Look at approaches that help challenge the status quo.
- On complex processes, to ensure that the scope is at the right level, try asking, “Why?” five times. When clear answers are no longer forthcoming, that suggests the appropriate level of scope. For example in a BPR: HR processes are inefficient. Why? It takes too long to bring a new employee on board. Why? There is no coordination between HR-IS, the recruiter and HR manager on where a candidate is in the process. Why? We have no way of tracking desired start date and when orientation needs to have occurred. Why? I don’t know. This sort of analysis will help identify the root cause within the process that will benefit from the review and implementation of ERM, ensuring that the scope is neither too wide nor so narrow that the business benefit is minimal.
- Ensure that the team is able to succinctly and specifically state the process, associated documentation, flow and use associated with the area under consideration. If that is not possible, then it suggests more work is necessary to identify the real priorities and impact.
- Build a roadmap of the short-, medium-, and long-term vision for the ERM application. Identify chunks of functionality for delivery in successive iterations. Re-scope the roadmap on the completion of the development cycle.

NEGATIVE

- Problems can occur in this phase of activity if people set out to capture all potential paths through a process, all exceptions, or all potential activities. This is the root cause of "analysis paralysis." In the short term, it can kill a BPM and /or ERM project as it distracts from the critical requirement of proving the approach to doing business.
- Creating the "definitive" requirements specification is a waste of time. Documents by themselves are flat. Indeed, the whole notion of a definitive requirements specification becomes irrelevant in a BPR and/or ERM project.

From Design to Deployment

A comprehensive methodology and approach to the BPR is necessary to underpin the target process-enabled ERM application. Following defined review process steps and use of pre review DCQ will result in delivering work to the relevant Participant. It ensures traceability of individual cases of work and guarantees compliance. Modern BPR techniques include Participant DCQ completion, integrated process modeling and business rules assessments, sophisticated audit capabilities, and powerful analytics.

When developing the actual BPR flow templates, the BPR team will find it much easier to gain clarity if they have a deep understanding of the process provided by the previous phase. The process, however, is just one area where work is required in the development and implementation phases. Focused effort is essential to ensure effective integration with third-party applications, if required. Rather than trying to address all issues together, the team should focus on just one aspect of the process before moving to the next. They can create a separate sub-phase of work for each facet:

• **Process flow.** In the initial iteration, the aim is to agree on the core functionality that will deliver the bulk of the value. Although a fair amount of review may be undertaken when looking at the as-is model, this effort is all about creating the to-be process. Even if, organizational change may be considered a deployment issue, the way in which activities are assigned to the groups and roles will also be important.

• **Integration.** This sub-phase focuses directly on information extraction and update from/to external applications. Associated with this sub-phase are the metadata and document types for the process. Again, ensuring that the design model is developed separately from the as-is model ensures that team members design and support what is necessary, rather than taking for granted what is already there. The deliverable should concentrate on proving to the user community that the necessary data and images can be placed on a default user interface and be accessible (i.e., do not attempt to customize the user interface).

• **User interface.** Ensure that the screens deliver the information required by the various roles involved in the process.

• **Metrics.** Explore the management information deemed necessary, how this data is gathered, who should have access to it, and how it is presented. The BPR should capture all the necessary information. It is worth noting that the metrics used to track process efficiency and effectiveness may differ significantly from the data used to maintain the state of the process.

• **Controls.** Business managers will want a way of throttling performance of a process, allowing them to control process execution. They need mechanisms that help them cater to peaks and troughs in demand, or influence the way in which business rules may apply to the records management process.

It is important to separate these portions of the review as this will allow specialist resources in the team to focus their efforts. Depending on the situation, the order of these sub-phases may change. For example, if extracting data from third-party applications will present the greatest difficulty, then this sub-phase should probably be reviewed first. Of course, in many projects, individual sub-phases may reiterate based on feedback from particular participants.

The authority of the BPR Team should ensure that team participants have direct access to all related data, documents, forms, physical location, users, business policies, user interfaces, process flows, in the same context.

POSITIVE

- Ensure that comprehensive facilities are in place for continuous and ongoing collaboration between the management and the BPR team.
- Make sure that the end users realize that this is not a “once and done” system delivery. They need to understand that the team is coming back for future iterations so that they do not try to cram every detail into the initial review. It may be necessary to produce a functionality roadmap with future phases of activity linked to areas of functionality not yet implemented. This will help the BPR team and the end users focus on the delivery from this phase of development.
- Rather than attempting to transform the as-is process flow developed in the initial phase (process discovery and understanding), build a new set of process flow models. This helps to focus on the desired functionality for this phase. It removes the temptation to bend the rules in the discovery and understanding phase (by attempting to put too much detail into the initial as-is flow diagrams. Locking down the to-be process definition in the first iteration can be challenging. Even when users know that further iterations are planned, they will push for functionality that is less important. Zeroing in on what the department/agency really cares about is often difficult.

- Catalog and weight exceptions to help identify those that are most important. Look at each one in terms of its impact (to the business process when it occurs), and its frequency. A severe exception may occur only twice a year. Or conversely, an exception that happens frequently may have little or no impact on the business document process.
- Separate the management of the document instances (all cases in the system) from the management of a single case.
- It is a good idea for the team to carry out a fundamental reassessment of metrics as part of the BPR Workflow analysis. Explore how to capture and integrate the business-relevant data. Further, take care to ensure that the measures will reinforce the behavior that the initiative is trying to encourage.
- When presenting finished functionality for any particular facet of the records management process, ensure that the Team includes a wider group than just the managers already involved. This helps remove errors, identify additional functionality for the next iteration, and encourage broad acceptance of the application by participants when it is released into production.
- Consider data and document implementation details of the process. They are normally the mechanisms invented to keep the process coordinated, rather than the essence of the process. Look for ways of achieving the real goals of the process without that mechanism of coordination. Removing them will probably drive a massive jump in productivity and/or cost reduction.
- Remember that both the use and understanding of data evolve iteratively. This can have fundamental implications for the design of the ERM process and integration mechanisms.
- Ensure that a subject matter expert /participant are available from each major role affected by the system. This is particularly important in the records process flow and user interface areas. Share specialist resources across projects.

NEGATIVE

- Remember that processes will inevitably change during design and development as the details are uncovered. These discoveries can happen at any point during the development. Assess each against the agreed-upon scope of the ERM project. If the proposed change has a dramatic impact, then identify it for a later iteration in development. Too much emphasis on trying to define process nirvana is of low value.
- While designing and deploying the ERM process, the temptation is to focus on its orchestration. Ensure that equal attention is given to the points of process failure. Evaluate each failure for its severity, occurrence, and the current controls to detect.

Monitoring and Control

The capabilities of the system to support effective records monitoring, control and management derive from an effective design and deployment phase. Several perspectives are important, including dashboards, alert and escalation mechanisms, control loops, and personnel management.

• Dashboard-style user interfaces can deliver appropriate metrics to managers and supervisors as well as metadata and an image view. The assumption is that managers will intervene where necessary to expedite items of work as long as they have suitable visibility on work in the system. Of course, the system itself can help facilitate this through the provision of mechanisms that enable the manager to inspect the item of work, reassign that item, or interact directly with the worker responsible. Moreover, the system can prompt individual users directly, bringing to their attention items of work that are in danger of exceeding any milestone or SLA (service-level agreement) established.

• Monitoring and control mechanisms that track records or require a response as the result of an action work as well and should also enable suitably authorized managers, with alerts, to direct the overall operation of the process. When most contractors talk about BPR and continuous process improvement, they are discussing the larger, overall business optimization loop. They have failed to grasp the importance of the secondary optimization loop where suitably qualified business managers control the manual records process directly. Generally, this is a design issue. The application should have built-in capabilities that provide managers with the controls they need to throttle business performance and manage the retention of records accordingly.

POSITIVE

- Working with LOB (line of business) managers, explore how they would react to specific peaks and troughs in document demand. Work out whether it is possible to provide them with mechanisms to influence resource deployment and throughput under these circumstances.
- Ensure that appropriate dashboards/interfaces are created for every level of the organization—from executives, whose dashboards/interfaces might subsume multiple processes, to workers, who will want to “keep score” of their own actions in the records process.
- It is particularly important to provide a focus on the needs of the participant/user groups and the management of the people within them. Concentrate on identifying how much work is coming down the pipe, and what has to get out the door today, tomorrow, this week, or by the end of

the month. This can drive a better understanding of what their collective efforts can achieve and where they are struggling.

Analysis and Optimization

Analysis and optimization are usually the responsibility of the process owner. In an ad hoc fashion, these people are looking to identify the problems and suggest changes for the next phase/generation of the ERM application. They are looking at the overall business process, its historical performance, and related business data, with the aim of identifying ways to improve performance.

Of course, the ERM should drive performance optimization. For most companies, adding more people (resources) to a process to improve performance is just not an option.

Optimization

Best-in-class BPR techniques should utilize tools or mechanisms that provide automated support to help determine the best means of process improvement and addressing some of its inherent difficulties. Rather than leaving it to the next analyst to determine options for improvement, the ERM system should help identify areas to consider. Moreover, it is often difficult to compare different scenarios in ways that are meaningful to the business.

Alternatively, you may want to analyze performance over time, comparing some slice of the past with current results or looking into the future.

POSITIVE

- ERM Process models are like a bikini. What they reveal is suggestive, but what they conceal is vital. In the BPMR environment, all process-related information should be accessible via the graphical representation. Ensure that it presents all events, rules, user interface screens, flows, and analysis—from the same view, in the same context. Best practice is to have one holistic environment. This gets everyone on the same page when communicating, thereby avoiding the so-called “telephone game” (however we end up describing that).
- Along with analyzing activity durations and resource utilizations, it is a good idea to look at paths: identifying the percentage of work that follows the “happy path” of the process versus the percentage spent on exceptions or complex approvals.
- The ECMS should provide mechanisms to dice and slice the information on storage, content, performance, linking historical data with the LOB data. The BPR process itself should include

optimization recommendations that suggest potential improvement, changes to business rules and process logic.

NEGATIVE

- Simulation is not an end in itself. It is one of many diagnostic tools. Do not rely on any one piece of information or one tool as being 100 percent accurate in its conclusion. Processes are multidimensional, and so is the "truth." Use a variety of analysis techniques to isolate the most critical factors that affect the ability of the process in support of its KPI and, as a result, underpin the KBO of the company.
- Avoid simulation models that are deterministic in nature—designed to prove to management a positive return on some proposed change. Such models often reflect the agenda of the modeler rather than the reality. They usually bury assumptions rather than surface them.

This paper was written by Larry D. Hunt, Chief Engineer and CEO of Integrated Digital Systems. Mr Hunt has over 30 years experience in BPR, BPM, EDMS, Workflow, and ERM development and consulting services. More information on Workflow can be found at www.workflow.pro. or through the contact information below.

Integrated Digital Systems
9817 Godwin Drive
Manassas, Virginia 20110

www.idss.net
1-800-283-0999
sales@idsscan.com