

USING A “MAP” TO IMPROVE IT PROJECT MANAGEMENT

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ABSTRACT

The use of commercially available, off-the-shelf software (COTS) programs often inhibits business process improvement. A modified approach to the conventional Business Process Reengineering (BPR) algorithm can provide significant project management improvement.

A Representative Situation – A true, ongoing case.

The governing board of a large international organization with headquarters in Washington, D.C. has recently approved an information management improvement project to support the process of preparing their annual operating budget. The operating budget establishes the funding for the personnel and operating costs at the headquarters and field offices for planning and administering over one hundred large overseas development projects initiated annually. The projects themselves are funded under the organization's capital budget. The information system supporting management of the capital funds for these projects was recently successfully updated. The organization is highly decentralized with each functional department contributing independently to the operating budget preparation process, which is coordinated by a small staff office. Two departments have independently developed disparate, small information systems to support their individual budget preparation processes but no attempt has been made to adapt either for enterprise wide application.

The board has expressed dissatisfaction with the primary method currently used to authorize and control operating costs for special projects within this budget because it does not adequately relate these costs to the capital projects. The organization uses a responsibility based accounting system, rather than an activity based system, which provides little help to establish that relationship. The board has directed that another method be developed. An enterprise wide, business process reengineering (BPR) analysis of the budget preparation process itself has been suggested. Some strategic planning has been accomplished to establish goals and objectives and the current process has been described in terms of requirements for an information management support system.

A large, nationally known consulting firm, specializing in knowledge of the off-the-shelf software market, has been employed to assist in soliciting and evaluating commercially available, off-the-shelf software (COTS) solutions. The consultants have recommended postponing any additional BPR activity until after selection of a COTS software package so that any business process changes can take into account the capabilities of the selected software and the time and cost of any required customization.

While this approach will most likely produce an improved management information support system, it will certainly lead to a budget preparation process that is less than optimum for managing this organization in the future.

Why is that?

COTS software companies take advantage of the simple logic that the more customers who contribute to payment of the development cost for software, the less costly it becomes per user. They make their products as flexible as possible to serve as many needs of as many potential customers as they can. An example is Enterprise Resource Management (ERP) software, which offers numerous integrated modules to address the software development company's notion of how business processes should be conducted. Fortunately, competition among software companies has resulted in quality programs available for a large range of commonly employed business processes. Since the preparation of operating budgets is a widely used business process, the probability is quite high for locating a COTS package that will support most of the information management requirements of the existing process.

On the other hand, it has been well established that the major return on investment in improved information management systems comes, not from automating existing business processes, but from modifying the processes themselves to take advantage of increases in productivity and efficiency offered by information technology. The degree to which COTS programs will meet the actual requirements of the ultimate business processes is problematic. The BPR paradigm involves analysis and re-design of business processes **followed by** design of the information systems and **then** the choice of software packages or development programs necessary to support the new processes. The focus is on relatively radical redesign of processes across functional lines of the organization. The consultant recommended approach involves tradeoffs being made between accepting the business processes supported by the package and the time and cost required for modifying the processes and customizing the software.

The result, at worst, is living with business processes severely limited by the capability of current, off-the-shelf software. At best, it is a compromised approach to improvement. The cost of customizing software combines with the natural resistance of organizations to changes in business processes to inhibit modification. This combination acts strongly to inhibit the radical improvements promised by BPR and often produces much less than optimum business processes for the future conduct of the business or management of the enterprise.

What can be done to improve this situation?

The academic answer, of course, is to follow the obvious logic of the BPR paradigm sequence and complete the process reengineering activities before selecting the software. This is, however, a time consuming and relatively expensive procedure. It is often not justified when the focus is on only improving the information system supporting a relatively minor, albeit essential, business process. No doubt this was a major consideration in the consultants' recommendation.

An **alternative approach** is suggested by the phasing of activities in the BPR paradigm. Following strategic planning activities to estimate the future enterprise environment and the establishment of overall business goals and objectives,

- The **first** phase is a thorough analysis of the existing business processes to establish the “as is” condition.
- This is then followed, in a **second** phase, by “bench marking” to determine what other organizations are doing and to establish “best business practices”.
- The **third** phase is the redesign of processes to establish the desired “to be” condition to meet the established goals and objectives for this particular organization in the anticipated future environment.
- The **fourth**, and toughest phase, is the implementation of the changes necessary to move the organization from the as-is to the to-be conditions.

The alternative approach calls for the development of a **Management Action Plan (MAP)**¹ as a replacement for the fourth phase of the paradigm. This plan outlines a time-phased path, with alternative routes and milestones or stopping points, for moving from the “as-is” to the “to-be” conditions. Each stopping point describes a meaningful intermediate business process condition or configuration resulting from a focus on business considerations alone. Each route represents an abbreviated information system requirements change analysis to support the business processes at that stage in the progression toward the “to-be” condition.

This **MAP** is short of a full-fledged implementation plan in that it does not address the tough, change-management issues involved in scheduling and accomplishing dramatic changes. Because of this, the conduct of this modified reengineering planning effort is relatively short term and inexpensive compared to a full-blown BPR project. Its primary benefit is in providing clearly defined, most-desirable processes (the “to-be” condition) for conduct of the enterprise's business in the future, as well as time-phased, intermediate objectives to reach that condition, both based primarily on business considerations. Moreover, it also provides useful information to assist in evaluating the flexibility of candidate COTS packages in meeting identified future requirements and the data to estimate the cost of customization needed. Thus, concurrent application of this modified BPR approach will contribute to improving the above-described

undesirable situation without significant cost increase or time delay, especially considering that the first two phases in the BPR paradigm will be accomplished in any event.

Summary

Conduct of the modified BPR activity leading to a MAP, as outlined above, is not expected to produce optimal business processes, as might be anticipated from full application of the BPR paradigm. However, it will certainly improve the management of an associated information management improvement project that does not justify such an effort. It will establish business process modification goals based on business considerations uninhibited by software capability constraints. The MAP will provide rational paths to approach those goals and the route descriptions will provide valuable information for evaluating COTS vendor proposals. This information will also be useful in designing any customization required. Although not free, this activity will not add significantly to the overall cost or time of a major information improvement project.

ⁱ This term and concept was generated by David Skeen in conjunction with research, directed by the author, leading to a doctoral dissertation submitted to partially meet the requirements of the Degree of Doctor of Science at the George Washington University. The concept was applied by Dr. Skeen, in a different context than described here, to a BPR project at the U. S. Department of Agriculture.