



# App Topics

Email: [info@boru-consulting.com](mailto:info@boru-consulting.com)  
Web: <http://www.boru-consulting.com>  
Phone: +353-1-633 5161

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## **BUSINESS PROCESS RE-ENGINEERING and ERP applications**

### Introduction

Re-engineering business processes arises from two certainties:

- we do not always get things “right first time”
- and the business environment is not a constant.

Business Process Re-engineering (BPR) is not a new concept. Successful organizations have always adapted to change forced on them by external influences. They examine their internal processes, modify them to meet changes in the business environment and move on. There has been a realization in recent years that Enterprise Resource Planning (ERP) systems have a significant influence on the re-engineering of business processes. In many cases, organizations have had to undergo extensive changes to business processes just to make their ERP applications work.

### About Business Process Re-engineering

For many medium to large size organizations, BPR becomes entwined with the implementation and use of ERP applications. Implementing an ERP system involves change. BPR is involved with change, but should also consider how an organization operates as a whole.

Consider the efforts of organizations hoping to achieve registration to an international standard such as ISO9000 or ISO14000. Meeting the registration requirements will require review and modification of many, if not all of the business processes. What about an organization that chooses to close all its retail outlets and transfer all its sales operations to the internet?

The implications of these changes are significant. BPR will examine the process flows for product, services and information. It should also consider who does what and how they are organized. The result should be a set of processes that best support the needs of the

## App Topics

organization. BPR provides a structured approach and tools to assist in analyzing the current processes, identifying the opportunities for improvement and developing improved processes. This discussion will focus on how BPR and ERP applications are related.

### Timing

BPR, even on a small scale, can involve significant amounts of change. The timing of an effort to review and improve business processes requires careful consideration.

To meet internal deadlines for Y2K compliance, many organizations have rushed to implement ERP applications. Any plans to re-engineer existing processes were probably dropped for the sake of meeting aggressive project schedules.

If you are still in the midst of an implementation or about to embark on one, this is not the time to consider an extensive re-engineering effort. Aggressive implementation schedules and BPR are not a good mix. Many organizations will struggle with adapting ERP applications to support existing processes. Concentrate on the application functionality required to support existing business needs. Use the time following the implementation to achieve a stable configuration and to build user confidence.

If you have recently implemented ERP applications and it looks like it will be a while before the organization can upgrade to the next release, then this is a good time to consider BPR.

### Scope of the Re-engineering Effort

If the organization recognizes the need for improvement in its processes, then the task will

be easier. It is most important that the senior management team recognize the need to improve. Their support for re-engineering is critical. To ensure that this support endures, BPR efforts must support the goals and objectives of the organization (cost reduction, cycle time improvements, waste elimination etc.). If a potential project does not support a business objective, it is unlikely to obtain the resources required.

Opportunities for improvement will be identified during an implementation project. These opportunities are likely to be the source of compromise as an implementation progresses, particularly with an aggressive schedule. They can also serve as the basis for establishing re-engineering priorities. The management team should review the opportunities and set priorities. This would also be a good time to use some **external expertise**. As well as providing valuable experience and techniques, an external BPR resource should have objectivity that will assist in identifying potential re-engineering projects and prioritizing them.

The end result of setting the scope should be a prioritized list of potential BPR projects with an estimate of the effort and resources that may be required. Ultimately, this is what the management team must support.

### Re-engineering Resources

Using **external BPR resources** has already been mentioned. An external expert can only supplement the resources that the organization will commit. To ensure ownership for the re-engineered processes, it is wise to have participation from individuals who have a stake in the outcome of the project. Failure to have participation from the individuals who operate the process will result in blame and finger-

pointing when the difficult time comes to implement the re-engineered process.

If you have completed an implementation project, BPR presents an opportunity to leverage the expertise that your team have developed in configuring and using your ERP applications. A solid approach to resourcing a BPR project would be to build a team around the process to be re-engineered. It should consist of individuals who operate the process, “suppliers” to the process, “customers” of the process and “experts” who may have technical or ERP application skills. Keep the team small and nominate an experienced individual as Project Leader. The Project Leader should be responsible for managing the project schedule and resources. A sponsor from the management team should also be nominated to champion the re-engineering effort and ensure that any roadblocks to change are removed.

## Techniques

There are many techniques that can be used to analyze existing processes and identify opportunities for improvement. The techniques that your organization will use depend on the skills that already exist and those that an **external BPR resource** may contribute. This section concentrates on one such approach.

### Analyzing the Existing Process

A technique known as “process mapping” works well here. Using this approach, the inputs and outputs for each process are identified. These could be product, services or information. The process is then charted in as much detail as possible. At each step in an individual process, the inputs and outputs are again identified. The review of the process should involve an evaluation of the flow of information, services or products to identify “disconnects”. There should

be consensus within the team on where the disconnects exist. These will be the basis for any improvements to be made to the process.

### Improving the Process

Armed with information on how the current process works (or not), the team can now focus on improvement. Firstly, examine the inputs and outputs of the process. Are all of the inputs used? There may be an opportunity to eliminate non value added activity at an earlier process. Similarly, examine the outputs of the process. Are some of these redundant?

The creative work starts with examining the disconnects within the existing process flow. Brainstorming works well as a technique to explore alternatives. This is one reason why a mix of customer, supplier and process operators is important in the team. The ERP applications expertise within your organization can also be utilized in developing alternatives for a re-engineered process. This will be discussed in the next section.

Be sure to consider the organization structure as the process is being re-engineered. BPR is as much about “who does what” as “what gets done”. Organizations that have had success with BPR will often structure their organizations around business process flows rather than traditional “silo” type functional structures.

### Documenting the Process

Using similar techniques to those used in analyzing the process, you should identify the inputs and outputs of the re-engineered process and chart the new process flow including information or product flows between process steps. You will need this to communicate and implement changes.

## App Topics

### Application Led Re-engineering

Application led re-engineering is a different way of approaching BPR. In this situation, re-engineering is driven by the deployment or implementation of ERP application functionality.

As already discussed, aggressive implementation schedules can result in compromises where application functionality is sacrificed to ensure that the schedule is met. Very often, opportunities to re-engineer and improve business processes are also sacrificed.

The period following implementation is a good time to re-examine these lost opportunities.

#### **Application Functionality Deployment**

When considering BPR projects, look at the untapped functionality within the installed ERP applications. Are there opportunities for automation or improvement? Occasionally in a multi-site implementation, the deployment of application functionality may be “uneven”. Are all sites utilizing the same functionality? Is there an opportunity to improve a business process by ensuring some functionality is utilized at ALL sites?

#### **“Add-on” Application Functionality**

ERP vendors continue to enhance their product offerings with “add on” applications or modules. The current offerings of “e-commerce” or “web-enabled” applications, Customer Relationship Management applications etc. underlines this.

You may also find a slew of third party applications available to enhance your ERP experience. Consider the functionality available within the existing ERP applications and third party tools. Does the functionality support your business goals and objectives? You may be

able to justify BPR based on the improvements additional functionality will provide.

#### **The “e” Factor**

Any organization should be aware of the huge implications of the internet and electronic commerce. A lot of BPR activity is already underway to leverage the opportunities that a whole new marketplace brings. The ERP vendors have also been quick to recognize that their applications need to integrate with the internet and corporate intranets.

Examine how well your ERP applications support transactions via the internet or your corporate intranet. Is there an opportunity to re-engineer your purchasing, sales or service activities? Be warned that the implications of electronic commerce for your organization can be significant. It may not be difficult to accept customer orders via a web page, but are your planning, manufacturing, distribution and accounts receivable processes capable of supporting this on a large scale?

### Managing the Information Flow

Your BPR analysis should also consider how information flows (or not) within the organization. Very often, information and reports are tightly integrated with existing business processes. Sometimes creating reports can be a whole business process on its own.

Over time, users of ERP applications can develop an assortment of complex methods to produce reports. There can often be repetition in gathering and analyzing information for reports, particularly when the reports are passed upwards in an organization hierarchy.

Carry out a top-down analysis of reporting requirements. Look at the data that is being used to produce reports. Does it make sense to assemble this information in a data mart or data warehouse and create the reports from there? Will this reduce the need to produce ad hoc reports? Is there application functionality or standard reports that eliminate some or all of your custom reporting requirements?

You should also consider the automation of report distribution and information presentation. There are many tools available that can present information via the web and email, allowing you to produce the information once and re-use it as often as is required.

### Dealing With Change

Re-engineering a process may not be the most difficult challenge you face. Implementing a re-engineered process can cause a lot of pain.

As mentioned earlier, there must be support from the management team. It is also important to have participation in the re-engineering efforts from individuals who will be directly affected.

The management team and the project leaders must sell the benefits of re-engineering. If there are tangible benefits (and there should be!), this should not be difficult.

One other approach that works is to have some “quick wins” early on in the BPR activity. This may mean choosing some functionality that is easy to deploy or working on a process that requires minimal resources and can be implemented quickly. Quick wins build the confidence of the management team, the project team and those who have to operate the process.

### Remaining Flexible

Above all, you should remain flexible in your approach to BPR. No process remains constant and as the business environment continues to change, your organization may have to re-examine processes over time.

Wherever possible, use existing application functionality in your re-engineered processes. This will be easier to support.

If you are going to use third party tools to supplement your ERP applications, make sure that they integrate well and are certified by your ERP vendor. Avoid making extensive customizations wherever possible. As ERP applications evolve, you may find it difficult and expensive to carry forward your customizations.

Keep an eye on any future developments planned by your ERP vendor. In some cases, it may be well worth waiting for a future release to bring required functionality rather than try to develop it on your own.

### Conclusion

BPR is not just something to be endured to make your business processes fit with a set of ERP applications. It is a powerful way for an organization to take a critical look at how it operates and effect change where it may be required. A smart organization will choose to implement or deploy the ERP application functionality that will best support its BPR efforts.