

Business Process Engineering (BPE)

Business process engineering is a way in which organizations study their current business processes and develop new methods to improve productivity, efficiency, and operational costs. Business process engineering focuses on new business processes, how to diagnose problems with an organization's current methodology, and how to redesign, reconstruct, and monitor processes to ensure they are effective.^[1]

Business Process Engineering (BPE) uses a proven systematic approach based on the latest experiences and research to achieve significant improvements. The BPE process helps clients fundamentally rethink and reinvent the business processes needed to achieve the firm's strategic objectives through the maximum use of enabling technologies and organizational strategies. A BPE effort can result in 15% to 50% improvement in performance of the targeted business processes, depending upon whether a reengineering or an improvement approach is used in the effort.^[2]

Business	Process	Engineering	Approach ^[3]
Business Process Engineering (BPE) Approach includes:			

- Understanding the Present Mode of Operation (PMO). We'll assemble an experienced team to analyze your current processes, technologies and systems. The result will be creation of a detailed PMO business process model showing interrelationships and dependencies between people, systems, and processes. This will serve as the baseline that proposed changes and actual implementations are evaluated against.
- Determining the Future Mode of Operation (FMO). We'll work with you to build an advisory team to define an FMO business process model based on your business objectives and our combined knowledge of industry best practices.
- Gap Analysis and Transition Plan. A gap analysis of needed business process improvements and transition to the FMO plan will be developed. You'll gain an understanding of the business strategy, timing, personnel, and system/process evolution that will take place.
- Implementation. By trialing and deploying new system or operational process improvements, we'll help you determine whether the intended results will be achieved. If additional system and operational process improvements need to be made, we'll repeat the appropriate PMO, FMO, Gap Analysis and Transition Planning steps as necessary.

Conceptual Framework for Business Process Engineering (See Figure 1.)^[4] The following is a proposed framework within the requirements engineering discipline. It covers business process capture and modeling, elicitation of business and technical requirements for the application and the proposal of the process changes requested for satisfactory application implementation. The framework was originally developed for a particular case study, but is not strictly limited to its domain. Figure 1 shows the essential process elements of the framework.

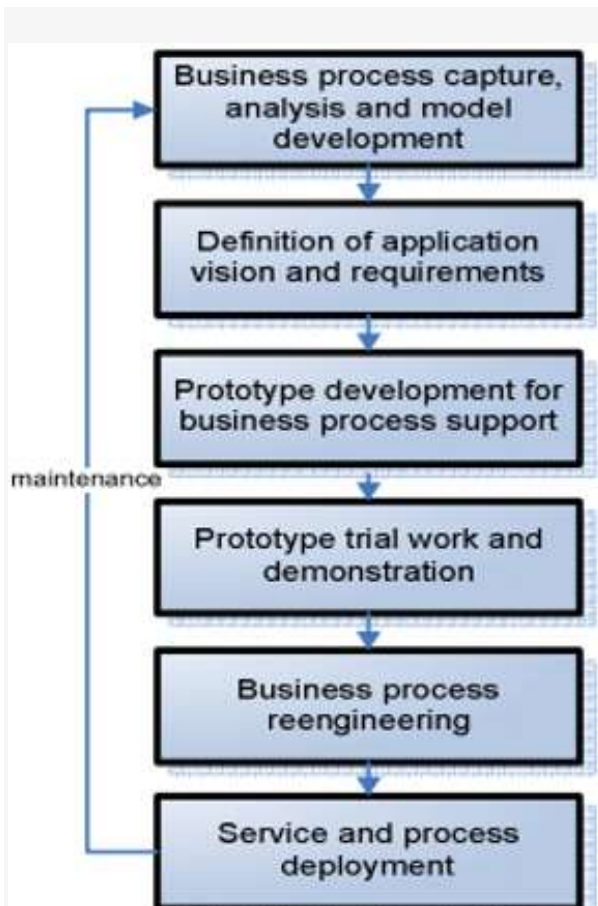


Figure 1. source: University of Zagreb

- **Business process capture, analysis and model development:** Business process capture, analysis and model development include the following. The initial boundaries of the business process are identified and a basic understanding of the process is acquired. The process is then described and modeled. The process actors are analyzed and service user groups are identified. The activities performed by each user group are recognized and modeled. The requirements elicitation techniques used in this stage are observations, interviews and brainstorming sessions.
- **Definition of application vision and requirements.** To define the vision of an application and its requirements the following is done. Stakeholders' requirements are gathered and mapped into service features to produce high-level functional specifications. Questionnaires are prepared and distributed to the identified user groups. This activity should be based on a clear vision and a promising business model. Any discussion with authorities should be initiated here.
- **Prototype development for business process support.** A service prototype is designed and implemented according to the requirements specification. The prototype aims at gathering and verifying complete user requirements and provides more concrete features such as a notification service.
- **Prototype trial work and demonstration.** Trial work is not only important for application functionality and performance verification but for the school process as well. Process weaknesses are emerging, so proposals for process changes must be explicitly defined and clearly presented to all process actors. The regularized rules must contain original process description and functional requirements of the new service and their

implications on the business process. Also, each process change must be unambiguously stated and illustrated. The new process model must be easily understood by the users.

- Business process reengineering. The only way to propose acceptable process changes is by collecting proposals directly from the process actors. Their on-topic feedback is valuable from both a technological and social aspect. Process actors can be regarded as domain experts in their field. Consequently, requirements specifications should be refined and users' feedback about process changes collected. Appropriate techniques include questionnaires, interviews, small group discussions and specialized workshops.
- Service and process deployment. Finally, the service and improved process are deployed and set into motion. First step is mobilizing all the actors involved. The requirements are subject to change and user groups' representatives should be involved in all the development iterations, particularly deployment. Adequate user training should be ensured and the support of service experts is highly recommended. These are the key success factors for this phase. Regular presentations of the development activities and control of the changing requirements are aimed at ensuring service quality. Any change which influences the process is promptly introduced into the new process model and discussed with the actors with the possibility of being implemented in the next cycle.