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Business process reengineering and performance improvement
The case of Chase Manhattan Bank

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Abstract *Previous researchers have investigated the principles of business process reengineering (BPR) and how firms approach this process. However, previous research makes no distinction among BPR projects in different organizational contexts. The present research investigates the BPR methods best suited for financial institutions. Based on a case study conducted in Chase Manhattan Bank, this research attempts to provide guidelines for BPR projects in financial institutions that will help them achieve dramatic performance gains. Chase BPR projects include four phases encompassing a wide scope of activities: energize, focus, invent, and launch. As seen in Chase BPR projects such as e-fund disbursement cards and service charge reengineering, these efforts resulted in new products and services in addition to producing dramatic increases in revenue and operating savings.*

Introduction

Information technology has profoundly changed the way we do business during the past decade. Business process reengineering (BPR) offers one method for managing this change while at the same time making it possible to achieve dramatic gains in business performance. However, not all BPR projects have been successful in achieving dramatic performance gains.

The continuing demand for business process improvements has resulted in a proliferation of consultants, methodologies, techniques, and tools for conducting BPR projects (Kettinger *et al.*, 1997). This flood of BPR methodologies has often left BPR project planners confused about which methods are best suited to their needs. This lack of consensus on BPR methods has resulted in many unsuccessful BPR projects.

Previous research has investigated the principles of BPR and how firms approach this process (Hammer, 1990; Hammer and Champy, 1993; Earl, 1994; Davenport, 1995; Kettinger and Grover, 1995; Stoddard and Jarvenpaa, 1995; Harkness *et al.*, 1996). However, the elaboration of these general principles makes no distinction among BPR projects in different organizational contexts. The characteristics of BPR projects in financial institutions differ from those of a manufacturing firms because business processes for financial institutions are

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more information intensive and service oriented. According to Kettinger *et al.* (1997), BPR projects differ in their characteristics, and varying project characteristics call for differing methodological choices. This research investigates the BPR methods best suited for financial institutions. Based on a case study conducted in Chase Manhattan Bank, it attempts to provide guidelines that will help BPR projects in financial institutions to achieve dramatic performance gains.

The concept of BPR

The concept of BPR is to bring "radical change, fast" to business processes. The objective of the Chase Manhattan BPR was to gain an understanding of several key elements:

- Why companies reengineer.
- What reengineering is and is not.
- How reengineering is different from process improvement.

We will briefly focus on each of these key elements, and then turn to their impact on reengineering.

Why companies reengineer

Companies reengineer for a variety of compelling business reasons. First, management determines that a significant gap exists between actual and desired results, creating a business problem. At times, senior management translates this business problem into process performance problems and opportunities. This allows the company to focus on fundamentally transforming the target process(es), thus improving business results and solving the problem. At this early stage of identifying the need for radical change, senior management commitment and sponsorship is essential in making the decision to reengineer. Traditionally, nearly 70 per cent of all reengineering projects fail. That extreme failure rate has often been ascribed to lack of senior management sponsorship or failure to make an ongoing commitment to the tough management decisions needed to effect these changes to the work environment.

What reengineering is and is not

By definition, reengineering is "radical change, fast". Reengineering is a fundamental rethinking and transformation of an integrated set of business processes. As practiced at Chase, reengineering requires not only a redesign of business processes but a concurrent examination and redesign of the information technologies and organization that support these processes. There are two proven problem-solving techniques: analytical and creative. Chase believes the best results are attained when the two methods are used in parallel. Understanding that process transformation is ultimately about doing work differently is the key to successful transformation. Hammer (1990) puts it more succinctly: "Reengineering is rethinking work".

Frequently there is confusion about what reengineering is – and is not, and how it differs from process improvement or "quick hits". The Chase model can be summarized as shown in Table I.

How reengineering is different from process improvement

Typically, process improvements fall into three categories: quick hits, incremental improvement, and reengineering:

(1) *Quick hits*. These are typically low risk, easily achievable efforts that provide immediate payback opportunities (typically within a few months).

(2) *Incremental improvement*. This focuses on closing small performance gaps, delivers small degrees of change that achieve small but meaningful business results.

(3) *Reengineering*. This demonstrates breakthrough thinking and aims for dramatic business results. Unlike quick hits and incremental improvement, reengineering is a form of organizational change characterized by dramatic process transformation.

It is important to take note of the term process in the context of reengineering. As the Chase approach to reengineering shows, a process is a series of related activities that takes an input, adds value to it, and produces an output for a customer (see Figure 1).

Chase reengineers processes, not functions, departments, geographies or tasks. Table II demonstrates how reengineering differs from other forms of process improvement.

Phased approach to BPR

When establishing BPR in 1996, Chase management engaged IBM to assist in developing their methodology. The IBM business transformation methodology was customized for use at Chase, and BPR staff was provided intensive training on the application of the methodology.

The methodology is segmented into four phases:

(1) energize;

(2) focus;

It is not ...	Although ...
Downsizing	Jobs are often eliminated
Reorganizing	Structures are changed
Functional fixes	Functions operate better
A big technology project	Technology is critical

Table I.
Summary of the Chase model

Figure 1.
The Chase approach

(3) invent; and

(4) launch.

Each phase is explained in some detail below.

Energize

This first phase of a reengineering project may best be defined as mobilizing for action. During this phase, executive sponsorship is solidified, project teams established, project and communications plans drafted, and a commitment to initiate the project is made. Typically, about 10 per cent of total project time is allocated for this phase. The goal of "energize" is to provide the motivation and vision necessary to make change possible. During the initial stages of this phase, it is important to determine the level of senior management commitment to the effort. Lack of commitment from senior executives has been shown to be a deterrent to successful reengineering. During this early stage, the project organization and scope are defined. The scope should be as broad as possible within the framework established by executive vision and targets. Energize phase deliverables include:

(1) A persuasive "case for action" – a high level document developed to communicate why reengineering is needed.

(2) Project organization and teams defined:

- a full-time core team of internal experts and BPR staff;
- an extended team that provides, when needed, specialized expertise and counsel;
- a process owner who acts as the customer for the reengineering effort.

(3) A project plan – including key activities, dependencies, and milestones.

(4) A communication plan – describing how project progress, milestones, and issues are to be communicated. Communications channels, frequency and audience are identified.

Attributes	Quick hits	Incremental improvement	Reengineering
Case or cause for action	Obvious	Necessary	Compelling
Degree of change required	Minor	Minor	Dramatic
Goals	Immediate improvements	Small scale improvements	Significant improvements
Senior management's time commitment	Decision point	Minor involvement	Major involvement; intensive throughout

Table II.
Three categories of business process improvement

Focus

In this phase, the "as-is" environment is analyzed. Of the total project life cycle, 30 per cent is spent in this phase. A danger frequently encountered by project teams is a tendency to spend too much time analyzing the current process, organization, and the financial and technology components under review. The Chase approach is to understand the process – not analyze it. Since reengineering is by definition a radical change to current processes, it is unreasonable to spend too much time assessing these processes.

In the Chase methodology, the focus phase deliverables include:

- Current process diagnosis – an assessment of the "as-is" process performance, business and customer context.
- Entry points – characteristics of the current business environment that can be changed, built-upon, or expanded during the invent phase. This includes aspects of the as-is process and process context where reengineering change will create the most benefit.
- Quick hits – process improvement ideas that can be quickly implemented.

The approach for this phase of the project is hypothesis driven (Figure 2).

Hypothesis-based problem solving is effective in defining objectives and solving problems. The project team develops a series of hypotheses to be proved or disproved during the focus phase analysis. This is accomplished by assessing issues, gathering data, testing the data, and developing conclusions.

The process of determining business context described above assumes that businesses compete in three major ways – cost, value or competence. Through a series of management and staff interviews, BPR determines how each of these components is viewed from the business perspective:

- *Cost*. The product or service is seen in terms of cost (e.g. electricity), not functionality or value.
- *Value*. The product or service is differentiated in terms of functionality, (e.g. higher reliability, more functionality – such as on-schedule air travel).

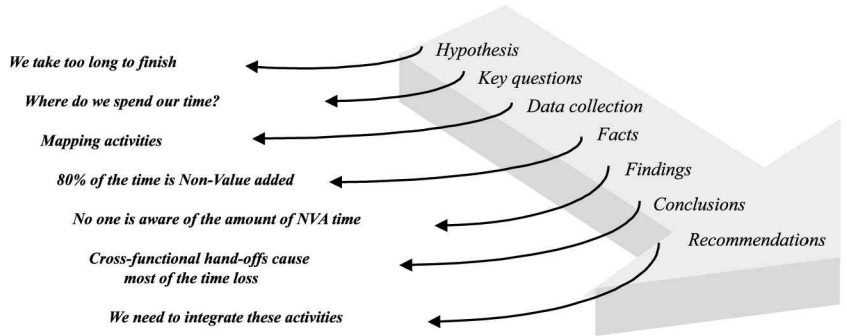

Figure 2.
Hypothesis driven approach of the focus phase

- *Competence*. The product/service is seen as a unique offering with highly enhanced value (e.g. jewelry, watches, special surgical procedures).

There is also a need to understand the process from the customers' perspective. Different customer segments may value different products or services. What the reengineering team seeks to learn is:

- how customers see us;
- willingness to pay for value-added services;
- what they want us to change;
- how our processes link with theirs;
- what our competitors do better than we do.

To gain these insights, BPR uses a number of techniques, including: a review of relevant internal customer survey data, the conduct of customer focus groups, and/or the collection of benchmark data from outside agencies. Once the interviews and data gathering are completed, the data are typically reviewed and used as a basis for developing the hypotheses to be considered.

A major aspect of the focus phase is the simultaneous assessment of the process, organization, financial and information technology components:

(1) *Process assessment*. Each facet of the end-to-end process is analyzed in detail. Process maps (in the form of workflows) are developed, financial and production data are gathered, activity-based costing information is analyzed, and automated simulations are frequently performed. The goal is to identify high-level process improvement opportunities. These may include such areas as:

- eliminating bureaucracy;
- eliminating redundancy;
- evaluating activities for value-add;
- reducing cycle time;
- eliminating errors;
- standardizing;
- optimizing supplier relationships.

These improvement opportunities may produce a series of "quick hits". Quick hits are important in this early stage to generate and maintain project momentum, demonstrate results, and bring early gains to the process.

(2) *Organization assessment*. During the focus phase, it is important to assess organizational design issues that may arise. These may include such areas as organization mapping, spans of control, staff skills and training, morale, and productivity among others. Figure 3 indicates the view of the organization from a reengineering perspective. The figure demonstrates how in a reengineering initiative, the organization is viewed across functions rather than within a department or business unit.

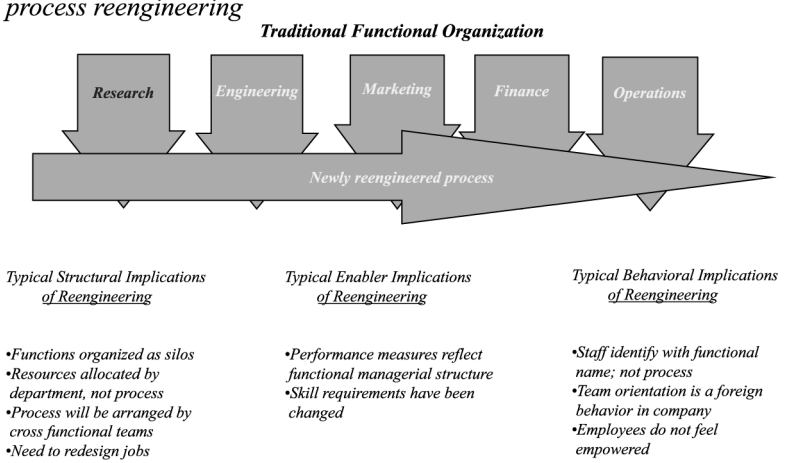

Figure 3. Organization assessment

(3) *Financial assessment.* The purpose of the financial assessment is to understand the situation from a financial/business perspective. This involves an evaluation of the competition, collecting costing and processing data, and creating an activity based costing (ABC) model. This assessment allows planners to decide what needs to be changed (i.e. to combine the ABC results with customer needs and wants and with other phases of the assessment process). At Chase this may include running a simulation of the as-is data to discover bottlenecks and value-add/non-value-add steps in the process.

This work makes it easier to understand the value of and potential for change (i.e. it helps determine changes that could result in "business success" as well as the value of making these changes). Ultimately, it is the application and ongoing measurement of these changes that demonstrate the value of implementing a redesigned process.

(4) *Information technology assessment.* During the IT assessment, an IT scan is conducted to identify current or emerging information technologies that might impact existing processes. The objective is to identify information technologies that will provide significant business value. This may include:

- establishing the value of the new information technologies;
- assessing internal and external readiness to implement the new information technologies;

- identifying high-value/low-readiness information technologies and to monitor and define the factor(s) which would improve the readiness level;
- identifying low-value information technologies and eliminating them from consideration.

The result of this analysis and assessment is a report outlining the opportunities for reengineering.

Invent

The invent phase begins by determining what the redesigned business system should look like – and why. Typically, about 40 per cent of total project time is allocated to this phase. As shown in Figure 4, the redesigned business system results from the future process design, with consideration for the technology and organizational impacts.

An effective process redesign is characterized by two key components:

(1) responsiveness to executive goals; and

(2) a fundamental rethinking how work is done.

At Chase, the process begins by envisioning the future state process design. This provides a compelling view of how business should be done in the future. This vision is:

(1) Characterized by:
- a time dimension;
- beliefs and values surrounding "life in the future";
- models and metaphors describing the way the process should work.

(2) Bounded by:
- financial limitations;
- technological capability;
- certainty of the future;
- social norms.

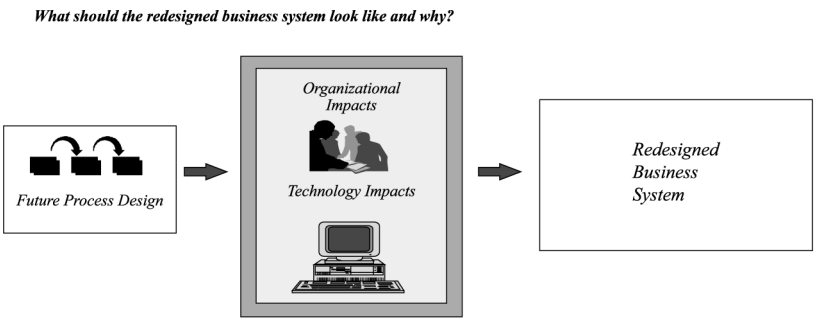

Figure 4.
The invent phase

The typical process in the Chase methodology calls for identifying a series of steps leading to the future state of the redesign. These sequences are called "get crazy" and "get real". "Get crazy" consists of traditional brainstorming sessions focused on specific views of the future state, and may include some or all of the following:

- brainstorm new ideas;
- creativity;
- paradigm busters;
- invert existing rules;
- organizational rules;
- technology enablers;
- divergent thinking;
- obtaining customer views (internal and external);
- benchmark best practice performance and identify business systems.

Out of the box thinking is not only accepted, it is encouraged during this phase of design development.

"Get real" takes the assortment of new ideas and looks at what is doable in the context of executive goals and business requirements. This is done by conducting design workshops to develop initial process flows and rules, check and validate the design for customer-centricity, ensure completeness and consistency, identify risks, and develop an initial proof-of-concept strategy.

As this begins to take shape, the new process and the organization and technology needed to support it must be integrated into a whole that serves the customer. An effort is made to translate the high-level breakthrough process concept into organizational, technological and operating requirements necessary to reach the end-state.

The final steps are to test the ideas and underlying assumptions, create sufficient detail to develop a business case and provide clarity in depicting how projects and/or releases of the redesign can be implemented.

The goal of this work is to create a "visualization" and/or a simulation integrating process, technology, and organization such that it:

- compels stakeholders to "think" and "live" in the future;
- complements a simulation model by describing what it will take to achieve the business performance expectations of the new design, and expands the acceptance of the new design.

Launch

The launch phase represents the culmination of the process and begins to draw the roadmap to implementation. About 20 per cent of the project life cycle is allocated for this phase of the project. In the early stages, it serves to identify tangible benefits (e.g. impact on income/expense, market share, the realization

of strategic opportunities, and financial metrics) and intangible benefits (e.g. customer satisfaction, competitive advantage, employee satisfaction, improved community relations).

The Chase model calls for an early evaluation of the project for risk factors. This entails a careful review of project "do-ability" (e.g. project size, resource requirements, staffing, time required) and technology (e.g. internal experience, degree of new systems development, fit with existing architecture). Impacts on the organization, people and implications to stockholders are considered during this assessment. The ideal outcome is to identify projects that return high net benefits with low risk.

Depending on the outcome of the risk assessment, the next step is building a blueprint – a final report containing descriptions of the new business process and a plan for projects necessary to achieve the desired state. At this point, the organization must make decisions. A systematic and orderly approach to assessment, design, and planning for the future using the methodology described makes for a smooth transition to implementation, and ultimately to tangible results. Chase Manhattan Bank has accomplished a number of BPR projects using the phased approach and the record of accomplishment by the Chase BPR projects has been positive. The following section will describe some of the details of those projects.

BPR projects of Chase Manhattan Bank

Name and address reengineering

BPR reengineered the name and address change process to foster the brand promise of "one and done". On average, Chase processes about 6.4 million name and/or addresses each year. The project team partnered with credit card, call center, mortgage and auto finance to gain an understanding of the current business environment. Chase's BPR team developed a redesigned process model modifying the existing technology architecture. The benefits of implementing the new model included:

- accepting customer requests at any point or means of contact;
- eliminating multiple calls by customers, reducing call center volume;
- supporting the "one and done" concept by automatically updating each account as requested by the customer;
- eliminating duplicate data entry and potential errors.

E-funds disbursement card

The initial thrust of this project was to determine the scalability of the existing technology platform to support the US government's EFT 1999 mandate (i.e. to move the method of payment for benefits recipients from checks to a payroll card). Although the government modified its timing and approach to this effort, BPR continued a detailed assessment of existing systems, processes and opportunities in this realm. As a result, a technology-based solution evolved that is scheduled for implementation in the fourth quarter of 2000. This

includes a highly flexible platform that allows customization of a number of card products (payroll, T&E, gift cards, stored value disaster relief, petty cash, to name a few), unlimited scale, mass account opening via multi-media by commercial customers, and flexible reporting and funding mechanisms.

Conservative first year estimates call for revenue of approximately $21 million. There is currently a patent pending for this system platform with the US Patent Office.

Branch cash management

The branch and ATM channel at Chase must maintain sufficient cash levels to service consumer and commercial customers. There was no automated method of predicting cash requirements for these channels, and an opportunity presented itself to improve interest income by reducing cash levels. BPR developed cash tracking models for branches and ATMs. These models focused on meeting cash requirements without significantly changing procedures. The project results were a first year revenue increase of $2.4 million. Additional recommendations to reduce overall cash levels in the channels of more than $123 million provided annual revenue increases estimated at $9.1 million.

Service charge reengineering

Prior to the reengineering initiative, refunds for service charges were manually recorded in the Branch network and faxed to the back-office for processing. BPR analyzed existing procedures and conducted focus sessions with branch and call center staff. The outcome of the project was two separate initiatives for implementation changes. First, existing processes were modified and automated to allow branches to process the request at point of contact. A new automated posting feature allowed the customer's request to be credited to their account on the same business day. Changes in processing provided annual savings of approximately $500 million.

The second phase of the project provided a redesigned, technology-based model that utilizes workflow and middleware technology, coupled with automated business rules and business roles, to provide automated decision-making on whether to approve, decline or refer customer requests based on a number of key decision points. At this writing, the redesigned model has a patent pending with the US Patent Office.

Retail funds transfer reengineering

In this reengineering initiative, the retail funds transfer process was fully assessed, and a number of key recommendations implemented. Real-time processing by customers at points of contact replaced manual intervention in back-office areas for the vast majority of recurring funds transfer requests. The outcome of the project included improved servicing time for customer transfer requests, improved tracking of requests, and operating savings in excess of $4.1 million.

Centralized account holds and levies

The centralized holds and levies department plays a critical role in ensuring the bank's legal compliance with the handling and processing of levies and other money judgment documents. BPR reengineered the process of receiving and processing legal documents from attorneys and local, state and federal agencies. A major outcome of this initiative was improved service quality and reduced loss exposure through enhanced cooperation with collection attorneys and government agencies. BPR sponsored a series of work sessions with legal and governmental representatives, and ultimately gained New York State Congress sponsorship of a bill to change the law regarding bank handling of levies and judgments.

The financial impact for Chase included expense reductions of $790 million from process redesign, and additional income of $995 million from new and revised legal processing fees.

Concluding remarks

While there are some similarities in how firms approach reengineering, each firm should tailor its BPR efforts to satisfy its unique organizational conditions, rather than following a universal approach (Kettinger *et al.*, 1997). BPR projects require different approaches depending on their characteristics. Although a number of BPR principles and methodologies have been identified by previous research, there have been relatively few works analyzing BPR methods best suited for specific organizational contexts.

By examining the BPR projects implemented at Chase Manhattan Bank, this study provides guidelines for BPR projects in financial institutions with a similar organizational context. Chase BPR projects include four phases that encompass a wide scope of activities. This study improves our understanding of BPR by describing and analyzing the major phases and associated activities conducted in reengineering.

According to Davidson (1993), successful reengineering efforts ultimately lead to business transformation. New products, services and customer services appear in the form of improved information flows. These enhanced options and features may produce new business opportunities. As seen in Chase BPR projects such as e-fund disbursement cards and service charge reengineering, BPR efforts produced new products and services in addition to dramatic increases in revenue and operating savings.

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