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ABSTRACT

Some Business Process Outsourcing (BPO) vendors are providing Information Technology (IT) Enabled Process Outsourcing and Reengineering service to clients. The benefits of the IT Enabled Process Outsourcing and Reengineering approach include long term productivity, service and quality improvements, decrease in costs, and gain sharing in addition to the benefits of the Fee-For-Service Outsourcing approach discussed by Lacity et. al. (2003). The case study of a mortgage bank which outsourced some of its mortgage servicing processes and associated back office functions to a BPO vendor is discussed. IT Enabled Process Outsourcing and Reengineering resulted in the strategic benefit of better customer response time derived from a dramatic decrease in cycle time by about 78 percent. This approach has also resulted in an annual cost saving of half a million US dollars.

Keywords

Business Process Outsourcing, IT Enabled Process Outsourcing, Reengineering

INTRODUCTION

Business Process Outsourcing (BPO) is the delegation of one or more Information Technology (IT) and labor intensive business processes (such as accounts payable, call center-based customer service, or claims processing) to an external service provider that owns, administers, and manages the selected processes based on defined and measurable performance metrics (McCarthy 2003). BPO is thus "the act of transferring some of an organization's recurring internal activities and decision rights to outside providers, as set forth in a contract" (Greaver 1999). Lacity et. al. (2003) identified five approaches to BPO viz. Do-It-Yourself, Management Consultants, Fee-For-Service Outsourcing, Joint Venture, and Enterprise Partnership. The Fee-For-Service has been a popular approach where third party vendors provide BPO services to clients. BPO services are used by clients to improve competitiveness and reduce cost (Cournoyer 2003, Deepak and Parikh 2002). Recent trends indicate that the emerging IT Enabled Process Outsourcing and Reengineering approach is becoming popular since it provides more long-term benefits than the Fee-For-Service approach.

IT ENABLED PROCESS OUTSOURCING AND REENGINEERING

The Fee-For-Service BPO approach (Lacity et. al. 2003) is the traditional outsourcing model, where the client is guaranteed one time savings, and on going cost and service improvements by the BPO vendor. It is likely that the long term relationship between client and BPO vendor in this approach often becomes arduous degenerating into an "us-versus-them" attitude. One way to offset this risk is the Enterprise Partnership approach that creates a new corporate entity that is created by the client and vendor to improve the business processes of the client (Lacity et. al. 2003). The BPO vendor through the new entity promises guaranteed process improvements to the client and takes the responsibility for operational management.

The arduous long term relationship of the client and the BPO vendor appears similar to that faced by clients and IT services vendors in multi-million dollar "lift-out" deals. In such deals the entire IT function including IT staff and infrastructure are taken over by the IT services vendors. Recent trends seem to indicate that some IT services vendors have successfully addressed this "loss of control" risk that often leads to "us-versus-them" attitude (Baldyga and Sarangan 2004). The approach has been to work in a partnership with the client and structure IT outsourcing as the client demands. Both the client and the vendor have the opportunity to work towards gain sharing once certain pre-defined service agreements are satisfied. A similar approach has been adopted by some IT services vendors who are offering BPO services. What is emerging appears to be an extension of the Fee-For-Service BPO approach with the benefits of Enterprise Partnership but without setting up a new corporate entity. This emerging approach is the IT Enabled Process Outsourcing and Reengineering that leverages the IT and quality management expertise of the vendor to provide long term guaranteed service, productivity, quality, and cost

improvements. This leads to transactions based pricing and gain sharing arrangements between the client and the BPO vendor. The benefits of the emerging approach in addition to those from Fee-For-Service BPO approach include long term service, productivity and cost benefits from IT enabled process reengineering, quality management, transactions based pricing models, and gain sharing arrangements between client and BPO vendor.

In spite of the growing importance of BPO, there is a dearth of academic literature on this subject (Feeny et. al. 2003, Lacity and Willcocks 2001). This is in contrast to IT services outsourcing that has been well researched. This paper examines how the IT Enabled Process Outsourcing and Reengineering model operates, and the benefits and risks associated with this approach using the case study of BPO in a mortgage bank.

METHODOLOGY

The contemporary nature of the research on IT Enabled Process Outsourcing and Reengineering and researcher's lack of control over the events made the case study an appropriate research methodology (Yin 1994). The data for the case studies primarily came from eleven in-depth semi structured interviews with project managers, users, and sponsors associated with the process outsourcing initiative with the mortgage bank and the BPO vendor. Data was also obtained from internal reports maintained by the BPO vendor and published reports by IT/BPO market analysts. The names of the mortgage bank, BPO vendor, and the stakeholders are not revealed due to the confidential nature of the case studies. The dominant mode of analysis of the case study used in this research is explanation-building (Miles and Huberman 1994).

CASE STUDY

BPO and the Financial Services Industry

Large enterprises in financial services industry have shown a high adoption of BPO compared to other industries (Scholl 2003). BPO adoption by large enterprises for administration services (human resources, finance and accounting, administration, payment services, etc.) is about 20.6 percent while it is 36 percent in the financial services industry. Overall adoption of demand management services (sales, marketing, customer care, etc.) by large enterprises is five percent, while it is eight percent in the financial services industry. The higher than average demand management adoption by the enterprises in the financial services industry can be considered as the touchstone of the value proposition of BPO.

The financial services market continues to intensify in competitiveness as a result of new global entrants and convergence between sub-sectors (Crane and Bodie 1996). Convergence has increased in the aftermath of the Gramm-Leach Bliley Financial Modernization Act of 1999, which allows enterprises in the financial services industry to compete in bank, insurance and capital markets sectors and paved the way for financial services supermarkets. Increased competition, new information technologies and declining processing costs, erosion of product and geographic boundaries, and less restrictive governmental regulations have resulted in a structural shift in the financial services industry. A natural outcome of this structural shift was that the enterprises looked to outsourcing business processes to remain innovative in offering new products, serving more customers, and reducing costs. As these enterprises specialized, finding BPO vendors with complementary strengths became a natural part of business strategies.

BPO was initially limited to the tactical administrative services side of financial services industry (Dayasindhu and Sheshadri 2003). BPO was driven by short term considerations like one time cost reduction resulting from labor arbitrage. Typically, business processes were transferred intact to BPO vendors, with the understanding that the vendors will produce the same process outcomes, at a lower cost. Today, BPO is increasingly becoming strategic and is driven by developments in IT and regulatory shifts in the financial services industry. BPO is used to create flexible capacity to drive revenue growth without investment overhang in depressed business cycles. BPO is being seen as capable of increasing return on assets by reducing the proportion of non-earning assets to total assets, leaving the investment in technology and physical platforms to the vendor. The savings from BPO are also being used for strategic investments like modernizing IT infrastructure.

The Outsourcing Decision

In early 2001, a mortgage bank in the USA was exploring a Fee-For Service BPO with a vendor which was a subsidiary of a large IT services vendor. The mortgage bank had outsourced development and maintenance of its IT applications to the parent IT services vendor from 2000 and was satisfied with the outsourcing arrangement.

The primary intent for BPO was that the mortgage bank wanted a strategic capability to service a growing customer base. BPO for the mortgage bank was a strategic imperative for managing growth and not just a cost cutting measure. The mortgage bank realized that substandard service in BPO will be a business liability that it cannot afford in a competitive

market environment. The bank performed a due diligence and was satisfied that the BPO vendor had the industry domain and business process expertise. IT expertise is assumed to be a "hygiene factor" for the mortgage bank since its business processes depended on varying degrees of IT support.

In mid 2001, the BPO vendor carried out a "discovery" exercise at the mortgage bank to identify the business process that could be outsourced. About 80 percent of the mortgage servicing and related back office functions were identified as those that could be outsourced and offshored. BPO typically has two components; (1) the process outsourced and (2) number of people ("seats") at the BPO vendor who will be working with the process outsourced. It was also found that a certain critical mass of seats needs to be outsourced and offshored to derive maximum benefits from BPO. The cost saving from labor arbitrage is the only benefit at less than critical mass while seats more than the critical mass would result in 25 percent to 30 percent more savings than the labor arbitrage. By the end of 2001, a pilot process for BPO was identified and work on transitioning the process began.

The Pilot: Rate Lock Validation Process

The rate lock validation process was selected for the BPO pilot. This process calculates the rates charged on the loan and validates these with the rate sheet published by the mortgage bank. The pilot involved the BPO vendor setting up three offshore "seats" to perform 10 percent of the rate lock validation. The Delivery Manager from the BPO vendor studied the process at the mortgage bank and transitioned the process offshore. The process and the IT systems involved in transferring data from the mortgage bank to the BPO vendor and domain were understood in a month. The BPO vendor received requests by E mail and the validated requests were E mailed back to the mortgage bank. The BPO vendor batch processed the rate validation once a day. When the process was outsourced and offshored by mid 2002, the team at the BPO vendor took slightly more than six minutes to perform a rate lock validation. In about two and a half months, the BPO vendor reduced the time for a rate lock validation to less than one minute using interventions for issues identified using a control impact matrix. For example, one of the issues identified was dipping motivation of the team. This was addressed immediately by team huddles, and offsite counseling. The Delivery Manager at the BPO vendor managing the outsourced process for the mortgage bank observed,

"Our process improvements reached a state where the team would batch process the entire set of requests for rate lock validation in half a working day while we were required to process only 10 percent of requests in an entire day!"

The successful BPO of the rate lock validation process served as a proof of concept that showcased the domain/technology knowledge and process improvement skills of the vendor in a batch processing mode. The Vice President whose division in the mortgage bank was responsible for the rate lock validation process was satisfied with the initial results from the BPO,

"I felt we could improve performance to near perfection! I had nothing but great things to say about the <BPO vendor's> team to our senior executives."

Steady State and Beyond: Rate Lock Confirmation Process

Rate lock confirmation process confirms the rate charged on the loan and the commission paid to the broker for the loan. This process contained discrete tasks at the different branches of the mortgage bank. It was decided by the mortgage bank and the BPO vendor that this process will be processed online as and when the request is received from the branch (the rate lock validation process in contrast was batch processed). Work on outsourcing the rate lock confirmation started by the end of 2002. The BPO vendor had to develop the IT system that ensured all the mails requesting rate lock confirmation from the branches reached the vendor and got allotted to those who worked on the process. The supervisor (at the BPO vendor) monitored the process through the IT system that captured time of arrival of mails from the branches of the mortgage bank and completion of rate lock confirmation by those working on them. These time data were input into a performance audit system for the supervisor, developed as a database application that assessed response time and quality. The team performing rate lock confirmation at the BPO vendor used techniques like the Six Sigma Define-Measure-Analyze-Improve-Control cycle, cause and effect diagrams, and control impact matrix to prioritize on actions that improved productivity of the rate lock confirmation process. One issue that came up was the inefficient tracking of request mails that were ready for processing that resulted in a longer wait time before processing. This issue was resolved by flagging a request that was being worked in the E mail inbox of team members working on requests. Another issue was the slow response from the IT system at the mortgage bank and the team had to wait while the data they requested for was getting downloaded. This issue was resolved by working on concurrent sessions in the IT system. The Delivery Manager at the BPO vendor elaborates,

"We used the quality techniques to come up with simple but effective technology interventions like (1) IT system triggered flagging of rate confirmation mail request that was being worked upon so that it was easy to track mails that were ready for

processing (2) Automating random quality audit that does not interfere with work process (3) Parallel processing, changing sequencing of opening screens, and working on concurrent sessions in the IT system that reduced time taken to perform rate lock confirmation."

These interventions reduced the average time taken to complete a rate lock confirmation from over 24 minutes to about 10 minutes in four months (by mid 2003) while maintaining near perfect quality levels. Since the average request per day for rate lock validation from the mortgage bank had reached a steady state, the reduction in time for rate lock validation led the BPO vendor to reduce the team size from eleven to eight by redeploying them on other projects that were being transitioned for the mortgage bank. This had the mortgage bank pleasantly surprised and intrigued. The Senior Manager of the mortgage bank responsible for the rate lock confirmation process remarked

"Overall it was great news! I was interested to know why <the BPO vendor> wanted to release these team members. And wanted to check with my senior management before accepting the release of team members!"

The mortgage bank benefited from the reduction in time taken for rate lock confirmation and also from a reduction in the team size at the BPO vendor. It is estimated that the first year savings for the mortgage bank from the productivity improvements was about US$90000 in addition to the labor arbitrage.

IT Enabling: Task and Report Printing

From the end of 2002, in addition to the back office processes, some of the customer service processes were piloted successfully by the BPO vendor. These processes involved setting up telephone call centers at the premises of the BPO vendor where a team was trained to service requests from the customers of the mortgage bank. The customer servicing function in the mortgage bank depended on the task and report printing function.

The task and report printing function starts with the mortgage bank's customer service center creating tasks based on request received from customers over the telephone. Tasks were consolidated on a daily basis after downloading from a mortgage servicing system to a print server at six in the morning everyday. Approximately 250 reports were generated everyday by the mortgage servicing system and printing was scheduled half an hour after the download. Tasks and reports constituted 80 percent of the requests from customers. The tasks and reports were processed by a print manager application and took about two hours to get printed. The printed reports and tasks were sorted manually by supervisors (employees of the mortgage bank). They took about two hours to sift through the tasks and reports and distribute to the mortgage service associates. It was only by mid-day (after six hours from downloading from the mortgage servicing platform) that the mortgage service associates got to work on the tasks and reports. These associates worked on executing tasks and resolving exceptions in the reports before updating the new status in the system. All these activities were carried out by the mortgage bank in its offices located in the USA. The tasks and report printing process involved an annual expense of half a million US dollars on printing consumables alone. That apart, there was a delay in processing time sensitive tasks since it took up to 28 hours for a task to get processed and get reflected in the mortgage servicing system. Such a long processing time for time sensitive tasks often led to customer dissatisfaction. There was also no visibility into the process for supervision since there was no provision for following up and monitoring tasks assigned to the mortgage service associates. The supervisors did not have a mechanism to sort reports and tasks according to similarity of requests that would have increased productivity of mortgage servicing associates.

The BPO vendor realized that the task and report printing function could be made more efficient with IT led reengineering. Initial discussions with the mortgage bank revealed that the senior management was not interested in introducing additional risk by way of outsourcing the task and report printing function. The Delivery Manager at the BPO vendor who was responsible for the mortgage bank's projects was confident of the benefits of the IT reengineering and outsourcing the task and report printing function. The Delivery Manager went ahead and reengineered the task and report printing function and used it as a pilot for the customer servicing processes of the mortgage bank that had been outsourced to the BPO vendor.

The reengineered process downloaded the tasks and reports from the print server at the mortgage bank to a server in the BPO vendor's offshore office over a two hour time window. The IT system monitored the data transfer and ensured security and completeness of data transfer. The flat file format of tasks and reports received were converted into a database. The data that was relevant to the customer servicing team in the BPO vendor were retained in the database and the redundant data was purged. The rule engine in the system grouped and categorized tasks that are accessed by the customer servicing team. The system also prioritized time sensitive reports for the customer servicing team that were in the database. The reports that were not time sensitive were accessed through a software application that converted them into easy to work with spreadsheet files.

Since the IT system employed a rules engine and workflow management, it reduced cycle time by about 78 percent (pre-reengineering cycle time: about 28 hours and post-reengineering cycle time: about 6 hours) by improving productivity of the

mortgage service associates and customer response time. The Web enabled IT system provided visibility and monitoring options to the mortgage bank, and allowed other functions in the bank to access information and facilitated transactions based pricing since all process workflow and control data were captured in the IT system. Supervisors in the mortgage bank could also access the system to monitor productivity of customer service team at the BPO vendor in real time. Once the benefits of the reengineered tasks and report printing process was successfully demonstrated to the mortgage bank it was decided that the IT system that supported this process should be installed on a Web server and support the entire customer servicing function at the mortgage bank. The most visible post IT led process reengineering annual savings of US$ 500000 for the mortgage bank results from the elimination of printing. The IT enabled reengineering and outsourcing of task and report printing has led the mortgage bank and the BPO vendor work on gain sharing arrangements (where the client and vendor share the savings that result from cost, productivity and service improvements). The Delivery Manager at the BPO vendor summarized the emerging approach in BPO,

"A successful BPO is a function of process maturity, sustainability, flexibility, and accountability provided by the vendor. Process maturity is the domain expertise in mortgage banking and strength in IT and process consulting helped reengineer a customer centric tasks and reports process. Sustainability is going beyond traditional BPO approach that just replicates outsourced processes to an IT led reengineering approach that commits risk free value add for the mortgage bank. Flexibility of the IT systems developed that helps the mortgage bank to control and monitor the outsourced processes on a real time basis and provide for information access to other functions in the mortgage bank. Accountability is in working out gain sharing arrangements driven by IT led process reengineering that are determined by service contracts that include bonus and penalty clauses based on real time business measures."

Analysis of IT Enabled Process Outsourcing and Reengineering in the Mortgage Bank

The benefits from IT Enabled Process Outsourcing and Reengineering accruing to the mortgage bank and the associated risks are discussed in Table 1 and 2 based on the framework of Lacity et. al. (2003). The significant benefits have been the infusion of external capabilities and guaranteed productivity increases and a decrease in costs. The important risk in the BPO was that the senior management was initially risk averse to new process reengineering initiatives. They were convinced only when the vendor showed them working prototypes and demonstrable benefits.

Benefits from IT Enabled Process Outsourcing and Reengineering	Were these Benefits Derived by the Mortgage Bank?
Infusion of external energy and capabilities	Yes. The outsourced processes of mortgage bank were in the hands of a BPO vendor committed to provide productivity improvements.
Ability of outsiders to bypass political resistance	Yes. The BPO vendor was perceived to be a neutral entity and had the access to senior decision makers in the mortgage bank.
Clear indication that management is committed to transformation	Yes. The BPO vendor had the full support of the senior management who owned the processes in the mortgage bank.
Guaranteed cost and service improvements for predefined baseline services	Yes. The productivity improvements in the rate lock validation and confirmation processes and service improvements from IT enabled reengineering.
Onetime savings achieved upfront	Yes. From the labor cost arbitrage and IT enabled reengineering.
Potential for upfront investment by supplier	Yes. The BPO vendor was the subsidiary of a large IT services vendor and could invest upfront.
Guaranteed long term productivity, service, quality, and cost benefits in both baseline and discovered services	Yes. The successful reengineering of task and report printing function has led to long term benefits for the mortgage bank.
Transactions based pricing models	Yes. The mortgage bank had access process work flow and control information for customer servicing

	functions that used the task and report printing IT system. This information facilitated transaction based pricing.
Gain sharing arrangements between client and BPO vendor	Yes. The mortgage bank and BPO vendor have worked out gain sharing arrangements after the successful reengineering of task and report printing function.

Table 1. Benefits Accruing to the Mortgage Bank

Risks associated with IT Enabled Process Outsourcing and Reengineering	Were these Risks Applicable for the Mortgage Bank?
No investment by senior management to complete the BPO	Mostly No. The senior management was risk averse. Initially they were skeptical with the BPO vendor wanting to reengineer the task and report printing function since they felt it would increase risk in the customer servicing processes.
Cost escalation	No. There was no escalation in rates. In fact the number of the team members of the rate lock validation process was reduced leading to cost reduction.
Internal resistance from business units	Yes. This was mitigated by getting the buy in from senior management of divisions in the mortgage bank that owned the process that were outsourced. There were no public announcements of the achievements. The benefits like decrease in cycle times and increase in productivity that accrued from the BPO were the best referrals.
Lack of sustainability of one time results	Too early to comment. It is about two and a half years since the mortgage bank started with the BPO. The vendor is confident that the results are sustainable since the teams are empowered and skilled in quality process and IT savvy to achieve the improvements in productivity and quality.

Table 2. Risks for the Mortgage Bank

The BPO vendor not only provided the mortgage bank the flexibility to ramp up operations and labor cost arbitrage but also an expertise in IT enabled process management and reengineering expertise that led to dramatic cost reduction. In the context of the mortgage bank, IT Enabled Process Management and Reengineering created a capability to manage process scale and flexible capacity, an understanding of business processes to manage costs without compromising on control. The BPO vendor provided the capability to invest in efficient IT systems (like the task and report printing system) without the mortgage bank having to bear the cost of investment up-front. These benefits fitted well with the strategy of the mortgage bank to leverage BPO for its growth to process and service larger number loans in lesser time. The BPO vendor's IT enabling expertise and its capability to invest in IT systems stemmed from the support of its parent, a leading IT services vendor. The current focus of the mortgage bank and BPO vendor today is on getting beyond steady state BPO to optimize/reengineer processes often with the help of IT interventions leading to gain sharing arrangements that is consistent with the observations of Hammer (1990). The emerging model of BPO is shown in Table 3.

	Fee-For Service BPO	**IT Enabled Process Outsourcing and Reengineering (Defined by BPO Vendors Affiliated to IT Services Vendors)**

Transitioning	Ensure process gets replicated at the vendor. Pilot projects.	
Steady State	Process outcomes as it were when performed with client but at a lower cost computed by a Full Time Equivalent (FTE) based pricing model. Cost savings driven by labor arbitrage.	
Post Steady State	As in Steady State	Continuous process improvements without investments using Six Sigma, Customer Operations Performance Center (COPC) etc. IT enabled process reengineering. Gain sharing savings from process improvements. Shift to transactions based pricing model.

Table 3. BPO: Comparison of Operating Models

Based on the case study cognitive maps of the senior managers in a typical client and BPO vendor are generated (Miles and Huberman 1994). The cognitive maps in Figures 1 and 2 display the important decision stages in BPO and IT Enabled Process Outsourcing and Reengineering.

CONCLUSION

The benefits of the emerging IT Enabled Process Outsourcing and Reengineering approach provides a perspective for enterprises to revisit outsourcing strategies given the growing importance of IT in BPO. The long term benefits of guaranteed long term productivity, service, quality, and cost benefits from IT Enabled Process Reengineering is likely to result in its increased adoption. As Peter Drucker observed,

"Information Technology forces you to organize your processes more logically…It is not the computerization that's important then, it's the discipline you have to bring to your process." (Schlender 2004)

BPO vendors will need to enhance levels of expertise in IT Enabled Process Outsourcing and Reengineering since this approach is likely to increase in importance. An expertise in this approach can become a useful differentiator for BPO vendors.

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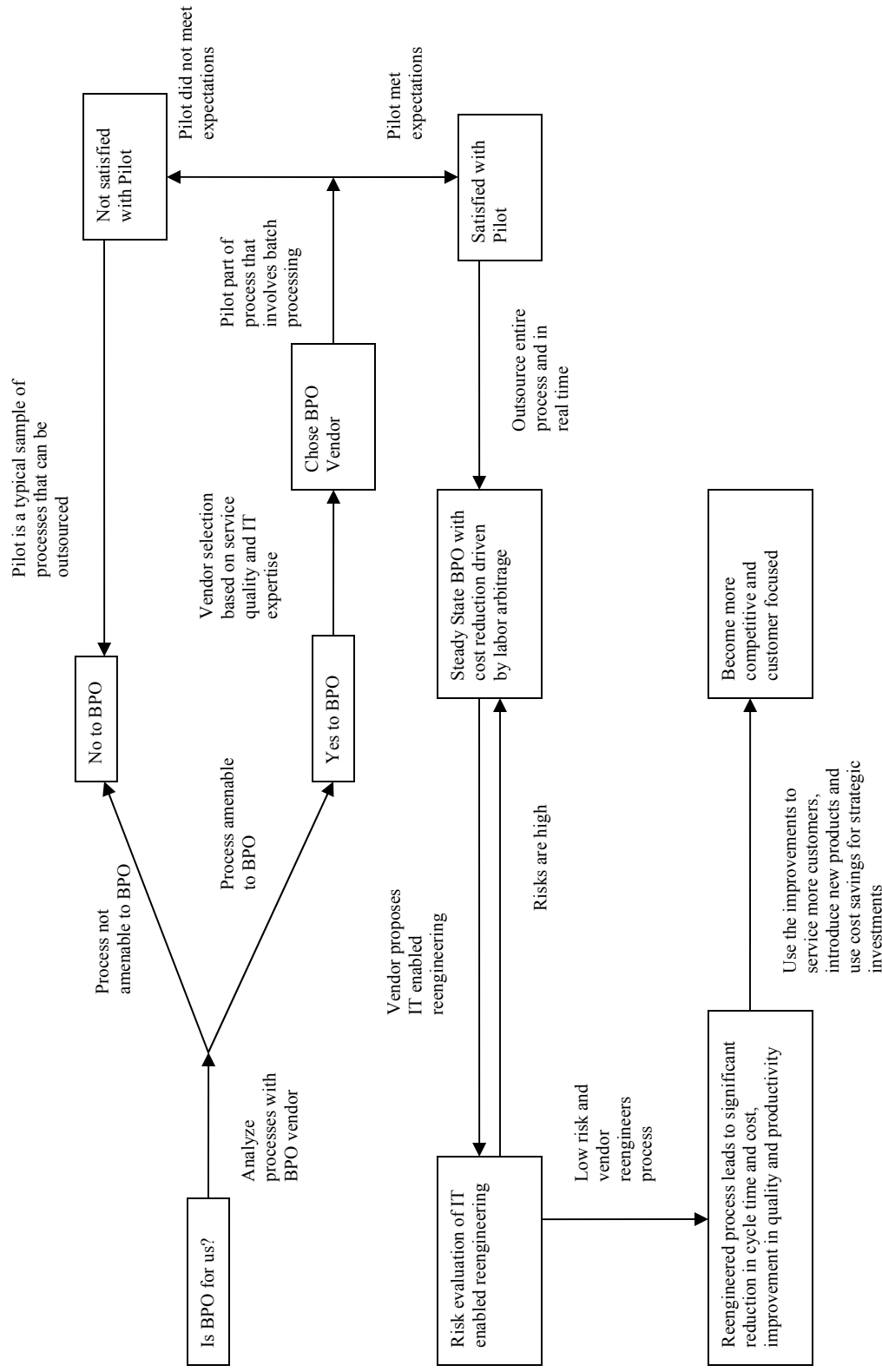I thank the reviewers and mini-track chairs for their suggestions.

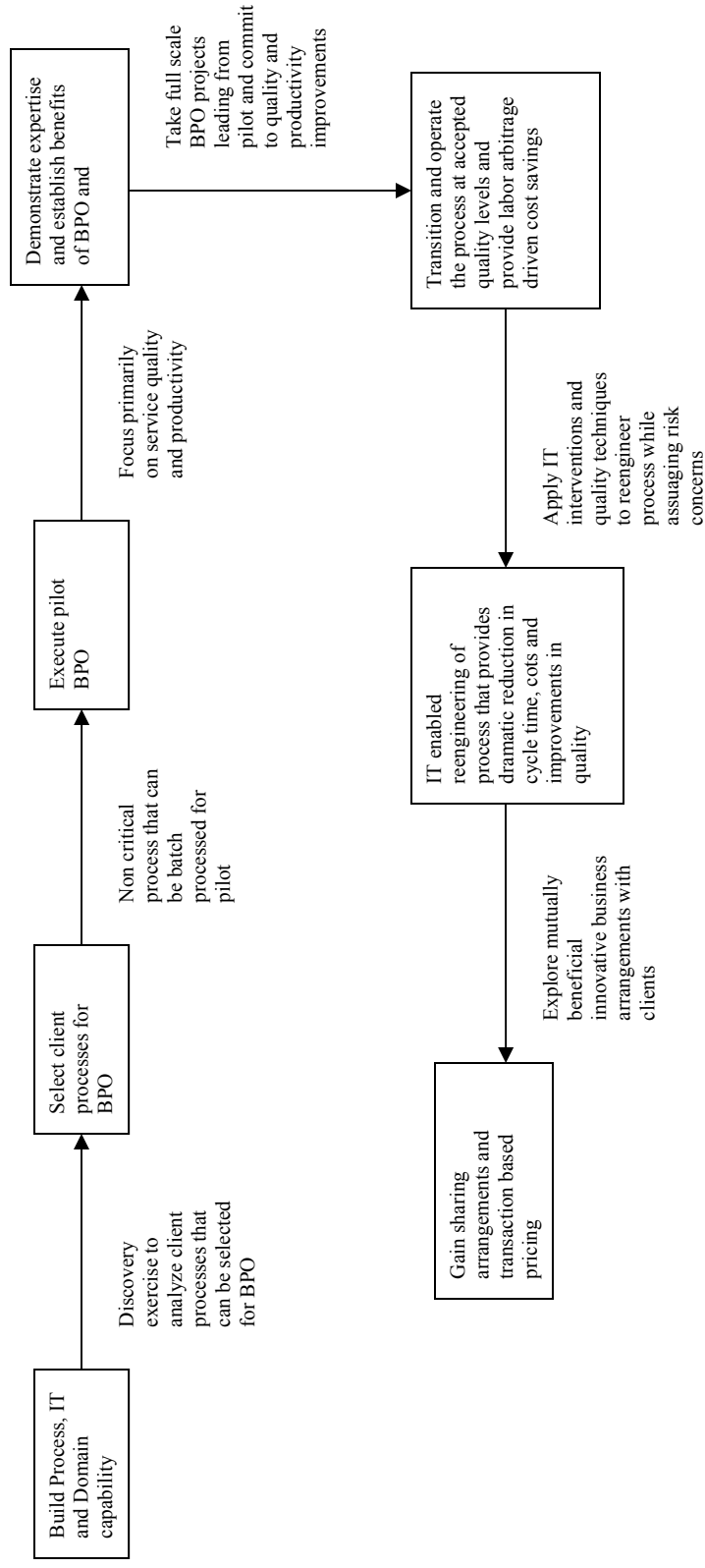**Figure 1. Cognitive Map of Senior Managers with the Mortgage Bank**

Figure 2. Cognitive Map of Senior Managers with the BPO Vendor

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