Case study

IT-enabled organizational transformation: a case study of BPR failure at TELECO

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Received March 1998; revised paper accepted for publication by Professor Ramon O’Callaghan March 1999

Abstract

This case study describes a business process reengineering (BPR) initiative undertaken by a US telecommunications company (TELECO) in response to imminent survival-threatening competitive pressures in its traditionally monopolistic market. The case study, first, highlights some of the seldom talked-about problems faced during the redesigning of business processes such as: the lack of detailed knowledge about functional areas; hidden agendas of top management; lack of knowledge of (and over-reliance on) computer-based BPR tools; poor choice of metaphors in the organizational language; and the lack of communication. Thereafter, the case study identifies critical problems faced in implementing redesigned processes. These problems include: the difficulty in creating an atmosphere of open communication; pressures against selecting IT vendors on merit; lack of awareness of the lead times associated with IT; uncoordinated implementation of HR and IT strategies; and discontinuities in the leadership. While we hope that the reader will be sensitized to the issues highlighted in the narrative and will individually derive lessons for application in familiar contexts, we nevertheless provide a discussion on three issues that, in our opinion, significantly contributed to BPR “failure” at TELECO. © 1999 Elsevier Science B.V. All rights reserved.

Keywords: Business process reengineering; Information technology; Management of information systems; Organizational transformation; Failure; Case study

The name of the telecommunications company and some minor details have been changed to disguise the identity of the organization and the informants. The contents of the case are however very real, and the case narrative has been developed based on extensive field notes and interview transcripts.

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PII: S0963-8687(99)00015-3
1. Company background

In 1993, TELECO was an independent telecommunications company with a work force of approximately 3500 employees based in a prominent US city. For over a century, it had provided telephone service to businesses and residences in the city and in the adjoining areas within a 50-mile radius of the downtown area.

1.1. The culture: monopolistic, technocentric, and territorial

TELECO’s culture was described by many organizational members as “monopolistic,” and many of the company’s practices reflected its non-competitive environment as it served a captive market. TELECO was also clearly an “engineering-driven” organization, and a technocentric approach to operations was evident from the way TELECO’s new products and services typically originated. For example, according to a sales manager, TELECO would acquire a switch from AT&T, “find out what it could do, and then try to force-feed an application to the user,” rather than find out what the customers needed and then implement a suitable technology. TELECO’s priorities were greatly influenced by the regulatory environment (e.g. The Public Utilities Commission), which provided the telecommunications company with a guaranteed client-base, but required it to measure service levels using “standard” indicators, and demonstrate high performance on the indicators in areas such as directory assistance and response to customer complaints. The resulting service measurement orientation in the company encouraged a fragmented accountability system and quick-fixes to symptoms of larger systematic problems by “throwing people” at a problem to boost service levels.

Another dysfunctional aspect of the organization was the existence of cross-functional barriers that encouraged territorial behaviors among the employees. For instance, a Vice President (VP) described difficulties arising in her area because of “finger-pointing” between the circuit designers and circuit testers. Similarly, another VP expressed concern over the “total lack of cooperation” between field-staff and the central-office staff. In his words:

There was a political wall, you might say, between the ‘inside’ folks and the ‘outside’ folks. The people outside were not allowed to come into the central office and do the work required to provide the service…

1.2. Antiquated information systems

A great deal of dissatisfaction also existed in the management ranks regarding TELECO’s information systems. There were “islands of automation” in the company, and many computer systems were unable to communicate with each other. TELECO was struggling with its legacy systems, some of which were proving to be significant barriers to responding promptly to customer inquiries and needs. A sales manager, for example, complained about the inability of the billing system to provide a detailed itemized record for any sale:

Our billing is severely limited…we could not tell you what serial numbers and which circuit pack was there on a PBX…we would have a single line on the bill
that would say “Equipment” which downstream produced a huge problem…account reps spend 80% of their time answering questions about the bill.

He added:

In the telephone company, there was never… a huge perceived need to change any of the existing systems… COBOL based mainframe type of systems… we didn’t keep up… why… because it always cost too much to keep up… alright, without us looking at the cost of not keeping up.

1.3. Changing context and anticipated organizational crisis

As long as TELECO had the guaranteed customer-base and faced no competition, the problems outlined above merely irritated the managers, employees, and customers. However, several managers at TELECO were beginning to realize that the “irritants” would have more serious consequences in the future, especially if the anticipated regulatory changes opened up the telecommunications market.

In early 1993, in light of the perceived inevitability of changes in the organization’s external environment wherein TELECO would be forced to compete with utilities, cable companies and long-distance carriers for a large portion of its business, the company’s President commissioned a five-member self-study team. This team was to take “a hard look” at the changing environment, evaluate TELECO’s cost structures and market penetration, and provide recommendations to the President. Around the end of 1993, after several months of study and deliberation, the team came to the conclusion that:

The whole telecommunications world is changing very rapidly… competitors will start to be numerous… the technology is changing in such a way that allows competitors to take away business without making gigantic investments. Our cost structures… we need to get those down to be competitive… we need to really make sure that our business is streamlined and efficient and focused on serving the customers… what we need to do is reengineer our entire company…

1.4. The reengineering decision

It was becoming apparent to the TELECO leadership that drastic changes had to be initiated and implemented with extreme urgency or else the very survival of TELECO would be in question. It was decided that an organization-wide radical change initiative was required during which the existing organization would be dissolved and all work processes would be restructured such that organizational performance in terms of speed, quality, and service (and thus, value for the customer) was significantly enhanced. Once the appropriate work processes were in place, a new organization would be built around them. Thus, the reengineering team-members at TELECO would have to redesign not only the business processes but also the organizational structures supporting the business processes.

An internationally renowned consulting company was hired and entrusted with the responsibility of leading TELECO through the steps of reengineering, which
included coaching the reengineering team and managing the schedule for activities and deliverables.

Next, the top management selected 25 “privileged” individuals from different functional areas in TELECO as members of the reengineering team. These individuals were believed to have substantial expertise/experience in multiple functions within the organization at different levels. Soon after their selection, the reengineering team-members were relieved of their normal job responsibilities, and along with the consultants, relocated to the top floor of the company building, completely isolated from the other employees. The team was then entrusted with the goal of redesigning the entire company within one calendar year—all processes, all departments, and all personnel.

2. The redesign process

The first step in the redesign phase was to divide TELECO into what appeared to be business processes and assign “process chunks” for detailed study to a sub-group in the reengineering team. As part of this information gathering effort, the reengineering team members interviewed over 1500 TELECO employees from different parts of the company within a period of one month.

2.1. The use of alienating forms of symbolism

The next step was to conduct a “problem identification root cause analysis” where the fundamental cause of problems in each process area was identified. This step also led to the isolation of some problems that could be fixed immediately. A team-member explained:

Some of the things that we found can be fixed immediately… I call it the hatchet in the head… if somebody has a hatchet in their head, pull it out… sometimes they are called quick-hits… low hanging fruit…

It was around this time of root cause analysis that some backlash started. TELECO employees resented metaphors such as “low hanging fruit,” “hatchet in the head” and “quick-hits” that were diffusing into the reengineering initiative related language, and these terms had to be hastily withdrawn. A manager who was sensitive to such “soft” issues recalled:

‘Quick hits’ was our consultants’ lingo… our employees reacted very negatively because in some situations, what we were ‘hitting’ was… people. So the terminology was changed to… ‘immediate opportunities’.

Also, the shroud of secrecy around the initiative was making TELECO employees suspicious of the intentions/agenda of the organizational leadership and the reengineering team. In the words of a reengineering team-member:

Basically what they did is to set up a group of people (away) from the rest of the organization… and a lot of what we were working on was extremely confidential in terms of the goals we were trying to achieve… and other employees would ask us
questions about things that we couldn’t really answer… because of the insider-trading, confidentiality, and all the other things that went on… so then mistrust started developing…

2.2. Clean-sheet approach?

With a growing sense of uneasiness, the reengineering team-members continued their analysis and consolidation of information gathered through interviewing—gaining a fairly detailed understanding of TELECO’s current business processes and the problems with them. Interestingly, at this point, the process re-designers\(^2\) took a “clean sheet of paper” approach and started building the “process visions” from “scratch,” rather than working on the identified problems with the existing processes. A re-designer described how he envisioned order processing in TELECO:

I guess you always start with what you know… OK… you envision someone sitting at the desk knowing everything about a customer… you envision them pointing and clicking and ordering a (telecommunications) service… and that order being placed does not have to touch anyone along the way… and the next thing you know is the happy customer at the other end because technicians are out there installing the service…

2.3. Designing IT-enabled processes without sufficiently understanding IT

As the reengineering team started redesigning the company’s processes, the potential of Information Technology (IT) in enabling more efficient work-processes became increasingly evident. Interestingly, all except one reengineering team-member had “no particular knowledge or deep understanding of IT,” and even that member (an IS Director who had the necessary expertise but was on the team as a re-designer and not as an IS consultant/advisor to other re-designers) felt uncomfortable in advising his teammates regarding the (in-) feasibility of their visions. Also, because of confidentiality issues, other IT experts could not be made available for advising the reengineering team. As a result, the team-members stated in simplistic terms what they wanted IT to accomplish in order to realize their vision. Sometimes, the role of IT was stated as plainly as:

Boy, if we could just click from here to here to here, we could be done with this much quicker…

Reflecting back on the process of redesign, a reengineering team-member said:

I wish we could have had a technology team from day-one over there (with the reengineering team) that could have consulted with the people on the capability… (and) limitations (of IT) as they created the vision… that was one of my lessons.

\(^2\) We use re-designer, process re-designer, and reengineering team-member interchangeably in this case study.
2.4. The role of computer-based BPR tools—enabling or constraining?

Members of TELECO’s top management appeared to have much faith in the use of IT tools for supporting BPR activities, and on their recommendation, the reengineering team had made extensive use of IT tools for creating and representing the redesign. Most of the team-members seemed to have a positive disposition toward the computerized BPR tools. One of them said:

We used Visio (a flowcharting software) to create all the process flowcharts… it was just fantastic… and Project (a project management software)… we really stretched its capabilities and used it to integrate plans across all the people involved… I would say that the design would not have been as effective without the use of tools.

However, one of the team members almost exploded when prodded to reflect on his experience of using BPR tools to produce the redesign documents:

The problem is, if you have a tool, you become a slave to that tool…we did more damn presentations to try and get a buy into what we were doing that we spent too much time producing those things. The business of producing and documenting was very cumbersome… we refined the hell out of this thing… and we toolsmithed it so many times, it was ridiculous!… (the plans) are only as good as how people follow them, because if there is no real dedication to plans… all the tools in the world won’t help…

2.5. Top management focus: head-count reduction and self-preservation

As the process visions started becoming more concrete, they were presented to members of TELECO’s top management including the President, the VPs, and the Directors. The top management, in turn, asked the re-designers to make cosmetic as well as substantive changes to the redesigns. From the point-of-view of re-designers, much of the design modifications mandated by the top management seemed to reflect their hidden agenda of self-preservation and downsizing rather than the espoused objectives of process orientation or the organizational values of service, quality, speed, and value-addition. One reengineering team-member, who had spent considerable time and energy in redesigning TELECO’s business processes, expressed his frustration in this regard:

…talk about political… you come back with eight processes and they say no… you got to have twelve… why?… guess what… because there are twelve people (VPs) I see on the sheet who need (process-owner) jobs…

The top management members also appeared to ignore completely the potential costs of IT and seemed obsessed with the savings from the head-count reduction expected to result from the implementation of proposed systems. One of the middle managers involved in the redesign provided a cynical account of the redesign process:

the actual practice became… reduce headcount… we know going in we need to get

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3 The expectations were considered unrealistic by the consultants as well as by many re-designers.
to a certain number (headcount)... OK... if you came in with a reengineered process and you were not meeting the number, you were asked to go back and rethink the process to meet the number... so, in other words, we started with a number... and backed into that number, and called it reengineering...

2.6. Futile attempts to prioritize an unrealistic set of IT projects

The over-reliance of the redesign team on IT was also becoming evident to some reengineering team-members, especially the IS Director, who knew about the large price tags and the long lead times that were required to make large information systems operational. As the IS director sat through the presentations of his reengineering teammates on redesigned processes and the IT required to enable them, he started getting a “sinking feeling”:

(As) I sat through this vision presentation for all the processes... I had a paper in my notebook and every-time somebody would say, ‘I want to put in a new system’ or ‘I want to make major enhancements’ I just started writing a little line. I thought I’ll just capture these five or six items. By the time I got done, I had 130 items that were entire systems projects that these people were expecting to happen to make their process come true. I took that list... and wrote a proposal and said, ‘Somebody (listen) immediately, a team needs to be formed to start interviewing these people, to say: What do you really need? What are the systems in practice? How’s that going to work? What kind of budget do you need to make this happen?... and start digging and doing at least some of the analysis... or these things are never going to happen...’

The proposal was forwarded to the VP of IS who immediately realized the gravity of the situation and created a five-member IT transition-support team. Soon after the formation of this team, its members started interviewing the reengineering team-members regarding the IT specified as part of their visions. TELECO management expected the IT transition team to make accurate projections regarding cost and time based on the interviews, virtually ignoring the transition team-members’ arguments that their analysis would be too “premature” for such projections, even after the interviews.

Reluctantly, the transition-team members used historical evidence and came up with their best guess for the cost, which was a “gigantic number”. This number clearly indicated that all the systems could not be implemented. The team therefore directed its attention toward devising some way to be able to prioritize the systems and allocate resources to them. A 3 × 3 matrix that had “criticality to vision” and “cost to implement” as its two
dimensions was designed by the transition team members, and eventually accepted by all parties concerned (see Fig. 1).

All proposed systems projects were to be mapped into one of the nine cells based on the projects’ criticality to the vision and the expected implementation costs. The cell marked “A” in Fig. 1 is clearly the “worst” cell, as projects in it have the lowest criticality to the vision and have the highest expected implementation costs associated. In contrast, the cell marked “I” is the “best” cell as projects mapped to this cell are the most critical to the vision while the implementation costs are expected to be the lowest. The transition team members proposed that systems in only the “best” three cells4 (I, F, and H) should be pursued.

In practice, dropping IS projects that were mapped in the six remaining cells (A, B, C, D, E, G) turned out to be completely unacceptable to most of the reengineering team members, since discarding those projects would mean that most of their creatively envisioned processes would not be implemented. After much negotiation, it was finally agreed that projects in the “worst” cell (A) would be discarded. Unfortunately, the problem now was coming to an agreement as to which project actually deserved to be in that cell. The redesigners would argue regarding the projects that were mapped in the “worst” cell (A): “Well, that (project) is not really there, it should move up…it’s more important.” As a result, hardly any project could be rejected at this stage.

2.7. Creating voluminous reengineering plans to which management had little commitment

Next, the reengineering team started designing the organization around the business processes that had been envisioned, staying within the head-counts approved for each process. Job descriptions were written up in detail for every position required. Thereafter, the team started working on the implementation plan that included detailed schedules for recruitment into new positions, systems delivery, training, layoffs and retirements, and highlighted the dependencies among different events or activities. This was an enormous undertaking, given the number of processes being redesigned and the number of information systems surviving elimination in an earlier step (using the 3×3 matrix discussed in the previous section).

All the work that had been done for each process was now consolidated into “process-owner binders”. The binders included a description of the processes before reengineering, problems that were found, new processes and their key characteristics, objectives of and assumptions made by the redesign team, personnel required and their job descriptions, organization structure, and, finally, implementation plans, sometimes presented as Gantt charts. While each binder was impressive in terms of its large size and elaborate use of graphics, a reengineering team-member lamented that there was “limited amount of teeth in the plan that we rolled out.”

4 Cells representing most critical and lowest cost projects, moderately critical and lowest cost projects, and most critical and moderate cost projects.
3. Implementation of the redesigned processes

With the redesign phase of the BPR initiative completed, the reengineering team-members directed their attention towards the implementation of their visions. The implementation phase, however, turned out to be more problematic than the smooth process that the team had envisaged. The problems originated in a series of different factors ranging from lack of trust and coordination to design inconsistencies, poor IT delivery, and management discontinuity.

3.1. Expecting employees whose jobs were at risk to communicate “openly”

The first step for the reengineering team was to establish lines of communication with other TELECO employees. An important aspect of the communication program was to have a “reality check” on the redesigned processes based on the feedback of people who were specialists in the tasks pertaining to those processes. Such a feedback was obtained in “quick look sessions” which were described by the facilitator (a reengineering team-member) as follows:

I would get all the people in a room... we had a technical writer there... and I would say, ‘Let’s start off with a concept of the system (for a specific process)’. … and the people said, ‘That won’t work because of this,’ or ‘That’s good,’ … and then we’d go through… how many people are we going to save?… (and they would say) ‘Oh, I don’t agree with those numbers at all… this part is OK, that part is not right’.

Some valuable feedback could be obtained during these sessions, and as a result, some of the projects changed in scope, although marginally. However, in most “quick-look sessions”, the participants hardly ever challenged the feasibility of the process or even the estimates of the number-of-heads necessary to run a process smoothly. This made the facilitator quite uncomfortable, and as he reflected, he realized that the “quick-look sessions” had not been able to serve their purpose at all. He explained:

This is how it would have felt to... those people in my session. On Monday, in the newspaper you read, ‘TELECO is going to eliminate 800 jobs’. On Wednesday, I call you to the meeting, and say, ‘Can we make these reductions... do you believe in my project?’ People were reluctant, for fear of losing their jobs, to say ‘no’. Because the backdrop they were working in was... ‘Well, if I say that we can’t do this, I am not going to be picked into a new position, and I may be one of these 800 people that gets cut’. Plus, what we had been pumping the company full of, is, ‘Stretch, go aggressive, reach for the stars, let’s break our own mind-set’... So people were trying to change their culture and say, ‘We can’t be comfortable with everything, we’ll give it a try’. They were trying to do all the things that we were asking them to do... there were a number of people in these quick-look sessions that if they would have known... that they were secure... they might have spoken up more...

The other objective of the communication program was to inform employees that the entire organization (as it existed then) would be dissolved, and current employees would have to apply anew for jobs that had been created and posted by the reengineering team.
Employees were also told about the “attractive” voluntary retirement option available for those who qualified.

3.2. IT sourcing: biased vendor selection and unclear systems specifications

In parallel, the reengineering team was involved in the selection of IT vendors who could provide the systems required to implement the visions within the scheduled dates. Standard company procedures appeared to have been followed for vendor selection, although, according to a member in the reengineering team, a majority of large contracts were preferentially awarded to TELESYS, a company owned by TELECO’s parent company. TELESYS enjoyed a good reputation overall in the software development industry but was known to have treated TELECO as a low-priority customer in the past:

They know they got a captive customer and they charge us a lot… and are slow in implementing…

In addition to the possible irregularities in vendor selection, the contract development process also appeared to be seriously flawed. Because of the large number of systems to be developed and the superficial nature of systems functionality specified by the reengineering team members, the contracts with the vendors ended up being very open-ended, thus making it difficult to make vendors accountable for their deliverables. A VP remarked:

I think the vendors were only spoken to at a high level. Had more people been involved in flushing out the systems… (the systems) would have been feasible… I think they (the vendors) were not given the complexity of the systems environment in which we operate.

3.3. Transitioning to the “new” organization with a “parking lot” strategy

The physical transition to the envisioned organization began in early 1995. Staffing for the redesigned organization was done using a “parking lot” strategy. This involved “firing” all employees from their present positions and then re-staffing the new positions by drawing from the pool of available employees (assembled in the “parking lot”).

During this entire period, the anxiety level of all organizational members, including those who had redesigned jobs, was extremely high. Everyone was worried about the possibility of not being picked for any new job and it was particularly stressful for the re-designers who had to eliminate their friends’ or (even) their own positions:

To give you an idea… in about six weeks, I lost sixteen pounds… there were many people who had nervous breakdowns during this… I basically eliminated my own position… which is a scary thought… and by the way, when you are finished, apply for a job…

The staffing process of non-management employees was perceived as being unfair and almost resulted in a major strike:

People didn’t get jobs that they wanted… there was a big meeting when all the management supervisors went in and said, “Well, I want this person in my area… I
want this person in my area,” and basically the people who didn’t get picked were put on the overflow program and either they had to find a place for themselves or they were shown the door. So that was the basis for a lot of union grievances… we had a big contract negotiation with the union… they almost went on strike.

3.4. Transitioning while carrying out responsibilities of the “old” organization

The transition from the “old” to the “new” organization did not occur on a particular cut-off date but over a period of few months, as different processes were staffed, and in some cases, as enabling IT was implemented. However, because different parts of the organization attempted to make the transition at different times, new positions within the redesigned business processes could not, in many cases, be immediately filled by employees selected5 because there was none available to take over the selected employees’ previous jobs. In the words of a reengineering team-member:

…people kind of had to continue their old stuff until they could be freed up… It’s like, I can’t leave to go to my new job until a person comes to replace me. And then that person says I can’t come to replace you until this person comes to replace me. It just kept going around like this, and nobody could move.

Consequently, the envisioned processes could not be made operational and this resulted in a kind of organizational “gridlock”. Around May 1995 the “gridlock” had been somewhat resolved through informal means and people started moving to their new roles, while also performing some of their old job-related tasks. The entire organization was described as being in a “churn” with some people leaving the organization, different groups of consultants and part-time workers coming in, and the remaining TELECO employees having to learn about their new jobs almost overnight without training or support. A manager complained about the “lack of full-time transition positions” and described this mode of transition as “building the (Boeing) 747 in flight”, wondering if such a transition was at all possible.

3.5. Inconsistencies in the redesign

Another significant problem that was becoming evident as the new organization was coming alive, was the large number of gaps in the redesigned processes, due to which unanticipated problems arose during the actual transition. A VP felt that the “holes” had arisen because “all disciplines weren’t represented” in the reengineering team, and argued that it was impossible for individuals unfamiliar with a particular business area to effectively redesign that area based on some interviews:

If I know nothing about your area of expertise, I start asking you questions, you give me answers, I can come up with a totally wrong picture…

Several incidents demonstrated the limitations of envisioning business processes

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5 Selection of employees for new positions within a process was done by its “process-owner” (a VP) in consultation with other members of the management who had already been selected for a position in that process.
without having a detailed knowledge of the process elements (e.g. tasks) and the interdependencies among them. As an illustration, the VP described the implementation of a process in which long-contested boundaries between the “outside people” (field personnel) and “inside people” (the central office employees) had been redefined for greater “effectiveness”:

The day the transition was supposed to happen… all the installers (historically ‘outside people’) who were out doing their service orders are supposed to come into the central office… to run what we call a ‘jumper’ (a wire) on our mainframe. Our mainframe is about… 200 ft long and 30 ft high. There is a ladder there along with a reel of tape. You have to make a cross-connection from the vertical part of the mainframe to the horizontal side. Before this reengineering initiative… there used to be a person in that office who did all that work for the outside people… Now all these outside people are supposed to come in the morning… there’s about 10 or 15 (‘outside’) people that all have orders due… they all try to come into the central office at the same time. There aren’t 15 places to park in the parking lot. There’s only one ladder and there’s only one reel of jumper wire on that mainframe… and there’s 15 people trying to get to it. Meanwhile the telephone is ringing off the hook, because someone downtown wants the circuit tested, nobody wants to pick up the phone because it is not for them… they got to run their jumpers…

3.6. Uncoordinated implementation of HR and IT strategies

A basic assumption of the reengineering team in justifying the head-count reduction was the availability and successful implementation of certain information systems (IS) and this was reflected in implementation plan through dependencies in the schedule. Unfortunately, during implementation, these dependencies were not respected, primarily due to pressure from the top management. For example one of the systems that was proposed—an enhanced billing system, when implemented, was expected to make about 50 customer service representatives redundant. The original plan documented in the process-owner binder clearly recognized the fact that the 50 employees would lose their positions only after the new billing system was implemented. However, on the scheduled date of billing system implementation (as per original plan), the HR department, fuelled by top management insistence on adherence to the original downsizing plan, laid off 50 customer service representatives, even though the new billing system was still in its early phase of design. This led to a disastrous situation where there were very few customer service agents available to serve the entire customer base using the old billing system, resulting in a rapid deterioration of service. To add to this problem, the number of employees who chose to retire far exceeded the company’s estimate (and desired number) of voluntary retirees and, as a result, left the company severely depleted of experienced human resources. Part of this problem had arisen because the TELECO management and the HR specialists, in an

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6 After the “outside people” had done the necessary installations in the field, they were expected to make this “cross connection” (which is referred to as “running the jumper”) in order to complete an order. Prior to reengineering implementation, an “inside person” was responsible for “running the jumpers” for all the “outside people”.
effort to pacify the union and to offer a “humane” way to downsize, had created a retirement package that was too attractive for the qualifying employees to “resist”.

3.7. Major systems not delivered on time by vendors or the in-house IS department

Most organizational members, including the process-owners (VPs), were attributing the “debacle” during implementation to the non-delivery of IT by the vendors. Only a handful of systems, most of them involving minor in-house enhancements of existing systems, had been successfully implemented. Many of the large systems that were expected to contribute substantially to the downsizing goals were in the analysis, or at best, in the design phase, around their scheduled delivery dates. Reflecting on the problems during implementation, a process owner explained:

…a lot of the restructure or redesign was dependent on the major systems… coming to fruition. We have found that almost every single one of those are well behind schedule. Either they were too big, not well thought out enough… all required much more homework and analysis to really arrive at… or to be able to implement than we anticipated… You need a lot of homework, I think, in the IT area. Either we as a company have a dismal track record… of implementing solutions, or everybody promises that yeah, I have got this, or we can do this, but when it really comes down to delivering, you don’t get what you expected and it takes longer and costs more.

A reengineering team-member felt that TELECO had completely under-estimated the importance of IT in the reengineered organization:

IT plays a huge, huge role in organizations… systems can make or break an entire company.

The IS Director felt that lack of appropriate technological infrastructure explained a lot of delays and problems in implementation:

…some areas that we did have infrastructure in place and those were the areas where we tended to be more successful in our execution. The areas where we tended to be less successful is where we were trying to forge that infrastructure… we were forging new grounds, putting tools we had never worked with… (resulting in) delay, frustration…

Many of the projects requiring the extension of older mainframe applications had been completed within the deadline due to TELECO’s existing infrastructure and expertise in mainframe programming. Similarly, because of the penetration of networked personal computers into the top layers of management, projects concerned with making corporate reference documents available on-line for all employees or with electronic delivery of documents at different levels of the organization, could be implemented without significant difficulties and were on schedule. Projects, based on the three-tier client–server architecture, with which TELECO had had no experience in the past, however, proved to be a more formidable challenge, and, consequently, were significantly behind schedule.
3.8. Leadership discontinuity

A major change in TELECO’s leadership at this time further worsened the personnel problem. The President who was the sponsor of the reengineering/downsizing initiative retired around this time (early 1996) and a new President who believed more in growth and expansion than in downsizing assumed control of the organization. Also around this time, the top management realized that some of the assumptions on which the reengineering initiative was based had not really materialized. Competition had not arrived and, in fact, some of the potential competitors had announced that they were not interested in entering TELECO’s market. In addition, other high growth markets such as direct TV and internet services had opened up, and led by the new President’s enthusiasm for growth, TELECO had entered these markets aggressively and with great success.

4. Declaring BPR “a failure”

With the changes occurring in the environment and in the leadership, there was much speculation regarding the fate of the reengineering initiative. A VP explained that the new President would support the reengineering plan to the extent that it would allow TELECO to “fuel the growth plans that he wanted for the business”. Another VP said that, given the facts that the competition had not arrived and that TELECO had experienced such rapid growth, he would say that the reorganization initiative as planned by the reengineering team had been “outlived” but not “abandoned”. He also added that the reengineering team should not be blamed for all the problems encountered during the BPR initiative:

I think the reengineering process was based on perfect conditions or utopia, that really doesn’t exist or never will exist… (but) they (the members of the reengineering team) weren’t so far off that things were a disaster. They were on target except that they didn’t hit the bull’s eye, because of certain assumptions that did not materialize… hindsight would say you do things differently, but hindsight wasn’t available… I could sit here and play Monday morning quarterback, they should have done this, they should have done that, but they simply didn’t know. There were some areas that they missed, but there were no ship sinkers out there.

Around the middle of 1996, the new president of the company delivered the final blow to the reengineering initiative in a company-wide meeting, where he spoke about TELECO’s current state of affairs and future directions. After attending the meeting, many reengineering team-members were convinced that the BPR initiative was “over”. According to one of them, the terms such as “not abandoned” and “outlived” that were being used in the company to describe the state of the BPR initiative were merely “euphemisms,” and in his opinion:

The president basically said… ‘No more anything on this reengineering project. We are no more doing anything that process-owner binder says’… pointing out that this initiative is a failure… it worked to get people off the payroll and that’s about it…
5. Discussion

So, what can we learn from the startling course of events at TELECO? Clearly, there are many different lessons that can be learned from the case study, and we encourage readers to derive the lessons that appear to be most applicable for their own contexts. The important thing is that we try to learn from our failures as well as our successes, and understand that success and failure will be interpreted by different stakeholders in different ways (Pettigrew, 1998). In this section, we discuss the three fundamental issues that, we believe, had a significant influence on the process and outcome of TELECO’s BPR initiative — top management leadership, communication, and IT knowledge and management. In this discussion, we briefly review the literature on each issue, and use aspects of the TELECO case study to refine the relevant body of knowledge. We then summarize the essential elements of our knowledge on each issue in the form of diagnostic questions.

5.1. Top management leadership

The existing BPR literature has recognized the critical role of leadership in BPR initiatives. For example, Hammer and Champy (1993, p. 107) state that “most reengineering failures stem from the breakdowns in leadership”. The importance of leadership is further highlighted in one of the “morals” of reengineering (Hammer and Stanton, 1995, p. 23):

If you proceed to reengineer without proper leadership, you are making a fatal mistake. If your leadership is nominal rather than serious, and isn’t prepared to make the commitment, your efforts are doomed to fail.

Top management must formulate and communicate the vision for the reengineered organization, and through their transformative leadership, create a sense of mission among organizational members (Carr and Johansson, 1995; Hammer and Champy, 1993). Based on their detailed case study of a BPR initiative at CIGNA, Caron et al. (1994, p. 247) have also observed that for successful radical change, members of the senior management must be committed to the initiative, and must demonstrate their commitment “by being visibly involved with the project”. Finally, the top management must view their organization not merely as an economic entity whose health can be judged based on quarterly financial reports (Carr and Johansson, 1995), but as a social system, which consists of individuals trying to cope with the sweeping changes in their lives due to BPR and the potential for low morale in their work-place as a result (Hammer and Champy, 1993; Hammer and Stanton, 1995). An implication of viewing the organization as a social system is that managers need to make careful use of “signals” (clear and explicit messages), “symbols” (actions that indirectly reinforce the signals) and “reward systems” to manage the reengineering process (Hammer and Champy, 1993, pp. 105–106).

The TELECO case study provides considerable support for the kind of guidance given in the literature. Throughout the life of the reengineering project at TELECO, top management commitment and sincerity was not in evidence. Initially, the president, it appears, wanted to implement downsizing, while publicly espousing ideas of process-oriented organization and notions of cost, service, speed and value. Also, the role of top management was very “hands-off” during the redesign as well as during the implementation
phases, and this was evident from the over-reliance on consultants and the nature of feedback received by re-designers regarding their process visions. Almost all the feedback was related to increasing the number of people who could be eliminated from the new processes. In one instance, the feedback was related to ensuring that the number of process owners in the final redesign should be the same as the number of Vice Presidents, thereby revealing the self-centeredness and insincerity of top management to the reengineering team-members. Commitment to downsizing and not to the espoused goals of reengineering was again evident when the HR department was instructed to eliminate people from the organization as scheduled, even though the new IT-enabled process could not be implemented. Sadly, few members of the top management team took the opportunity to signal or symbolically express concern for the suffering being experienced by organizational members, who were describing themselves as “dying here in the trenches”. Finally, during the “traumatic” transition period, the President who had initiated the project retired, and was replaced by a President who believed in growth rather than in downsizing through reengineering, resulting in discontinuity in leadership and in the strategic direction of the organization. This sudden change in focus was seen by TELECO employees as a symbol suggesting that all their suffering had been in vain. Reflecting on the entire project, a process owner (VP) as well as a reengineering team-member mentioned that, throughout the reengineering initiative, the top management team had not communicated a consistent message to the employees, and much of the confusion and lack of commitment in the organization was a result of the management’s contradicting signals and symbols.

The failings of TELECO’s top management in: (a) establishing and communicating a vision clearly; (b) participating actively in the redesign and implementation phases; (c) empathizing with reengineering team-members or organizational members; (d) using consistent signals and symbols regarding the goals of the redesign to the reengineering team members; (e) showing commitment to the reengineering plans by respecting the dependencies between the IS and HR plans; and (f) maintaining a continuity in the management team as well as the strategic direction of the organization, all contributed to the failure of the BPR initiative. Based on a synthesis of the existing literature and our observations at TELECO regarding leadership, we propose the following diagnostic questions for organizations embarking on a radical change initiative.

- Do the members of the top management team have a clear vision for the organization after the radical change, or are they merely reacting to market forces by choosing the “easy path” of downsizing (using the rhetoric of BPR to legitimate their short-term easy fix)?
- Are the members of the top management in-touch with the human organization that they manage or do they merely view their organization in terms of revenue, cost or profitability numbers?
- Are the top-level managers willing to be closely involved in the formulation of the redesign and implementation plans, and thereafter be committed to the plans? Or are they inclined to delegate all the responsibilities to a team of middle managers and consultants, whose plans can be changed at their (i.e. the top managers’) whims?
- Is there likely to be a continuity/stability in the leadership while the radical change initiative is in progress?
Finally, should conditions necessitating the radical change initiative no longer hold true, does the top management team have contingency plans for easing the organization toward a different strategic direction?

5.2. Communication

Communication is seen as a central organizational issue by a number of authors. Hammer and Stanton (1995, pp. 136,151) see the importance of communication or selling change “over and above all their other challenges”. They identify impediments to communication such as “false familiarity, disbelief, fear of layoffs” and propose “Ten Principles of Reengineering Communications”:

1. Segment the audience.
2. Use multiple channels.
3. Use multiple voices.
4. Be clear.
5. Communicate, communicate, communicate.
6. Honesty is the only policy.
7. Use emotion, not just logic.
8. Heal, console, encourage.
9. Make the message tangible.
10. Listen, listen, listen.

Carr and Johansson (1995, p. 31) also emphasize the importance of communication in BPR implementation in their list of 16 best practices. They state: “Communicate effectively to create a buy-in. Then communicate more”. On similar lines, Caron et al. (1994, p. 248) advise BPR practitioners to communicate “truthfully, broadly and via multiple forums”. Davenport (1993, p. 191) provides similar guidance when he states:

…a concerted effort must be made to communicate throughout the change program and to build commitment to the new design… Communication and commitment building must occur at all levels and for all types of audiences… regular communication must be established between the executive and process innovation teams and those who will be affected by the new process. Sensitive issues, such as level and type of personnel reductions to result from the initiative, must be addressed honestly and openly.

Problems in TELECO’s communication strategy are apparent from the very beginning of the initiative, and the guidelines regarding communication in the BPR literature have clearly not been utilized in this initiative. The early stages of TELECO’s reengineering initiative was shrouded in secrecy and this resulted in the development of considerable ill-feeling and mistrust among employees. There were few (if any) attempts to address concerns and fears of employees and thereby gain back their trust. The offensive metaphors in the reengineering language (such as “quick-hits,” “low hanging fruit,”, and pulling out the “hatchet in the head”) further widened the rift between the employees and the reengineering team as well as the management. During the implementation phase, there appeared to have been a genuine attempt made by some reengineering team-members to
get feedback regarding the redesigns from the other organizational members through “quick-look sessions”. Unfortunately, participants of these sessions did not feel comfortable in sharing their honest views regarding the redesigns, perhaps, due to fear of losing jobs or the lack of trust, or both. There was more communication initiated later during implementation, with special information sessions conducted to explain “what the (new) jobs are going to entail, and how the process was supposed to work, and things like that”. In addition, there were sessions where reengineering team members or “open” members of the management invited input from employees about the impacts of the initiative and ways to address potential difficulties. Regretfully, there was hardly any action taken to reflect that the employees’ inputs had been understood and valued. A marketing executive explained:

…I don’t think there was a good feedback loop… they heard all the things… we’re dying here in the trenches, things are going wrong and people are losing orders and everything is falling apart on us, things are not coming together like we need them to. And all the input went above or somewhere and we never heard anything… well, how are you fixing it, how is anything changed? I think everyone feels like they are dying and struggling… it’s really hard on the morale too…

To summarize, while there was some sharing of information after the initial phases of the reengineering, communication at TELECO was rarely directed towards building trust and mutual understanding. Communication was unilaterally initiated by the management/reengineering team-members when they needed information or needed to share information; communication was discontinued when there was no such need, in their view. Based on our understanding of the literature as well as the events at TELECO, we propose the following diagnostic questions regarding communication for organizations undertaking a radical change initiative.

- Does the organization have well thought-out plans for communicating with the employees throughout the life of the initiative?
- Is the communication merely intended to share information unidirectionally or is it to promote mutual understanding and trust between the management and the employees?
- Is there an open communication directed towards promoting mutual understanding among the reengineering team-members, and between the members of the top management and the reengineering team, or are there likely to be serious distortions in their communication due to power differences and conflicting self-interests?
- Finally, are the metaphors in the organizational language carefully controlled to ensure that they do not lead to the breakdown of communication and trust among the different stakeholder groups?

5.3. IT knowledge and management

Last, but certainly not the least, is the issue of adequate knowledge of IT and the adoption of appropriate IT management principles. Many authors appear to share the belief that IT is one of the key enablers of BPR (Davenport, 1993; Manganelli and Klein, 1996; Sethi and King, 1998). A number of authors have discussed the capabilities
of IT and attempted to explain how reengineering team-members can take advantage of IT in enabling more efficient and effective business processes. For example, Lucas and Baroudi (1994) have provided a set of new organizational design variables enabled by IT pertaining primarily to the structure and to the work processes within organizations. Davenport (1993) has categorized the different ways in which IT can change organizations as automational, informational, tracking, analytical, capturing, sharing and distributing intellectual assets, sequential, integrative, geographical and disintermediation, and has also provided a description of a number of generic technologies useful in enabling new processes. Hammer and Champy (1993) have argued for the need for “inductive thinking” in harnessing the “disruptive power” of IT in order to break old rules that limit the potential of business processes. Grover et al. (1995) have described how IT may be used to increase the functional coupling among elements of a process. Stoddard and Jarvenpaa (1995) have highlighted the importance of IT infrastructure as an enabler if present or inhibitor if absent or deficient. Finally, a number of authors have enumerated the advantages of using IT-based BPR tools (Davenport, 1993; Klein, 1998; Kettinger et al., 1997), and recommended their adoption by redesign teams.

Examination of the TELECO situation in conjunction with the existing body of knowledge on BPR-related IT issues seems to suggest that a number of IT-related issues at TELECO have not been prominently addressed in the BPR literature. This seems somewhat ironical, given the prominence of IS researchers/practitioners in the BPR community, and the widely acknowledged importance of IT in enabling and implementing BPR (Land, 1996). One of the main problems during redesign at TELECO was that the re-designers did not have an adequate understanding of the capabilities and limitations of process-enabling technologies, and there was no organizational mechanism in place for them to improve their understanding. This lack of understanding of IT, consequently, led to unrealistic process redesigns that relied on under-specified systems that were extremely complex and, in some cases, not feasible. BPR tools that were used in the redesign process also appeared to have had both positive and negative effects on the redesign effectiveness, and this observation is at odds with the existing literature that unequivocally portrays tools as having positive influence on redesign effectiveness. Outsourcing contracts with vague systems specifications were awarded preferentially to a “sister organization,” and not managed carefully to ensure on-budget and on-time delivery. IT infrastructure was not adequately planned for and implemented to enable a smooth transition to the new systems. Finally, IS management and personnel appeared to have lacked the importance or credibility to convince top management regarding the need to respect the dependencies between the IS and HR strategies. Again, based on our observations in TELECO, we propose the following diagnostic questions addressing the IT knowledge and management issue:

- Is there a sufficient level of understanding among the reengineering team-members regarding the capabilities and limitations of a broad range of process-enabling information technology (IT) options?
- Is there an appreciation among the reengineering team-members as well as the organization’s top management of the complexities, lead-times, and costs associated with the development and implementation of IT required to enable the redesigned processes?
• Are there formal or informal organizational mechanisms in place that can enable redesigners to educate themselves in areas (both functional and technological) where they may be deficient?
• Do formal organizational procedures and standards with respect to outsourcing of systems development and managing vendor contracts exist, and are they followed during the initiative?
• Does the organization possess the necessary IT infrastructure for the smooth adoption of the new systems?
• Is there an alignment between the overall organizational strategy\(^7\) and the IT strategy, and between the IT strategy and the strategies of other functional areas (e.g. Human Resources)? Does the IS management have the credibility to advise or convince top management regarding the need to align the efforts of different functions towards the achievement of organizational goals?
• Is there some understanding among the re-designers/management regarding the circumstances and the extent of use of computerized BPR tools (for flowcharting, simulation, project management, etc.) that is actually helpful in creating effective process redesigns?

6. Conclusion

We reiterate that managing a reengineering initiative is extremely complex and difficult, and there is (and can be) no guaranteed path to success (Sauer et al., 1997; Galliers and Baets, 1998). An in-depth understanding of the process of IT-enabled radical change and important factors that influence the process can however help in anticipating problems and initiating action to mitigate or avoid them. We believe that this paper makes two significant contributions in this regard. First, it sensitizes readers to issues that can prove to be critical to the outcome of a BPR initiative, and this sensitivity is likely to help readers recognize problems arising from those issues in their own contexts, and take timely action. Second, the in-depth documentation of events at TELECO provides the BPR and IS communities with an opportunity to revisit, reevaluate, relearn, and reconsolidate knowledge regarding BPR and IT management. We have attempted to consolidate the knowledge on three key issues in the form of questions that organizations can use to examine their preparedness for undertaking BPR. While the diagnostic questions proposed are neither comprehensive nor universally applicable, they provide a useful set of pointers for organizations seeking to avert a disaster in their IT-enabled radical change initiatives similar to the one experienced at TELECO.

Acknowledgements

The authors would like to thank J. Dean, A. Raturi, J. McKinney, S. Sahay, R. Dharwadkar, R. Grewal, N. Surendra and S.T. Sarker for their help during the project.

\(^7\) In formulation as well as in implementation.
and the TELECO employees for sharing their insights. The constructive input of the case studies editor, Ramon O’Callaghan, is also gratefully acknowledged.

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