Improving the return on IT investment: the productivity paradox

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Abstract

Over the past four decades, information technology (IT) has had a profound effect on the US economy, resulting in a shift from a manufacturing to an information economy. This effect, however, has also produced what may be labeled the paradox of IT productivity. While the percentage of a firm’s budget spent on IT continues to increase, there is increasing evidence that firms fail to obtain the benefits of these expenditures within the anticipated time frame. The reason for delays in obtaining the benefits is due to management’s failure to strategically leverage the full potential of IT and their failure to overcome resistance to change. These problems are discussed in depth and solutions for them are suggested. © 2000 Elsevier Science Ltd. All rights reserved.

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1. Introduction

Over the past four decades, revolutionary changes have buffeted the US economy. We have moved from an economy dominated by manufacturing industries to one dominated by service industries, from an economy leveraging physical and financial resources to one leveraging human and intellectual resources. Where we once sought organizational efficiency through precisely circumscribed job descriptions and corporate autonomy, we now seek efficiencies through cross-functional teams and alliances.

Although these and related changes can be attributed to such macro forces as global competition and socio-cultural shifts, perhaps the most pronounced force creating these changes is information...
technology (IT). IT now permeates every segment of business and one can safely say that without the IT developments of the past 40 years, few of the changes we have witnessed would have come to pass. Moreover, the economic revolution may be in its earliest stages. New information technologies are continuously introduced, providing opportunities for firms to change what they do, where, when, and how they do it, and the alliances they develop to help them do it.

Although costs for information storage, processing and communication are decreasing at astounding rates, firms continue to devote ever-increasing resource to IT. Studies suggest that IT expenditures account for as much as 9% of revenues in some industries (Rayner, 1995) or 5% or more of a firm’s capital stock (Brynjolfsson & Hitt, 1995). Both the rise in importance and cost of IT highlight an intriguing paradox: firms often fail to take advantage of the full potential and opportunities these investments could engender and if and when they do realize financial returns, those returns appear later rather than sooner.

Each new IT investment should enable a firm to become more efficient and or effective; yet, frequently, few of the anticipated benefits are obtained within the projected time frame. In fact, in many instances, anticipated benefits fail to materialize until many years after a firm introduces a new IT application. IT investments, by their very nature, must be accompanied by careful redesign and/or restructuring of the organization to obtain many of the anticipated benefits of the investment. Yet, time and again, organizations fail to redesign and restructure their business in ways that best utilize these new resources. This paradox has held true for all the major IT innovations since the advent of the computer: from simple transaction processing systems to database management systems and office systems, to the new generation of applications spawned by the rapid development of the Internet.

As an example, let us look at the banking industry and their adoption of the automated teller machine (ATM). From their introduction in 1971, ATMs were viewed as the first step in bringing high-tech banking to customers. However, simply making ATMs available to one’s customers did not produce many of the potential benefits that could have been obtained from ATM deployment. To obtain the maximum benefits from ATM deployment, banks had to abandon internal structures that were based upon accounts, to structures that focused on the customer.

Furthermore, they had to change the way they thought about customer service — from a belief that more branches translated into better service, to finding combinations of ATMs and branches that provided the best service. It took banks between 10 and 20 years to make these changes; in fact, some banks still are in the process of making the changes necessary to fully leverage the potential of ATM networks. Similar scenarios have been played out in every industry, with each new IT application, from the very first attempts to automate transaction processing to more recent attempts to automate offices.

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1 Information technologies are a “general purpose technology”. They can make radically new production methods possible when combined with complementary investments (Bresnahan & Trajtenberg, 1995; Malone & Rockart, 1991). David (1990) has compared the current computerization of the economy to the historical example of electrification 100 years earlier by noting that new ways to organize work are required to exploit new general-purpose technologies.

2 Banks were organized around the types of accounts provided to customers, such as savings accounts, checking accounts, mortgages, other loans, investments, etc. Through the early 1980s banks typically sent separate statements to customers for savings, checking, mortgage, and other loan accounts.
The paradox of IT productivity is that even though organizations invest in the latest technology to increase efficiencies and profits, failure to redesign and reorganize delays the return on that investment. In this paper, we analyze this paradox and highlight its underlying causes. We then suggest strategies that firms may employ to prevent the paradox thereby improving the return on IT investments.

2. Irrational application of rational technology: underlying causes

There are many reasons why this paradox has a rich history and an apparently unfettered future. For purposes of parsimony these causes may be subsumed under two broad categories: (a) failure in strategic thinking, and (b) failure of senior management to overcome resistance to change.

2.1. Failure in strategic thinking

The essence of strategy is to formulate plans that maximize opportunities while minimizing threats. It is an exercise in “what-if” thinking. Unfortunately, the deployment of many IT applications as an example of “now-what?” thinking. Improving the status quo rather than creating a vision of the future is the dominant corporate mind set.

Firms typically design and use new IT applications to improve what is currently done, by doing it in a more efficient manner, rather than thinking about these applications as opportunities to reengineer and/or redefine the organization. Instead of thinking of an investment in ATMs as an opportunity to provide customers with the same service, at a lower cost, banks should have been thinking of opportunities that this technology provided to increase the scale and scope of their business. Bank executives were asking “now-what?” questions instead of “what-if” questions.

For example, they might have asked the following questions:

- How might ATMs change our definition of service, customers, and markets?
- What effect will ATMs have on our current strategy? Should we reformulate that strategy?
- Does this technology change the rules in our industry? For example, does it have a major impact on one or more of Porter’s (1985) five competitive forces? How will our customer base change? Who is likely to enter the industry? How might relationships with our vendors change?
- How can ATMs enable us to reengineer the organization to better attain our goals or pursue our strategy?

An emphasis on IT to improve current efficiencies assumes that the future will be the same, only more so. Firms operating from this perspective strive to do the same things only do them faster and cheaper. To use a metaphor suggested by Porter (Suriwiecki, 1999), they try to increase their speed in the race they have entered rather than questioning whether they have entered the right race. However, in order to thrive in a competitive world, firms must see their futures as significantly different than the present because technology provides opportunities which never existed before. The firms featured as stars in tomorrow’s business magazines will be those that use technology to create what could be and what might be, not those that improve what is. These firms will be comprised of senior managers whose worldview implicitly incorporates the threat posed by the IT paradox.
2.1.1. Worldviews of senior versus IT managers

Both the empirical and anecdotal literature suggest the root cause for the impediment to deploying IT strategically: senior management’s failure to view IT as little more than an efficiency tool rather than a catalyst for change. Moreover, they tend to see technology as the domain of IT professionals and never develop psychological ownership of that technology. Although senior managers perceive IT as a resource, they perceive it as qualitatively different than resources such as time, money, equipment, labor, and materials. The latter comprise a set which senior managers intuitively understand. They implicitly understand the relationship between these resources and productivity. For most senior managers, however, IT is a resource understood only through the efforts of an IT professional who serves as translator and coach. By distancing themselves from the technology and viewing it only as a tool rather than a pivotal resource, senior managers often fail to probe the strategic implications of how that technology will necessarily affect internal operating decisions and external marketing decisions.

Yet senior managers are the only ones who are in a position to make the structural and strategic decisions necessary to take full advantage of the technology and who have the macro level view of the organization to see how the technology can best be utilized. Although IT personnel often drive new application development and may prompt senior managers to think about IT strategically, they often lack the necessary business perspective and must therefore resort to “efficiency”-driven products.

The differing worldviews of senior managers versus IT professionals underscores another reason for the failure in strategic thinking: typically there are no individuals in the organization who have all the necessary knowledge to make the best decisions regarding IT deployment. To develop applications that yield full value from these investments requires individuals who possess two types of knowledge: organizational knowledge and technical knowledge. The former refers to information about the organization; the latter refers to knowledge that enables one to know what the technology can create at a reasonable cost. Organizational knowledge necessarily includes knowing the answers to such questions as: Where is the organization headed? What are the internal control mechanisms? What are the internal coordination mechanisms? How is our market changing? Which of our product lines are most vulnerable to changes in demographics, economic forces, or geo-political forces? What do we do well? What do we do poorly?

Technical knowledge necessarily includes knowing answers to a different set of questions: What can be done with the technology? What will it cost? What are the technical risks? How difficult will it be for competitors to emulate what you may do and what will it cost them? Are there likely to be standards set in the future that will affect this application? If so, will we be able to influence the standards? Few if any individuals in an organization possess the requisite knowledge to intelligently answer both sets of questions.

Suggestions for new IT applications are typically brought forth by individuals who possess one or the other type of knowledge. When functional managers suggest applications, they do so from a perspective of organizational knowledge, not technical knowledge. In such circumstances, the applications typically address problems and opportunities that can be served by tried and true technologies but fail to take advantage of many technology resources that may already be available within the firm. Because functional managers are unaware of the capabilities of newer technologies and of the technological resources that are available, it is unlikely that capabilities provided by new IT innovations will be driving the firm’s strategy, even though this is the best way to execute
strategy. The consequence is that the applications suggested serve to do what is currently done in a more efficient manner. Thus, the stage has been set for “now-what?” versus “what-if?” thinking.

Conversely, when IT managers suggest applications, they do so with little or poor organizational knowledge. As a result, they too suggest applications that will do what is currently done in a more efficient manner. This is not to say that the reengineering necessary to take full advantage of a technology does not occur. It does; but it takes far longer than necessary. Eventually, functional managers learn what they can do with the new technology and take the steps necessary to make best use of that technology. But the process takes far longer than it should and in a competitive environment, far longer than many firms can tolerate.

Failure to strategically leverage the potential of IT explains only part of the IT paradox. The other major contributing factor is senior management’s inability to overcome the resistance to change created whenever IT is initially introduced or when managers migrate from one system to another.

2.2. Senior management and resistance to change

In probing and clarifying the paradox of IT productivity we necessarily focus on the forces inhibiting change generally and IT deployment specifically. Since the seminal work of Lewin (1951) almost 50 years ago, researchers and practitioners have been intrigued by the forces accounting for managerial resistance to change and interventions for overcoming it. In fact, organizational change and resistance to it are arguably among the most extensively researched topics in all of organizational behavior literature. What can we deduce from this voluminous literature to help us understand the IT paradox?

Rather than amplify the classical resisting forces such as vested interest, fear of the future, and adherence to the status quo, our answer to this question is built upon a series of premises which themselves suggest a paradox. The five premises are as follows: (1) IT represents a major corporate investment, an investment which necessarily commands senior manager’s attention; (2) senior managers are ultimately accountable for producing a return on that investment; (3) senior managers would not be senior managers if they were oblivious to the personal, political, and bureaucratic forces inhibiting change; (4) over the years, they have witnessed many change efforts, some in which they were active participants, other in which they were interested bystanders; and (5) they ascended the hierarchy through their ability to champion change and overcome resistance to it.

If our assumptions of senior managers are accurate, we are left with an intriguing paradox. Why do apparently organizationally savvy senior managers have such difficulty in overcoming the forces which inevitably delay the return on a highly visible, consequential IT investment, a return for which they are ultimately accountable? We suggest two possible answers to this question, answers which underscore the dynamics of psychological denial.

2.2.1. Senior managers may publicly espouse change yet personally and covertly resist it

Scanning the literature for prescriptions on implementing systemic, organizational change results in the unequivocal conclusion that top management must support the change. However, the more subtle and perhaps more accurate prescription is that upper management must not sabotage the change effort. In short, senior management’s overt support of IT may simply provide a subterfuge for covert sabotage.
Once the decision to employ IT has been reached and funds committed, only the most naïve and self-destructive executive would publicly resist and rally support for that resistance. Moreover, given the five premises articulated above, we would expect that senior managers are those, whose covert resistance is precisely that — i.e. covert. Yet to the extent such resistance is present, it will be manifested in subtle ploys where sabotage will leave no “finger prints”.

For example, senior managers could delay and or extend the projected implementation period erring on the side of “making sure everyone is on board”. Although this tactic makes sense from a consensus and team building perspective, and may generate considerable team support, it may jeopardize the firm’s competitive position in the market. Or consider the manager who historically receives a periodic tracking report but will not receive it under the new, reengineered process. Even though the report will have no effect on the overall performance of the firm, the manager may require system designers to add a superfluous and hence costly program features for the sole purpose of generating that report. Finally, consider the senior manager who publicly supports IT yet steadfastly refuses to acquire computer skills and requires a subordinate to act as a personal E-mail agent.

The covert resistance may not even be conscious and purposeful. In other words, the senior manager may honestly believe he is supporting IT deployment yet unconsciously creates barriers preventing that deployment. Support for the public commitment versus unconscious resistance interpretation is found in the provocative work exploring senior management behavior which is both self and organizationally destructive. In a corpus of theoretical work, Argyris (1985, 1991, 1994), develops the thesis that successful senior managers often unconsciously sabotage the efforts they publicly endorse.

Consider his example of the highly popular management practice of empowerment. According to Argyris, managers and the change programs they support often undermine the empowerment they so desperately want to achieve. Why does this occur? “Could it be that today’s top-level managers don’t truly want empowered employees? In truth they are probably unsure (Argyris, 1998, p. 103)”. Could it be that today’s top-level managers don’t truly want to strategically implement IT? As is the case with empowerment, “they are probably unsure”. The reasons they are unsure may be found in our second explanation of senior management resistance.

2.2.2. Senior managers fail to thoroughly account for the psychological costs created by IT, both the costs to them personally and the costs to their subordinates

Based upon our experience as consultants and researchers, we have little doubt that most IT professionals and senior managers consider the human resource (HR) implications of deploying IT. However these discussions usually focus on the easily quantified, objective dimensions of HR: staff realignments, compensation, potential downsizing, job retraining and specialized recruitment. If the agenda contains references to employee fears, sabotage, and covert resistance they are usually given short shrift by delegating the “touchy-feely” issues to the HR department or to an external consultant charged with “getting them to toe the line”. Yet these latter issues are the pivotal issues which ultimately determines the success or failure of IT deployment.

The two most recognized proponents of reengineering, Hammer and Champy (1993) reinforce this thesis. There is little doubt that Reengineering the Corporation provided the impetus for the reengineering movement in industry. However, in subsequent books (Champy, 1996; Hammer, 1997) they each acknowledged a failure to fully consider the human costs and resistance to
reengineering efforts. Their “reengineered” message reinforces Argyris’ thesis: IT represents a threat to managers because it challenges their sense of control, confidence, and competence. This threat more often than not translates into resistance.

Ultimately we resist change because it represents a threat or loss. What may be most threatening to senior managers is the fear of losing their sense of self-efficacy, their need to feel competent, useful and in control (Gist, 1987). Because senior managers have a need to save face and project control, they may not question their personal responsibility in delayed or failed projects. Ego defensive routines screen out precisely the type of introspection and critical self-analysis that would uncover resistance and sabotage (Argyris, 1985). Scapegoating and fault finding take the place of candor, personal growth, and organizational learning (Senge, 1990). Failure to acknowledge the personal threat of IT and the psychological rationalizations it may engender, provides important clues for both understanding and solving the IT paradox.

3. Solving the paradox

Our prescriptions for solving the paradox are based on two assumptions. First, the causes highlighted in this paper, failure to think strategically, and senior management’s failure to overcome resistance to change, are inextricably related. They are interdependent rather than independent causes. Senior managers, a major source of resistance to change, also conceive and execute strategy. Thus, any specific prescription should address both these causes simultaneously. Second, the prescriptions should reflect a systemic and holistic view of the organization. This view would underscore the major targets or foci of the change while highlighting the interdependent dynamic of that change.

These two assumptions are reflected in Leavitt’s (1964) classic model of organizational change. This model posits that any organizational change focuses on one or a combination of four interrelated targets: people, structure, task and technology. Moreover, changing any one of these four necessarily affects the others. Changing the technology should and will impact people, structure and task. Yet, most IT development and implementation efforts fail to change one or more of the above targets as required.

In fact, the problems discussed earlier are, quite simply, the result of failure to equalize the rates of change in the four target components. The technology changes are the most dramatic, but the rates at which the people, structure and tasks change are far slower than necessary to take advantage of the investments in technology. The real problem, therefore, is to find ways to identify and change people, tasks and structure so that their rate of change is in concert with the changes in technology. Fig. 1 visually depicts the problem described here.

We propose three strategies for increasing the rates of change across the people, structure, and task dimensions, thereby solving the paradox. These strategies are: (1) reframing the role of IT, (2) creating cross-functional teams, and (3) incorporating story telling as a strategic planning tool.

3.1. Reframing the role of IT

The first step in the problem solving process is problem recognition; senior executives and IT executives must recognize and accept the reality of the IT productivity paradox. Rationalization
and discounting must be replaced by objective acceptance. They must explicitly and implicitly embrace the view that, rather than being an unlikely scenario which only occurs in other organizations, the paradox has a high probability for occurring in their organization. In essence, senior managers must change their worldviews of the role of IT.

They must develop psychological ownership of IT and start viewing it as a catalyst for redefining the firm and its competitive position in the marketplace. Bensaou and Earl (1998) compared the difficulty American companies experienced when implementing IT systems with the apparent ease experienced in Japanese companies. They concluded that the latter hold a set of assumptions regarding IT which are distinctly different than those held by the former. Specifically, unlike IT in American companies, IT in Japanese companies was not the sole responsibility of IT professionals. Functional managers viewed IT as integral to the corporate mission and simply one of many necessary tools for leveraging productivity. The authors suggest that American managers must “reframe” their assumptions about IT. This reframing should result in seeing IT “not as something special, different, and problematic, but rather as part of a fully integrated picture (Bensaou & Earl, 1998, p. 121).” The practical consequences of this frame is that strategic decisions and decisions regarding IT applications are interdependent. Employing IT intelligently becomes an operating norm for the firm.

Reframing IT applications will help address the first problem: failure to think strategically. While this might seem easy to accomplish, it is, in fact, quite difficult. To affect this reframing will undoubtedly require structural changes and changes in the tasks that must be undertaken. If a firm is to consider changes in its external strategy, IT system development and implementation efforts must be led by individuals or groups possessing organizational knowledge, technical knowledge and be part of the strategy development team. These individuals and groups must see the big picture, see themselves in that picture, and understands IT’s role in “framing” that picture.

Seeing the big picture and the IT frame enclosing it will require, at the very least, structural changes and, more than likely, changes to the development and implementation tasks and processes as well. After recognizing the validity of the paradox, firms must affect significant structural changes to the way these projects are handled. A number of examples of firms which have defined IT as central to their strategic mission have emerged over the past decade. Dell Computer, UPS, Ford, and Charles Schwab represent companies for whom IT is not a tool found only in the IT professional’s “toolbox” but rather a strategic lever for achieving long term, sustainable growth.
Finally, reframing will help managers overcoming the self-destructive denial posited by Argyris. Rather than abdicating the responsibility for change and organizational renewal to outside consultants or pre-packaged programs, managers will come to accept their role in both creating the paradox and in resolving it. Cohen’s analysis of performance paradoxes related to TQM and reengineering underscores the self-destructive tendency for senior managers to abdicate performance problems to consultants or pre-packaged solutions:

…managers continue to turn toward programs as the answer to their problems. In doing so, they divert attention away from the very solutions and untapped potential they have right at hand. This is not to say that these tools and techniques are not useful. Many organizations have benefited from their use. But when managers abdicate their own responsibility or their subordinates’ accountability in favor of management programs, they increase the chances of acting in opposition to their own best interests (Cohen, 1998, p. 36).

3.2. Cross-functional teams

A second strategy is to require cross-functional responsibilities for functional managers and IT professionals. For example, functional managers could be given IT oversight responsibilities and IT managers could be periodically assigned to project task forces. Cross training, job rotation, and committee assignments will not only help reinforce the new frame of IT, but will also serve to bridge the differing worldviews discussed earlier. Cross-functional teams will also produce a secondary benefit: they will help reinforce the importance of reframing discussed above. Teams composed of functional managers and IT professionals implicitly reinforce the message that all employees are working for the same goal: to achieve corporate objectives. Parochialism and self-serving agendas are thus anathema to that goal and will soon be labeled as such.

Finally cross-cultural teams will help to leverage the most important asset of the firm, its intellectual capital. Sharing, challenging, and validating ideas expands the collective wisdom of that team specifically and the larger organization generally (Quinn, Anderson & Finklestein, 1996). Team members move from discussion of their specific expertise, know-what and know how — to discussions of common interest and company performance. They move from what they know, to what others know, to what they start learning together.

These structural changes alone will not guarantee that these problems will be resolved. Firms must also put into place processes to ensure that the proper questions will be answered during the development and implementations process. To ensure that the right questions are asked and answered, development teams must be required to explicitly ask and answer relevant “what-if” questions. Examples of questions that development teams should be required to answer before a project is approved follow.

- Should our strategy change in light of the capabilities that a new system will provide?
- Can a new system change our business?
- How can a new system be used to change our relationships with customers and suppliers in a way that will benefit us?
- How can a new system be used to change the way we manage?
How will a new system change formal and informal relationships and processes and what do we have to do to overcome resistance to these changes?

3.3. Story telling and strategic planning

However, having the “right development team composition” ask the “right questions” is not enough. The information sought and gathered must be carefully analyzed and the recommendations that result from this analysis must be reviewed by all who have a vested interest in those recommendations. Moreover, those stakeholders (senior, managers, IT professionals, customers, suppliers, etc.) should be asked to find potential problems or weaknesses in the system.

One powerful method for structuring this critical analysis is called “story telling”. Proponents suggest that story telling forces planners to clearly think through their recommendations and helps build support for the implementation efforts that are to follow (Shaw, Brown & Bromiley, 1998).

The works of Goldratt, studied by both scholars and practitioners underscores the power of a story. Although fictional, and not written as a strategic planning treatise per se, The Goal (Goldratt, 1992), and It’s Not Luck (Goldratt, 1994) illustrate the heuristic power of a drama depicting human foibles in the pursuit of organizational excellence.

This same heuristic power can be created when teams are brought together to plan for the integration of IT. Story telling provides both a method and a forum for the team to think through the changes that will be necessary to take advantage of the system and at the same time, address the resistance to change that might be encountered. Typically, new system proposals are sold (by proponents) by identifying lists of benefits that will be obtained if the system is implemented. Producing lists of benefits is easily done without having to think through the assumptions and rationale that the list generators use and, fails to build support for the initiative among the people that are going to have to deal with the system. Bulleted points reduce the complexity of IT implementation to seductively simple “to do” lists. Such lists are one of the reasons for the frustrating return on IT investment.

Every new system proposal should include a story that clearly describes how the proposed system will benefit the firm (tie-in to the firm’s strategy and plans), how organizational assets and processes will be affected by the new system, and what changes will be necessary to take full advantage of the system’s capabilities. The story must convey not just their proposals for changes in structure, people and tasks that are necessary to make best use of the new system, but the logic behind their recommendations. Having to write such stories will force the team to clearly think through the recommendations, make it easier for others to understand why changes are being made and finally, build support for the changes that are sought.

As a planning tool, story telling differs from the more common tools of strength, weakness, opportunity, and threat (SWOT) analysis and Scenario analysis along two basic dimensions:

1. Discrete variables versus dramatic flow: SWOT analysis and Scenario analysis are based upon assumptions about discrete variables in the external environment and in the firm. These variables drive the strategy. Story telling however, treats strategy as an evolving drama incorporating the most likely forces affecting the intended outcome of that story — i.e. the goal. Whereas SWOT analysis and Scenario analysis assume that the future may be described to
reflect the most likely market forces, Story telling places these market forces in the context of human drama.

2. Managers as stakeholders versus protagonists and antagonists: Whereas, SWOT analysis and Scenario analysis may account for resistance by identifying managers as stakeholders, story telling casts managers as crucial actors in the effective IT implementation. These actors are described with egos, agendas, and personalities. Proponents of story telling implicitly accept Shakespeare’s admonition that “all the world is a stage”.

These recommendations will help address the “strategic thinking” and “resistance to change” problems. One cannot write a story that describes why the new system is proposed, without answering “what-if” questions. Besides, a well written story that explains why the new system is necessary and what changes are necessary to take advantage of it will go a long way towards building support for this initiative, thereby helping overcome resistance to change. Finally, this process will force senior management to be heavily involved in these development efforts and in so doing, help overcome hidden phobias, thereby reducing their resistance to these changes.

The three strategies described here: reframing the role of IT, the use of cross-functional teams and story telling and strategic planning, serve to accelerate the rate at which changes in people, tasks and structure will take place. In so doing, the gap between the rates at which the technology and the other three components change, will be reduced or eliminated. Fig. 2 depicts the effect of the proposed strategies.

4. Summary

The importance of information technology to the world economy is self-evident. Few of the structural changes in our economy would have come about without advances in IT. Even clearer is the impact of IT on competition within many industries. In the airline industry, for example, IT has helped some firms prosper and led to the demise of others. It is therefore surprising that after over
40 years experience with IT, firms still are unable to obtain many of the benefits of IT investments until many years after expenditures have been incurred.

Our experience as researchers and consultants forces us to conclude that the delay on the return of IT investment is due to two separate, yet interdependent failures: failure in strategic thinking and failure to overcome senior management’s resistance to change. Reframing, cross-functional teams, and story telling are three methods for increasing the rate of that return.

References


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