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Beyond the Business Case: Strategic IT Investment

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Title: *Beyond the Business Case: Strategic IT Investments*

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Abstract: Traditionally, most firms' IT capital investment decisions have been based on business cases estimating financial returns on individual applications. Infrastructure costs were often bundled with applications, although disruptive technologies, such as desktop computing and Internet protocols, led to occasional large lump sum investments. In this paper, we argue that firms should make four distinct types of IT investments: transformation, renewal, process improvements, and experiments. *Transformation* initiatives create significant, long-term infrastructure that enables major changes in organizational processes. *Renewal* initiatives improve the efficiency or effectiveness of existing shared IT platforms. Business *process improvement* initiatives increase the net value of business activities, products or services by leveraging, not building, shared infrastructure. *Experiments* are business applications focused on identifying and developing opportunities afforded by IT. We describe these four types of initiatives and illustrate them using evidence from field research and case studies. We conclude that firms should be investing in all four types of initiatives in order to address both short-term profitability and longer-term survival and growth and to develop the robust IT environment and business applications that are needed to support their desired business model.

14 Pages

Beyond the Business Case: Making Strategic IT Investments

As IT becomes more closely tied to business objectives, firms need to adopt multiple approaches to IT investment. Successful investment strategies consider two dimensions: technology scope and strategic objectives.

In 1986, senior managers at United Parcel Service (UPS) decided that package tracking had become a competitive necessity in the package delivery industry. Developing that capability, however, was not as simple as writing or buying a package tracking application. The firm needed to develop networks, databases, and processing capacity before they could even begin to provide that service.¹

In the first half of 2000, line managers at Delta Air Lines submitted requests for IT investments that totaled almost three times what the firm felt it could allocate. During the prior three years, the firm had focused essentially all its IT spending on rebuilding its airport systems and infrastructure. These efforts had resolved a Y2K crisis, but they led to what the CIO described as a “land rush” of requests for new systems development initiatives as of January 1, 2000. Individually, the requests each had a business case that promised significant positive returns on investment. Combined they far exceeded the ability of the IT unit to deliver.²

These experiences are not unusual. In the last 15 years, a litany of IT-enabled initiatives, from business process reengineering to enterprise resource planning, have elevated the importance of investing strategically in IT. The Internet alone has created a vast set of opportunities to reengineer processes, introduce online products and services, approach new customer segments, and redo business models.³ But while opportunities seem boundless, the resources required by these investments—capital, IT expertise, management focus, and capacity for change—are severely limited.

Traditional business case approaches to IT investment attempt to identify projects with the best profit potential. The heightened strategic importance of IT, however, has forced firms to weigh the returns on individual investments against demands for organization-wide capabilities. They must also assess opportunities to leverage and improve existing systems and infrastructures in light of opportunities to create new capabilities and test new business models. These complex tradeoffs are leading to new IT investment patterns.

¹ This description of UPS’ IT investment practices is based on 22 hours of interviews with senior business and IT executives between January 2000 and February 2001. See Ross, J., CISR Working Paper No. 318, 2001.

² Descriptions of Delta’s IT investment practices are based on 20 hours of interviews with current and former Delta senior business and IT executives between June 2000 and July 2001. See Ross, J., CISR Working Paper No. 317, 2001.

³ Feeny, 2001, describes these opportunities in more detail.

Beyond the Business Case

To learn how IT investment practices are changing, we interviewed business and IT executives at 30 U.S. and European companies about their e-business initiatives and the IT investments that supported those initiatives.⁴ Twenty-five of these firms said they traditionally relied on business cases for IT investment funding. All but three, however, had funded at least one e-business initiative without a business case. Instead, senior management had simply allocated funding for initiatives perceived to be strategic priorities. At 16 firms, senior management made a lump sum allocation for firm-wide infrastructure. Typically, senior management was responding to the perception that the firm could not meet changing customer demands or pursue new business opportunities with their existing infrastructure. One bank, for example, invested heavily in networking capabilities in anticipation of rapid growth in their electronic banking services.

At twelve firms senior management created a separate budget for e-business experiments. As an example, Manheim, which auctions cars to used car dealers, established a separate unit to develop the capability to sell cars and related services online.⁵ Doing so allowed faster, more focused development of new business models.

The limitations of using business cases for e-business initiatives were highlighted by one firm's initial foray into e-business. A marketing project was justified on the basis of the ROI expected from the \$1 million it required. The IT unit noted, however, that successful implementation depended upon an additional investment of \$5 million for networking and web services technologies. The firm had no mechanism for justifying firm-wide infrastructure investments, so the project sponsor agreed to absorb the cost, arguing that others would benefit. Eventually recognizing the importance of shared infrastructure, senior management instituted exceptions to usual business case analysis that allowed for what the firm called "roadmap" funding.

Many executives acknowledged the discomfort of abandoning the security of business cases. They were unclear as to whether they were establishing a precedent that would shape future behavior or merely taking a temporary detour. Our perspective is that lasting pressures have permanently changed how firms will approach the problem of justifying IT investments. Given that technological and market changes are only intensifying dependence on IT, it seems more prudent to adopt new investment strategies, not as "exceptions," but as part of a deliberate rationale that says success comes from using multiple approaches to justifying IT investments. The business case is only one of these.

⁴ The objective of the research project was to describe the processes by which firms were incorporating e-business into their business models. We collected data between October 1999 and March 2000 in hour-long telephone interviews. At 18 of the firms, we interviewed both a business executive and an IT executive with key responsibility for e-business. At 12 firms, we talked with either the head of e-commerce or the IT executive responsible for e-commerce. In total we conducted 48 interviews. Among our firms, a few had established web-based e-business capabilities as early as 1995, while others had begun as recently as October 1999. On average their e-business experience was about 28 months. The results of the overall study are summarized in Ross, Beath, Sambamurthy and Jepson, 2000.

⁵ See Woodham, R. and Weill, P., "Manheim Interactive: Selling Cars Online," CISR Working Paper No. 314, 2001.

The IT Investment Framework

For many years management teams have struggled to achieve both short-term profitability and long-term survival and growth through their IT investments. They usually expected profitability from new business applications, while they saw IT infrastructure as something necessary for long-term survival and growth. Electronic business opportunities, however, have changed this picture. Infrastructure services such as integrated systems, data accessibility, and secure networks are now critical to short-term profitability. And long-term growth and survival depend on developing business applications that test emerging business opportunities.

Figure 1 presents a framework for IT investment based on the practices of firms in our study.⁶ As the framework illustrates, firms must make investments that differ along two dimensions: *strategic objectives*, which highlight the tradeoffs between short-term profitability and long-term growth, and *technology scope*, which distinguishes between shared infrastructure and business solutions. To address both dimensions firms need to invest in four distinct types of investments: transformation, renewal, process improvement, and experiments.

Transformation. As firms attempt to migrate to a more electronic business environment, many find that they do not have the necessary IT capability. Transformation investments are necessary if a firm finds that its core infrastructure limits its ability to develop applications critical to long-term success. Transformation is triggered by the growing need for integrated customer data, platforms that provide 24x7 support, and end-to-end processing. (See Table “Characterizing IT Investments.”) Transformation initiatives are often risky endeavors, undertaken when firms have determined that it is even riskier not to significantly rebuild their infrastructure.

Firms whose outdated IT infrastructures have pushed them into a competitive crisis invest heavily in transformations. In its 3-year \$1 billion infrastructure overhaul, Delta ripped out dozens of functionally-oriented “smokestack” applications—each with its own distinct platform—and installed a shared data environment supporting a new suite of applications and services. The key feature of this environment is a publish and subscribe capability that makes data on flights, customers, crews, equipment, and baggage simultaneously available to appropriate Delta systems and employees. Smokestack systems at Delta had made it difficult to respond accurately to customer questions. The new infrastructure has enabled development of systems that serve customers accurately and efficiently, facilitate equipment and crew reassignments during irregular operations, and, increasingly important, enable new airline security measures.

Renewal. The shared or standard technologies introduced when infrastructures are transformed eventually become outdated. To maintain the infrastructure’s functionality and keep it cost-effective, firms engage in renewal initiatives. The potential benefits of renewal initiatives include

⁶ This framework was derived from our analysis of the experiences of the 30 firms in the study. Because it was an outcome of the study, we did not ask participants about their investments in each category. To validate the framework, we collected additional data from six IT Vice Presidents/CIOs who we have found to be particularly thoughtful and creative in their IT management practices. Our discussions with these firms confirm that in 2000 and 2001 they will make investments in each category, with the exception of one firm, which believes that it is not currently investing in any experiments.

improving maintainability, reducing support and training requirements, or making existing capacity more efficient. Renewal initiatives may also be driven by a vendor's decision to withdraw support from older products.

One financial services firm, after deploying a number of e-business applications on its standard Windows platform, recognized that the Windows environment could not handle its transaction volume and migrated the applications to Unix platforms. Years earlier, in adopting Windows as a single standard desktop environment, the firm had undergone a transformation. The migration to Unix, in contrast, enabled the same business outcomes, but reduced downtime and maintenance costs.

Characterizing IT Investments

Investment Type	Drivers	Funding Approach	Probable Owner	Example Initiatives
Transformation	Core infrastructure is seriously inadequate for desired business model	Executive-level allocation	Entire firm or all affected business units	Implement an ERP Transform network to TCP/IP Standardize desktop technologies Build data warehouses Implement middleware layer to manage web environment
Renewal	Opportunity to reduce cost or raise quality of IT services Vendor pulls support of existing technology	Business case Annual allocation under CIO	Technology owner or service provider (usually IT for shared components)	Purchase additional capacity Enable purchase discounts Facilitate access to existing data Upgrade technology standards Retire outdated systems and technologies
Process improvement	Opportunity to improve operational performance	Business case	SBU(s) or functional area(s) that will realize benefits	Shift customer services to lower cost channel Allow employees to self-serve Shift data capture to customers Eliminate costs of printing and mailing paper reports or bills Streamline cycle times for processes Capture new data automatically
Experimentation	New technologies, new ideas for products or processes, new business models	Business or executive-level allocation	SBU or functional area	Test demand for new products Test cannibalization of channels Learn if customers can self-serve Test new pricing strategy Assess customer interest in new channels, new technologies Assess costs of new channels

Process Improvement. Business applications leverage a firm's infrastructure by delivering short-term profitability through process improvements. Business process improvements should be low-risk investments because, unlike transformation initiatives which are intended to fundamentally change organizations, these initiatives improve operational outcomes of existing processes. For example, when Delta invested in a new application to support its boarding process, management knew with relative certainty how much it would cost to develop and support the software, what improvements in the boarding process would result, and what the business value of those improvements were to Delta.

To reach this level of predictability, process improvements *must* build on existing IT infrastructure. At Delta, the new boarding application leveraged the centralized customer and flight databases, a layer of middleware providing access to that data, and the shared, interoperable technology platforms. Fundamental organizational change had accompanied the new infrastructure so that the new boarding application merely streamlined an existing process.

Experiments. New technologies present firms with opportunities or imperatives to adopt new business models. To learn about these opportunities or imperatives, as well as the capabilities and limitations of new technologies, firms need a steady stream of business and technology experiments. Successful experiments might ultimately lead to major organizational change with accompanying infrastructure changes or they might lead to more incremental process improvement initiatives.

Brady Corporation, a \$500 million global manufacturer of identification solutions, decided in 1995 to move aggressively to use the Internet to support both its direct to customer and distributor channels.⁷ In order to learn about both Internet technology and customer reactions to e-business initiatives, Brady developed a limited online catalog. Customers drifted toward the web-based catalog only gradually but the experiment clarified the potential benefits of a full-scale online catalog and buttressed arguments for an organizational transformation that was already under way.

Similarly, Staples, an office supply superstore, put all of its performance reports on the web to "get their feet wet" on intranets. This experiment helped the firm understand use and benefits of an intranet. Using what they learned, Staples developed business cases to justify additional intranet-based services, such as Benefits-at-Work, an online system for servicing employee benefit needs, and a web-based help desk to answer employee questions about product features, facilities issues, and systems.

Distinguishing Among Investment Types

Although the four types of IT investment are conceptually distinct, in practice they can be difficult to distinguish. A successful experiment may prompt a process improvement. Or process improvement initiatives may begin leveraging a transformation long before it is complete. For example, Staples and Delta have embarked on process improvements in the early stages of their

⁷ See Ross, J. and Levina, N., "Brady Corporation: Delivering Customer Value Through Multiple Channels," CISR Working Paper No. 315, 2001.

transformations. We argue that, even when they are simultaneous, firms should distinguish transformation investments from process improvement investments, because these investments will deliver value to different parties.

Whereas the benefits of the process improvements will improve operating results of a particular business unit, the benefits of a new shared infrastructure will arise throughout the firm, perhaps well into the future. These benefits may include not only a series of process improvements, but also reduced IT operations costs or reduced time to initiate new shared IT services. Investments in shared infrastructure will shape, for better or worse, the opportunities available to the firm. If senior management directs transformation investments with this in mind, the firm's overall IT capability is more likely to support its strategic business direction. Firms that separate their infrastructure investments from process improvement investments find that managers quickly learn to identify opportunities to leverage that infrastructure rather than insisting on solutions that require new infrastructure.

Distinguishing between experiments and the investments that successful experiments trigger presents a different challenge. When successful experiments are scaled up and rolled out, the firm may invest in new infrastructure or applications. UPS developed an online Returns and Exchanges offering to test customer reaction. When the decision was made to roll this product out, UPS ported it to its existing infrastructure to capitalize on its high volume transaction processing capability and shared customer and package databases.

In hindsight, an experiment and its subsequent process improvement may look like a single investment. But firms can, and should, distinguish an investment in an experiment for learning purposes from an investment in a process improvement that is expected to yield additional profits.

Perhaps the toughest distinction is between transformation and renewal. Renewal investments replace old shared technologies with newer, more powerful or more cost effective technologies. Process improvements may be enabled by renewals, but they are not the primary objective. Transformation, on the other hand, intentionally changes a firm's infrastructure in ways that not only enable, but usually demand, process change. Because the value of a renewal initiative does not depend on making changes to a business process, they are often the responsibility of the CIO. Process owners should not be expected to fund renewals of shared technologies, if they cannot be held responsible for insuring that the expected IT service efficiencies are achieved. On the other hand, responsibility for transformation investments must be located with those who will lead the necessary process changes.

Making Strategic IT Investment a Habit

The strategic investment framework argues for a new IT investment habit. Senior managers cannot rely on a series of business cases interrupted by the occasional executive handout to address both competing business objectives and competing technology scope. Instead, they need pools of resources for each of the four types of IT investments described in the preceding

section. This raises two issues: (1) how to allocate funds across investment types and (2) how to establish priorities within investment types.

Allocating Funds Across Investment Types

The process of allocating funds across investment types demands a vision for how IT will support the core business processes. UPS has defined four core processes: customer relationship management, customer information management, package management, and product management. Delta also has four core processes: customer experience, the operational pipeline, revenue management, and administrative processes. At both firms these core processes are cross-functional and thus demand shared data and application integration. Accordingly, core processes at both Delta and UPS drive the firm towards sharable, reusable platforms that make it easier to deliver applications and achieve cost effective IT operations.

We believe that most firms are constantly comparing their existing capability to support core processes with their desired capability. This comparison usually provides the initial basis for allocating funds among transformation, renewal, and process improvement. In contrast, funding for experiments may depend more on perceived opportunities presented by new technologies and the condition of the infrastructure.

We have not found any firms who allocate funds precisely as suggested by the Strategic IT Investment Framework, but firms that are effectively leveraging IT are instinctively making distinctions similar to those described. (See the Appendix “Strategic Investment at UPS” for a detailed example.) Staples, the office supply superstore, has two main buckets in its IT budget—Baseline and New Applications—through which it allocates funding for all four investment types. The Baseline budget funds annual IT operating expenses, including infrastructure renewal. As a result, while renewal constitutes approximately 25% of IT spending at Staples, it does not compete with other investment priorities because it comes from a different source. Staples’ New Applications bucket funds transformation, process improvement and experiments. Currently, a key objective at Staples is to move towards common processes and systems across business units. Annual transformation projects, totaling about 20% of New Applications spending, are incrementally building infrastructure components such as portals, kiosks, and help desk facilities that support that objective. But Staples is determined to leverage its infrastructure as rapidly as it builds it. Thus, it allocates 40% of its New Applications budget to process improvement projects that leverage the capabilities of the infrastructure to meet specific business needs. Staples allocates the remaining 15% of its New Applications budget to what it calls New Capabilities, which covers experiments, such as its initial foray into intranets and portals. These experiments do not compete with process improvements or transformation investments for funding. The percentages spent on each investment type reflect Staples’ business priorities and its existing IT capability.

In contrast, a large insurance company has a portfolio that reflects its aggressive campaign to implement Internet capabilities for both independent agents and end customers (see Figure 2, “Allocating Funds Among IT Investment Types”). Compared to Staples, the insurance company is allocating considerably more of its IT spending on transformation to develop the infrastructure

for the intended business change. The insurance company is also investing in process improvements that leverage that infrastructure. Consequently, its renewal and experiment percentages are considerably less than Staples.

Funding Transformation

Transformation investments create a basis for long-term growth, but their payoffs are not easily and quickly achieved. Their value does not come from installing the technology; it comes from changing both operating and management processes, if not also operating and management cultures! Consequently, transformation investments demand significant senior management commitment to (1) invest the funds, (2) guide implementation and process change, and (3) steer the firm towards opportunities to leverage these investments.

Many firms will struggle with the necessarily large commitment required by an infrastructure transformation given the many pressures on their budgets. Charlie Feld, Delta's first CIO, built the case for funding that firm's transformation by noting that much IT expense was hidden: "We spent hundreds of millions of dollars on the infrastructure, but we would have spent it anyway. When this money is being spent in departments and in divisions, it's being spent, it's just not being seen." Clearly, effective IT transformation starts with understanding IT costs in a firm and applying principles of activity based cost management.⁸ Quantitative tools such as decision tree analysis⁹ or real options analysis¹⁰ can also assist investment decision making, but ultimately most firms rely on competitive analysis and executive instincts to guide transformation investments.

Funding Renewal

Most renewal initiatives reduce the cost and raise the quality of IT services and thus can be justified with traditional business cases. The IT unit that is responsible for the cost and quality of shared IT services would prepare the business cases. For example, technology owners in Delta's IT unit regularly review the capabilities, limitations, and operational costs of Delta's 50 key infrastructure technologies. When business needs or technology developments indicate that a standard technology is no longer appropriate, the technology owner develops a business case that presents a justification for replacing the existing technology with something more appropriate.

Funding Process Improvement

Process improvements that reach out to customers or back to suppliers are usually cross-functional and strategic. Thus, they tend to be funded centrally. Segregating infrastructure investments from these process improvement investments helps firms identify which of their process improvement projects are or are not dependent upon transformation investments. Any dependencies may necessitate postponing some process improvement applications, but this will clarify the prioritization process for both process improvement and infrastructure initiatives. By funding process improvement projects separately from infrastructure, firms can clarify the goals

⁸ See G. Cokins, 2001, for a explanation of activity based costing.

⁹ Clemons, 1991, illustrates this approach.

¹⁰ See for example, Benharoch and Kauffman, 1999, and Taudes et al, 2000, for more details on this point.

and expected returns of each investment alternative. With this separation in place, business cases that incorporate discounted cash flow analyses should provide valuable guidance to investment decisions.

In addition to cross-functional or firm-wide process improvement projects, individual business units have their own IT needs. These projects typically do not require senior management attention, and thus are more likely to be funded locally. Delta and UPS have taken different approaches to addressing local process improvement needs. Delta allocates a small “allowance” to each function to address whatever process improvements each function feels are most compelling. UPS provides business units with clear standards for technologies and platforms and allows business units to develop applications—at their own expense—that are subsequently supported by the central IT unit.

Funding Experiments

Experiments are funded in myriad ways: out of the CEO’s or CIO’s pocket or from a business unit’s supply budget. No one we talked to had discerned a way to put a value on learning benefits that would persuade a capital budgeting committee to invest in experiments! Some researchers have argued for the use of a real options analysis to evaluate the learning benefits of pilot projects¹¹ and others have demonstrated the use of real options analysis for ranking R&D projects.¹² For the foreseeable future, however, funding for IT experiments will most likely be based on the passions and intuitions of sponsoring business managers or specially funded organizational units (e.g. e-business units).

Conclusion

As dot-coms—and e-business more generally—have lost their luster, firms might be tempted to revert to old IT investment habits. The strategic IT investment framework argues for a new habit. Instead of comparing the business cases of potential IT investments, firms should establish pools of resources for four types of IT investments. This multi-pronged approach allows for both short-term profitability and long-term growth by recognizing the critical but distinct roles of both shared infrastructure and local or firm-wide business solutions.

¹¹ For example, see Dos Santos, 1991; Kambil, Henderson and Mohsenzadeh, 1993.

¹² For example, see Herath and Park, 1999.

Companies Interviewed

Air Canada	FleetBoston Financial
Amtrak	HADCO Corporation
Arcadia Group	IBM Global Services
BCEE	Johnson & Johnson
Brady Corporation	Karstadt
C.H. Briggs	S. S. Lazio
British Airways	State of Maryland, DLLR
Cisco Systems	Manheim Auctions
CompUSA	Ostergaard
Confindustria	Pitney Bowes
Delta Airlines	Safeway Stores Plc.
DHL	Sprint
E.I. du Pont de Nemours and Company	Transitions Optical
E-Chemicals	United Parcel Service (UPS)
Elf Atochem North America	Yellow Freight

Appendix: Strategic Investment at UPS

In the late 1980s, UPS' CEO, Oz Nelson, decided that information technology leadership was critical to long-term success in the package delivery industry. Responding to competitor moves, UPS embarked on a transformation that has permanently changed the company.

The Transformation

Over a period of ten years, UPS invested \$11 billion to build a centralized data center, hire technical experts, create a global network, develop three sharable databases (people, customers, and packages), implement enterprise-wide applications, and build a redundant operations environment to protect against disaster. The management team did not require financial justifications for these investments. Instead, they funded CIO-led initiatives to build the IT foundation necessary to do business in the package delivery industry.

Process improvement

On this foundation, UPS built new applications to improve customer service, broaden its service offerings, increase worker productivity, and extend its geographic reach. When the Internet became a viable channel in the mid-1990s, UPS built web-based front-ends to existing systems and identified new web-specific products and services. UPS justified these applications in much the same way it had justified applications in the past: using business cases—referred to as “charters”—that specified the costs and benefits of the initiative. These charters differ from the usual business case in two ways. First, whereas business cases are typically developed for a single business “silo,” UPS' charters often support cross-functional processes. UPS has established four teams, each of which represents one of the firm's key cross-functional processes. Each cross-functional team submits its application priorities to a senior management committee, which makes the final determination as to what applications will be funded each year. Second, the capabilities of the existing shared IT infrastructure serve as the starting point for new business applications. Business managers claim to look for ways to leverage the infrastructure when they propose new IT applications and business processes.

Renewal

UPS' IT investment practices are not limited to writing blank checks for infrastructure overhaul and an annual review of new project charters. IT and business management also focus on upgrading infrastructure

technologies and on positioning the firm to seize new opportunities when they arise. To this end, UPS has adopted two additional investment processes. First, it invests each year in CIO-led initiatives to refresh the IT infrastructure. Refreshing involves replacing systems that are no longer supported by vendors and upgrading technologies to improve reliability, lower maintenance costs, or expand functionality. UPS relies on technology standards to enhance interoperability of its technologies and contain maintenance costs. As technologies age and new technologies offer new capabilities, IT updates technology standards and then gradually implements them across the organization. With 344,000 employees in 200 countries, the migration to new standards can take several years, particularly when the technology is located on the employee desktop or in a UPS truck. Thus, UPS has found that staying current with technology requires a substantial annual commitment to refreshing its technology.

Experimentation

UPS executive management also allocates funds for IT research and development. Part of this funding provides for testing of new technologies so that the IT unit can determine when new capabilities are ready for prime time at UPS. A key focus of this testing is assessing scalability and interoperability; UPS IT does not install systems that cannot carry the weight of 13 million packages per day. When business managers identify IT capabilities that offer strategic value, the IT unit wants to be prepared to suggest an approved technology that can most closely meet the business need—on a UPS scale. UPS also funds business experiments. For example, the firm established an e-Ventures unit specifically to test e-business opportunities.

Bottom Line Results

UPS' IT investment practices have enabled it to take advantage of several new business opportunities afforded by IT. Due to an aggressive use of information technology, UPS exchanges 88% of all transactions and package information electronically. At the same time the firm has reasserted its leadership position in its industry.* A key factor in that success is the firm's IT investment practices, which attend to both short and long-term business requirements. They also balance the provision of shared IT services for meeting global business needs with the support of specific business process requirement.

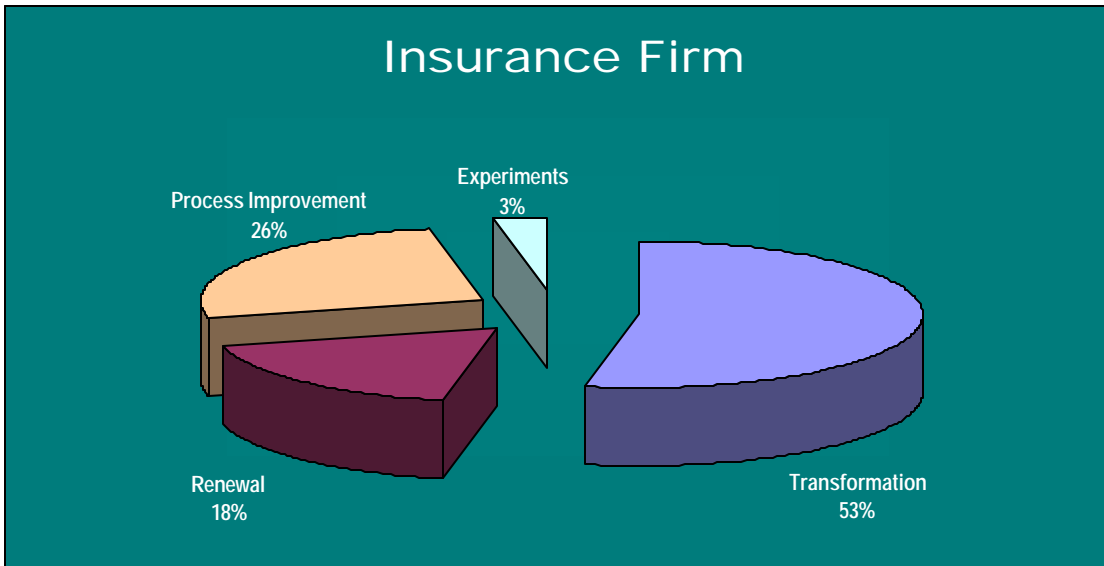
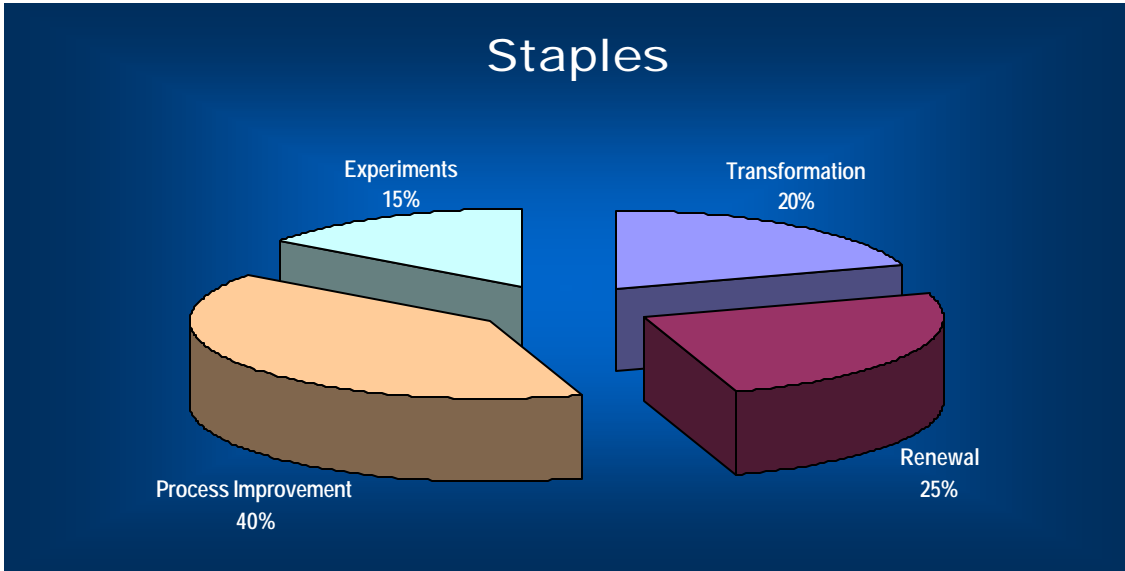
*In 2000 UPS was named by *Fortune* magazine as both America's and the World's Most Admired mail, package and freight company, and by *Forbes* magazine as Company of the Year.

Figure 1: Strategic IT Investment Framework
Technology Scope

Business Solutions	Process Improvement	Experiments
	Renewal	Transformation
Shared Infrastructure		
Short-Term Profitability		Long-Term Growth

Strategic Objective

Figure 2: Allocating Funds Among IT Investment Types



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