



Continental Airlines: Outsourcing IT to Support Business Transformation

As the Texas sun began to set, Janet Wejman, the Chief Information Officer for Continental Airlines looked out the window of her Houston-based office and considered what her next move should be. It was now November 1996 and while she had only been with the company for a few months, she faced a dilemma relating to the airline's information technology outsourcing agreement with Electronic Data Systems (EDS). The ten-year contract was beginning to show some strains as a result of the dramatic changes that had taken place at Continental since the contract's inception. Tensions had developed between some of the: Continental and EDS staff regarding expectations of what services should be provided by the agreement and more generally, what an outsourcing relationship required of each of the respective parties.

Management of Continental's participation in the outsourcing relationship fell to Wejman in her new role and she had to formulate a plan to meet the needs of the airline without ignoring the perspective of EDS. In many respects, the relationship, which Wejman viewed as generally good, had been very successful and mutually beneficial for both parties. However, recent managerial changes coupled with an improved financial performance and outlook within Continental necessitated that the expectations of the outsourcing relationship be reviewed with EDS so that together the parties could determine the best approach to go forward. The issues being discussed, as well as the changes that had occurred, would have implications for the appropriate structure of Continental's internal IT functions and Wejman considered how best to manage this process. Wejman wanted to improve the relationship with EDS and define an IT vision for Continental. As she prepared for a meeting with Continental's President and Chief Operating Officer, Greg Brenneman, Wejman reviewed the status of the current relationship.

Management Change

A dramatic shift had taken place in Continental's management structure during 1994 (Exhibit 1). Gordon M. Bethune, an executive with experience in the airline industry at Braniff, Western, and Piedmont before spending six years at Boeing from which Continental recruited him, was hired as President in February 1994. In October of that year, Bethune succeeded Robert R. Ferguson III as CEO. Ferguson had championed the disappointing Continental Lite effort which was the airline's short-haul, economy product designed to compete with lower price competitors such as Southwest Airlines. Bethune became Chairman of the Board in October 1996.

For the 1995 fiscal year, Continental reported profit of \$224 million on revenues of \$5.83 billion and demonstrated a much improved financial condition. In fact, 1995 represented the first year since 1986 that the company had recorded a profit. Further, this profit represented the first time since the airline industry was deregulated in 1978 that Continental had reported net income without the assistance of bankruptcy protection (Exhibit 2).

On February 29, 1996, the Wall Street Journal reported that Continental gave its shareholders the fifth best return of any public company during 1995 and ranked it number one among eight other airlines with a return that was 213.9% above the peer average. Continental's stock was trading near its 52-week high point.

In an interview with Business Week, Bethune argued that many of the problems associated with Continental's poor recent performance could be attributed to "a crappy product, and we were trying to discount ourselves into profitability. Nobody wants to eat a crummy pizza, no matter if it's 99 cents..."¹ Bethune asked Greg Brenneman, a Bain & Co. consultant who had gained recognition for his work in the airline industry, to reduce Continental's maintenance costs and improve the airline's reservation system. Together, Bethune and Brenneman replaced more than half of Continental's 61 vice-presidents. Many of the new managers had significant industry experience with airlines such as American, Northwest, and Braniff.

The change in management had direct implications for the outsourcing relationship. Dennis Stolkey, a Division Vice President with EDS' Travel and Transportation Group (and the former account manager, for Continental), indicated that the outsourcing relationship between EDS and Continental had evolved through several stages. He recalled:

Continental was the Travel and Transportation Group's largest customer and we treasured our partnership with them. I believe the relationship grew stronger after the initial signing, but especially during the 1993 and 1994 (CALite) years where strategic relationships were developed with Continental senior management. With the emergence of an entirely new and successful management team in 1995, we found ourselves trying to build new relationships and prove EDS again under the new circumstances.

Bill Miller, Senior Director - Telecommunications & Technology, who joined Continental in 1984 during its first bout with bankruptcy noted:

One of the most challenging aspects of this agreement was perpetuating the intentions, underlying assumptions, and strategic objectives of the original contract. In the five years after it was signed, only one person from Continental who sat at the negotiating table remained with the airline and only two senior managers who lived through the outsourcing process were still here. With each generation of new people there is not only less first-hand knowledge of the contract but greater resistance to adopting it as it stands. We needed to understand the spirit behind the services outlined in the contract as well as the mechanics of what was to be performed and how.

For its part too, EDS was undergoing some changes. Bonnie Reitz, Vice President -Marketing and Sales for Continental, who had joined the airline in September of 1994 at Bethune's request, suggested:

Both Continental and EDS were in transition. EDS traditionally provided high-volume transaction-oriented services and they were very strong at building and maintaining systems. They had some difficulty shifting to the consulting side but they are moving in that direction. In addition, many of the difficulties between Continental and EDS were due to changes in Continental. Because of improvements in our performance, we moved from an almost absolute focus on cost savings where we did not want to discuss IT and what it could do for us, to a

¹ Zellner, W., "The Right Place, The Right Time" *Business Week*, May 27, 1996, pg. 74.

setting where we wanted to use information technology, had ideas about some desired applications, and were prepared to invest in these systems. More discussion and partnership was necessary as we moved through these changes but ultimately the transition was expected to benefit both parties.

Transforming the Business: The Go Forward Plan

An all-encompassing initiative launched by Bethune and Brenneman was the ***Go Forward Plan***. This plan was announced as the means to return Continental to profitability during 1995. The four central tenets of the plan were:

- Stop doing things that lose money (Fly To Win)
- Improve cash flow by restructuring obligations (Fund The Future)
- Get passengers and luggage to their destinations on time (Make Reliability A Reality)
- Work Together

Each of these had its own focus and objectives but successful application was dependent on the effective implementation of all four in unison.

Fly To Win - Fly To Win meant that everyone at the airline focused on correcting those actions that resulted in losses. Continental's management believed that the most obvious problems that required attention were the reduction in the quality of services offered as part of the airline's OnePass Elite benefits (Continental's frequent flyer program), the alienation of travel agents, and the attempt to expand Continental Lite too rapidly. Each of these problems was addressed during 1995 with considerable strides being made to rectify the various weaknesses.

The OnePass Elite benefits were raised substantially, travel agency incentive programs were enhanced, and changes were made to the Continental Lite system including capacity reductions and pricing corrections. These efforts were part of a process that also reevaluated aggregate capacity issues and reduced the size of the overall fleet, improved the reservations system through the introduction of new technology and increased staffing to reduce response times and raise the company's ability to capture available revenues.

Larry Goodwin, who joined Continental in 1987, had taken a new position as Vice President-Reservations during the second half of 1994. In this capacity he was responsible for the operations of Continental's reservations system and its customer relations efforts. He explained:

The reservations system underwent a significant technical upgrade during 1994 as we switched to our new QIKRes system. QIKRes provided an user-friendly interface between the reservation agent and the system with pop-up screens and prompts. The old system utilized dumb terminals and required the reservation agents to memorize long strings of commands that could be up to one and a half lines in length. Reservation agents are now provided with a series of problem types like "lost baggage" that help them deal with customer concerns more quickly and consistently. QIKRes walks them through a flow, chart type analysis of the problems, offering possible solutions.

The simplicity and logical flow of the QIKRes system also allowed Continental to shorten its training cycle for reservation agents before they received their first customer call from five weeks to three. Traditionally, we hire approximately 1,000 people on an annual basis for the reservation agent positions so any reduction in training time helps reduce costs substantially and allows us to attain proper staffing levels more quickly. In addition to the cost implications though, QIKRes really helps the reservation agents to sell products rather than just take orders.

The ease of use simplifies the mechanical aspects of their functions giving them time to offer suggestions to the customer. The system itself will also prompt the agents with suggestions. The money we have saved on the shortened training has enabled us to invest in telephone sales training for our agents thereby increasing the value of the average call we receive.

Continental also maintained its pressure on costs, targeting what Bethune defined in the 1994 Annual Report as "those items that customers don't value and refuse to pay for" in order to achieve savings that would offset expected growth in fuel costs and taxes and wages. The organizational changes were also cited by management as part of this effort since business units were refined and managers were made accountable for business unit profitability.

Fund The Future - As Bethune stated in Continental's 1994 Annual Report, *Fund The Future* meant "aggressive actions and cash management policies that will improve our cash flow and earnings." Unused leased aircraft were returned to the lessors and the related payments were deferred, while other leases that were at above-market rates were renegotiated. With respect to aircraft purchases, progress, payments were restructured and some orders were deferred. Continental's management also negotiated with the airline's major creditors to defer debt.

The company also targeted ways to better leverage non-core assets. Management noticed a glut in maintenance capacity and closed maintenance centers in Denver and Los Angeles (leaving Houston as the carrier's only major maintenance base) and pursued expense reduction opportunities by outsourcing long-term maintenance contracts. A negotiated return to higher pay levels for employees that was due in March of 1995 was deferred until the company was stronger financially and better able to manage that commitment.

Make Reliability A Reality - A focus on reliability meant reversing Continental's traditional position in the lower half of the major airlines with respect to on-time performance and the number of customer complaints. Management of the airline defined reliability as "on-time performance, connecting bags with passengers and maintaining a consistent product quality." To achieve this goal an Operational Performance Department was created to identify and eliminate root causes behind delays. Management initiated a "We Care" Customer Service Program that sought feedback directly from Continental's customers as opposed to that relayed through the Department of Transportation (DOT). It did so by establishing a toll-free 1-800 number and including comment cards in Profiles, Continental's in-flight magazine. Goodwin had been quite active with the "We Care" program since its inception and noted:

The QIKRes system gave us a platform and provided an infrastructure that enabled us to do a number of things we were unable to do with the previous system. In the past, we limited what reservation agents could do for the customer and advised them to refer dissatisfied customers to our customer relations group in most cases. This approach effectively compounded the problem because we were just passing along angry customers and making them even more frustrated. Furthermore, an internal evaluation we conducted suggested that most of what was being done by the customer relations staff could be accomplished by the reservations agents. QIKRes is now used to provide guidelines and train reservations agents to deal with angry customers.

Although we had initially expected to reduce staff and cut costs as a result of the new system, we decided instead to use the people and time freed up by QIKRes to be more proactive in our customer relations efforts. These individuals now respond to the 3,000-5,000 comment cards we receive monthly as well as the telephone volume, which doubled with the introduction of the 800 number. We felt that redirecting the efforts of some of our customer relations staff to increase customer access would help us fulfill our corporate objective of improving Continental's image.

The DOT defined on-time arrival as getting planes in and out within 14 minutes of schedule and Continental began making strides toward this objective during the final quarter of 1994. An incentive plan was developed to encourage widespread, long-term commitment to these objectives. For every month that the airline was represented in the top 50% of the DOT on-time performance ratings, a special bonus was paid to all employees at the manager level and below. As on-time performance improved, the bar was raised to set a new achievement level.

Finally, investments were committed to developing a consistent appearance for the airline and to support modernization efforts. For the first time in ten years, in the summer of 1995, all Continental aircraft had the same exterior paintjob. The interiors were also updated, meals and snacks were offered on a greater number of flights, first-class service was available on all flights, and airport terminals were upgraded where necessary.

Working Together - The element that made the first three successful was a cultural shift toward greater teamwork and decision-making capabilities at the employee level.

Upon reviewing the effects of the first year of the ***Go Forward Plan***, Brenneman commented:

Financial results for 1995 suggested the Go Forward Plan, coupled with the favorable economic environment, was a success. But while we remained committed to the Plan's four cornerstones for 1996, I would characterize the contrast in approach to that taken in 1995 as one of evolution rather than revolution.

While the efforts to downsize and eliminate the poor business processes and strategies that had troubled Continental previously were largely successful, in 1996 Fly To Win was modified to mean a better allocation and pricing of the airline's assets in order to generate the optimal return for the company's shareholders and employees. New flights were to be added where Continental was strong and since the airline enjoyed relatively full flights on many of its routes, it began to seek a more profitable mix of business versus leisure travelers. For its part, ***Fund The Future*** changed from an intent to manage cash flow to ensure survival to a desire to reduce interest costs. A better financial and operating position led management to believe that borrowing costs could be decreased considerably. The efforts necessary to *Make Reliability A Reality* were redoubled and the bar was raised. In 1996, eligible staff received bonuses of \$100 for each month the airline was rated number one in the DOT on-time rankings and \$65 for every month that it placed second or third. Simply recording a position in the top half was no longer adequate. A variety of initiatives were also instituted to improve the appearance and convenience of travel with Continental, particularly for the OnePass Elite and business travelers. *Working Together* remained a binding objective. No long-term success was considered likely without employee support and a number of measures were put in place to help promote and monitor progress in this area.

Information Technology

Wejman noted that Continental's management team was receptive to new technologies and viewed their application as a means to continue the progress that had already been recorded and expand upon it.

Senior management understands what technology can do and is willing to invest in the right solutions. We needed an e-mail system and within thirty days of the proposal it was implemented at a cost of \$2.5 million. Their support makes my job much easier.

This knowledge of the opportunities that technology presented meant that increasingly, management was seeking answers to problems through the use of IT. Mark Erwin, SVP – Airport Services, who had been with Continental in a variety of capacities for 19 years, commented on the need for IT solutions:

We considered technical investments that assist decision making. We wanted our systems at the airports to be far more user-friendly and to perform more technical functions so that our agents could focus on customer service. Even the process of printing a ticket required considerable input from the agent. This extra effort does not provide the customer or Continental with any value. A better system would enable the agents to speed the process for customers from curbside to the plane while increasing the number of revenue generating activities they can accomplish. We were working to develop our final PC product to implement to our field.

Another technological outlet that Continental management was evaluating centered on the utilization of electronic distribution channels. Continental established a site on the Worldwide Web in March 1996 as a means to reach its customers more cost effectively than the traditional structure permitted. In addition, Reitz indicated:

We were exploring technology which could track and assimilate data on a scale large enough to support one-to-one marketing. Database marketing was critical to our future success. We wanted to be able to understand the needs and desires of our customers so that we could improve our services and customize them to individual requirements.

The implementation of E-Ticket (Continental's electronic ticketing services) was another area where management believed information technology offered a solution (Exhibit 3). E-Ticketing reduced transactions costs for Continental and increased the speed and convenience of the ticket purchase for the customer. It also provided considerable customer data and enabled the marketing staff to track individual customer activities and preferences and incorporate them in a tailored pitch to those customers with which management hoped to build long-term relationships. Although desirable, because of the complexities associated with the technologies involved, implementation was challenging. Wejman suggested:

The E-Ticket experience was a challenging transition. It was difficult to balance the changes and manage the various support contracts from numerous vendors.

While Continental's management focused on possible uses for new and emerging technologies, the NHS group, under Wejman, was also responsible for day-to-day operations of all information systems. Part of this responsibility fell under an outsourcing agreement with EDS.

The Outsourcing Agreement

The current contract, for which negotiations began in 1989, came into being as an interim agreement in February of 1991 and was officially signed in May of that year. The contract required that EDS provide data processing, systems development, system integration, hardware and software maintenance, telecommunications voice and data network services, and other telecommunications services. At the time it was signed, it was the largest outsourcing agreement in the world, worth approximately \$2.1 billion during its ten-year life. As of 1996, it was one of the largest outsourcing agreements that survived without any major changes. Reitz noted:

The Continental/EDS agreement was the first major outsourcing relationship in the airline industry and until a \$2.8 billion, 10-year agreement was signed between Delta and AT&T, it was the largest.

As with most outsourcing agreements that were developed in the late 1980's, cost savings were a primary motivation for the venture between Continental and EDS. The general cost savings impetus was given greater urgency in Continental's case as the airline was in financial distress during 1989 and ultimately filed for Chapter 11 bankruptcy protection on December 3, 1990. As such, during the time the contract was under negotiation, Continental was in the midst of restructuring its operations in order to emerge from bankruptcy and was actively seeking cost reduction opportunities wherever possible. As a result of the fact that it was negotiated during Continental's bankruptcy proceedings, the contract between Continental and EDS was in the public domain because its provisions required court approval. This was an extremely unusual feature of this contract relative to virtually all other major outsourcing agreements.

The outsourcing agreement was a multi-party arrangement between Continental, certain entities related to Continental, and EDS. One Continental-related entity was System One. System One developed, marketed, and distributed travel-related information management products and services to the travel services industry worldwide. System One also owned, marketed, and distributed a computerized reservation system to travel agencies, travel suppliers, corporations, and other significant customers. Concurrent with Continental's outsourcing agreement, System One signed a ten-year systems management agreement with EDS that provided for EDS to manage the data processing and telecommunications facilities and services used by System One. During 1995, Continental and System One negotiated a deal whereby the existing systems management agreement between System One and EDS was terminated and various assets and liabilities were transferred to a newly formed company that was owned in equal parts by Continental, EDS, and Amadeus, a European computerized reservation system. One effect of this transaction was an increased level of involvement by EDS in the selection of vendors for services that might impact this system. This created a setting where EDS had significant input in the evaluation of vendors that offered services with which EDS competed.

The two primary components of the outsourcing document were the Master Agreement which established the basis of the relationship and set the general tone for the relationship and the Services Agreement which detailed the technology resource levels that were to be made available, the services that were to be provided, and the service levels and standards that were to be met. The design of the contract was intended to be concise but complete, detailing every system and service, as well as the responsibilities of the affected parties to a very low level of detail.

Although EDS provided virtually all of Continental's information technology services, the airline retained the right to use certain other specified service providers in special circumstances. Since Continental has operations in about 40 countries worldwide, the scope of the contractual support outlined in the agreement was global but due to the breadth and complexity of Continental's operations, EDS was not able to provide the requisite type of assistance in every arena. In addition, there were other third-party service and maintenance providers in different geographic regions EDS managed by ensuring that the necessary interfaces were maintained.

Continental also secured the right to use, and on occasion did employ third-party software developers when EDS lacked the expertise necessary in a particular application. Goodwin commented:

The Local Area Networks which serviced the Reservations division were supported by another outsourcing agreement with another provider since this type of work fell outside the contract with EDS.

On another occasion, EDS coordinated the activities of a number of vendors to accomplish a large and very successful client/server project to enhance the capabilities of the Operations center by automating the process of scheduling and routing planes, scheduling crews, and ensuring that the necessary maintenance was conducted.

Jay Salter, who joined Continental in 1994 as Staff Vice President – Operations Administration after a career in the airline industry with Braniff and some smaller carriers, commented on the importance of ensuring excellent coordination between EDS and Continental in the Systems Operations Coordination Center he managed:

This center is mission critical to the airline and must be operational 24 hours a day, seven days a week. Theoretically we can accept no more than one hour of down time. In practice, even that could be too much. This places enormous demands on our systems and the people who must manage and maintain them. Updates have to be done in increments rather than one fell swoop and the vendor must have a test and development process that mirrors Continental's so that all the bugs can be ironed out before any changes are installed here.

The complexity of this situation can be magnified by any miscommunication or misunderstanding between us and our vendors. EDS is not always as familiar with our industry as we would hope. But realistically, EDS only has about seven possible airline clients in the U.S. so as an industry we remain a relatively small part of their overall business.

Further, the airline management did not outsource the strategic direction, management control, or cost control. Continental's management recognized the need to retain these responsibilities in house but did make provisions to ensure that guidance and assistance were sought from EDS in each of these areas. This was accomplished through the development of a partnership with the senior EDS management on the account and the co-location of several EDS account team staff and various project managers with Continental's information technology personnel.

Despite the provisions of the contract, some concerns remained among Continental's IT management with respect to the airline's actual ability to make strategic changes to its outsourcing decision if it chose to do so at the end of the ten-year agreement. Miller commented:

Outsourcing is forever. Its like an old-fashioned marriage - till death do you part. The time and expense necessary to actually migrate away from the outsourcer is substantial. Although our contract with EDS spells out full transition support, changing the IT structure would be an incredible undertaking. It could easily take a year just to engineer and provide the facilities to re-terminate the data networks. The establishment of data processing capability and the actual migration of the networks and the applications would take even longer. Accordingly, alternative strategies must be developed to facilitate changes in the contractual relationship at the end of the initial contract period. In many ways, the advent of distributed computing reduces this problem.

Organization of the MIS Department

During the five years since the contract's inception, EDS had consolidated Continental's four data centers into one central location and had modernized the environment EDS had also consolidated Continental's extensive 800 Reservations service and the airline's supporting data network, providing economies of scale that were previously unavailable.

The desired cost reductions were achieved and Continental's information technology department was reduced from the several thousand individuals who worked for System One (Continental's former information technology arm) to a staff of 25 (Exhibit 4).

Wejman headed the Technology Division and was responsible for IT strategy development within the context of management's business objectives for the airline. Her role was to act as the advocate for technology in the company and to coordinate with senior management of both Continental and EDS to ensure that common goals were defined and pursued. Her efforts were supported by three departments.

The first of these was the Telecommunications and Technology Services group which was Bill Miller's responsibility. In this capacity he managed the EDS contract, IT service levels, IT resource management, infrastructure, all modes of telecommunications, telecommunications services, hardware/networking project management, support/maintenance management, contracting, airline industry relations on technical matters, data security, capacity planning, business resumption planning, budget management, and strategic planning for the division.

A second group was responsible for Applications Development. The director of this group dealt with user interface issues, airline technology alliances, system requirements, project planning, project management, and the management and allocation of EDS programming resources. This director also had oversight responsibility for EDS project managers supporting Continental development projects.

The final group was the Advanced Applications and Distributed Computing group. The director of this group was accountable for advanced technologies, client/server engineering, desktop applications, graphical user interface applications for front-end legacy systems, PC equipment selection, acquisition and support.

Miller described some of the challenges facing the IT department in the outsourcing environment:

The IT staff must be the vendor's most stringent in-house critic but must also be a staunch public defender of fairness, especially in those circumstances where unpopular positions are being reviewed. The internal IT representatives must walk the thin line between the system's users at Continental and EDS. It is often an uncomfortable position.

In an outsourced organization such as ours the requirements of IT professionals are different. We are not thick in people so we must be rich in skills. With fewer people we rely heavily on individuals to have a broad range and reasonable depth of expertise.

Managing The Relationship

The perception of EDS' role in the implementation of the technical changes that accompanied the Go Forward Plan was mixed. Goodwin noted:

EDS was very helpful during the installation of equipment for QIKRes. We had the system installed and operational in nine months and we enjoy a very strong relationship with EDS from a technical support perspective. Beyond that though, we don't get many of the things I would expect. It may be because of the nature of our original agreement where EDS assumed the old infrastructure with its reliance on mainframe technology and the associated approach to business. We have moved toward greater use of client/server applications but EDS has not evolved to provide the support we need in the new structure. EDS' strength with respect to the

application of PC technology and other technological opportunities available today is not apparent. They seem better suited to a maintenance role than a consulting role.

The ASAP system, a front-end customer handling initiative designed to make the customer's experience better and more efficient had been a disappointment to many of the managers at Continental because of problems that had delayed its roll-out. Stolkey acknowledged, "EDS' record on client/server applications has been mixed."

Management of the Systems Operations Coordination Center, which scheduled and monitored all of Continental's aircraft, crews, and maintenance worldwide, enjoyed a generally positive relationship with EDS and had recently completed a very successful client/server application. Danny Wiesner, who had coordinated the development of that project for Continental, commented:

EDS' size gives them a depth of subcontractors from which to draw. They have marketing agreements with a broad array of software providers internationally, can track down solutions to our needs on a global basis, and have tremendous expertise with systems architecture. Where we have encountered some challenges have been with internal personnel moves at EDS that can disrupt our projects as key people are pulled away and we have to provide on-the-job training for the new personnel and bring them up to speed on project and the industry. Sometimes communication is a problem if the people at EDS are not familiar with the terminology of the airline industry in general or Continental in particular. This can result in missed target dates as people act on what they think was meant when really their actions are moving us in the wrong direction. It is not entirely the fault of EDS though. We need to be more thorough in defining our requirements and documenting our processes so that they are less confusing.

There were different levels of interaction between Continental and EDS personnel. Managers in some areas, where technical needs were less immediate or severe, relied on Wejman's IT staff to communicate any requests for certain services desired under the contract to EDS. Others, like the Reservations division of Continental which was a large user of technology, had a different approach. Operations support related assistance worked directly with the EDS account manager. On systems related concerns Goodwin's group worked with Wejman's office to define requirements. Reitz noted that for her group:

Most IT requests are channeled through Wejman's area but we do have some direct input to EDS as a user on certain programming issues. As much as possible we like to coordinate the IT-related activities of our area concurrently with Janet's group and the EDS representatives. This process helps make introductions and improves the management of the relationships through broader general understanding of what we are trying to accomplish. I don't believe that Continental's internal IT group should have to act as the advocate or defender of an outsource vendor. That leads to mistrust and misunderstanding. Given the rapid pace of change in our business, we all benefit from active participation and user buy-in is established up-front this way.

The coordination of activities between Continental and EDS was accomplished in a number of ways. The primary means occurred through the interaction between the assigned counterparts at Continental and EDS. This interaction included both formal and informal communication channels. In addition to the co-location of several integral personnel, the relationship was managed through a combination of face-to-face meetings, telephone conversations, and e-mail interaction on a daily basis. The fact that Continental had only a small staff of in-house information technology professionals necessitated a considerable degree of integration with EDS personnel and this format offered a basis for the management of the relationship and a prompt communication of system management issues and concerns. The other methods of managing the relationship and coordinating the activities of Continental

and EDS occurred through project review meetings, joint committees, and monthly "close" meetings. The specifics of each are outlined below.

Project Review Meetings - These meetings were regularly scheduled, on a weekly or monthly basis, between EDS personnel and system users at Continental who were assigned to particular project teams as functional experts to provide input that reflected user needs, in support the technical design and development effort. Depending on the nature of the project being discussed, staff members from Continental's information technology group might or might not have attended. The objective of these meetings was to provide the necessary information to both Continental Division management and EDS Development and Account Team management

Joint Committees - The principal joint committees were developed to assist in the management of the relationship, including the application steering committees which consisted of EDS programming staff and functional specialists, management from the functional divisions of Continental, and representatives from the airline's information technology staff. The responsibility of these committees included managing the use of those programmer resources that were assigned to specific applications and to plan and approve any required application modifications, assigning the appropriate priorities to the different requirements. These committees worked with support and maintenance programming resources and were separate from 'major' (i.e. any project requiring more than 1,000 hours) modifications or new application development.

Standing joint committees existed for managing telecommunications and facility installation projects, as well as the introduction of client/server technology. The senior committee was the "Core" committee which was created to provide strategic direction and to resolve those issues that the "Standards", "Configuration", or "Infrastructure" joint management committees were unable to settle. In addition, joint management committees were formed as needed to supervise special management undertakings and resource management projects.

Monthly Close Meetings - These meetings were held monthly between Continental and EDS personnel to summarize and assess the performance of the outsourcing partnership during the previous month. Unlike project management reports that were received on weekly basis, the central functions of the outsourcing relationship were reported monthly through three comprehensive performance reports. These were the Monthly Performance Report which detailed the service levels, network performance, application performance, and performance trends for all of the data; the Telecommunications Close Package which enumerated the performance and cost of each of the various voice, data, telephone, switch, and related services, equipment maintenance, equipment leases, and various outside services; and finally, the Information Processing Center Close Package which itemized the use of CPU, DASD, Tape, and print resources, CPU performance, and data center configurations.

The reports generated by the monthly close meetings were reviewed at formal meetings of the information technology staff and the appropriate technical and financial professionals at EDS. Rather than merely a financial or performance review, the monthly close meetings, reviewed financial issues, operational performance, project status, management directed initiatives, and current and potential problem areas. The basis of these meetings was management by exception. Although there was daily contact between the parties involved in the monthly close meetings, their purpose was to provide a forum for professional discussions of technical performance and cost management issues without creating a formal issue between Continental and EDS. Issues that arose in these meetings need only be formalized if a satisfactory resolution could not be reached by the parties involved.

Although the Outsourcing Agreement was quite detailed, daily operations between Continental and EDS had revealed some areas where dissatisfaction existed. Stolkey noted the changes he had seen in the relationship:

In the late 1980's and early 1990's, when our agreement was first drafted, Continental was very cost focused due to their bankrupt status and uncertain future. During the years that followed, there was a move within this relationship and other outsourcing arrangements, to tie the revenue of the outsourcing vendor to the results received by the customer. Until 1994 and 1995, Continental's primary concern and EDS's primary responsibility, was improvement and solid performance from the legacy systems. Increasingly however, Continental expected innovative new processes, technologies, and software from EDS as their business requirements transformed. Continental received considerable value under the terms of the contract with EDS. They enjoyed far superior mainframe performance than was previously the case, stable data and telecommunications hardware, a consolidated data center, reliable data management, and reduced telephone service costs. Further, we provided systems engineers to Continental at a very competitive cost.

Reitz commented:

There is probably always a reduced sense of control after outsourcing and the belief that when the service was internal things were better but this is often wishful thinking. Like other businesses, Continental cannot be expert at every non-core aspect of its operations. We need partners to accomplish our long-term objectives and EDS is one such partner. However, no relationship or contract can be viewed as static in an environment where changes occur as quickly as they do in our industry and our company. These changes necessitate modifications but we must make those changes in a manner that benefits both parties.

What Should Wejman Do?

Although her conclusions would be drawn from her experiences with the management of an outsourcing relationship in the IT arena, the importance of the lessons Wejman had learned would be pertinent throughout Continental as the airline sought ways to best manage its other outsourcing relationships and considered the possibility of outsourcing other services. How should she now approach EDS, and what changes would be necessary to meet Continental's changing needs? How flexible should she be, given EDS' compliance with the terms of the original agreement? How should Wejman manage Continental's reliance on EDS for so much of its technological needs?

**Exhibit 1: Continental Airlines Executive Organization Chart
(as of January 1997)**

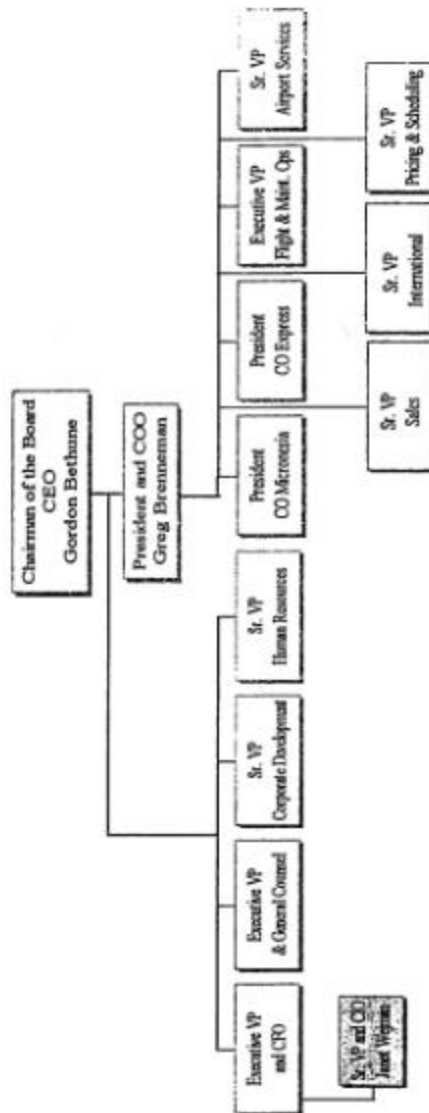


Exhibit 2: Summary of Financial Information

Statement of Operations (In millions of Dollars, except per share data)	Reorganized Company			Predecessor Company		
	Period From Reorganization (April 28, 1993 Through December 31, 1993)		Period From January 1, 1993 Through April 27, 1993		Year Ended December 31, 1992	
	Year Ended December 31, 1995	Year Ended December 31, 1994	Year Ended December 31, 1993	Year Ended December 31, 1993	Year Ended December 31, 1992	Year Ended December 31, 1992
Operating Revenues	\$ 5,830	\$ 5,670	\$ 3,911	\$ 1,857	\$ 5,459	
Operating Expenses	N/A	5,681	3,815	1,970	5,565	
Operating Income (Loss)	N/A	(11)	96	(113)	(106)	
Nonoperating Income (Expense)	N/A	-840	-147	-883	-19	
Extraordinary Gain	N/A	-	-	3,619	-	
Net Income (Loss)	\$ 224	\$ (813)	\$ (39)	\$ 2,640	\$ (125)	
Earnings (Loss) Per Share	\$ 7.20	\$ (23.76)	\$ (2.33)	N/A	\$ (2.70)	

Exhibit 3: Continental's E-Ticket

Continental Introduces
Electronic Ticketing

Your Express Lane to the plane.

Introducing Continental's E-Ticket

Electronic ticketing. Or E-Ticket for short. The shortest, fastest, easiest way to your flight. All you need is a confirmation number and a credit card to travel through the airport, making only one quick stop to pick up your boarding pass at the E-Ticket Machine. Or simply show a photo ID at the gate or ticket counter. It's that simple.



How does E-Ticket work?

First, call your Travel Agent or Continental at 1-800-523-FARE to make your reservation and purchase your ticket. At the airport, look for the E-Ticket machine, insert your credit card to activate the machine and identify you, follow the easy prompts that allow you to check-in, and out comes your boarding pass. Now you're ready to board. It's that simple. Have last minute travel plans? Read on. E-Ticket can help there, too.

What exactly can the E-Ticket machine do?

It allows you to purchase an E-Ticket for same day travel. It will issue your boarding pass if you've already purchased an E-Ticket. It allows up-to-the-minute seat selection and changes. Helps check your baggage (baggage service for E-Ticket Machines are located at the ticket counters). Records your OnePass number for proper mileage credit, and if necessary, you can change your flight times for that day of travel. Gold Elites can automatically upgrade to first, and if first class is full, they will be added to the standby list.

Sounds great, where do you sign up?

Good news, you don't have to sign up. All you need is a major credit card. E-Ticket is as convenient and easy to use as say, a telephone.

Now you can fly through the airport, too.

Where is E-Ticket available?

E-Ticket is available in the mainland U.S. and Alaska. And E-Ticket machines will be located in our major airports. In those cities that don't have E-Ticket machines, just show up at the gate with a photo ID, and a Continental agent will take care of everything for you. If you have luggage to check, proceed to the ticket counter and an agent will assist you.

Are you ready for The Express Lane?

Your Travel Agent can tell you all about it. Or call 1-800-523-FARE, an easy number to remember. All from the people who give you More Airline For Your Money and Continental's new E-Ticket.

Of course, no matter how convenient you find our new E-Ticket service, a friendly face or helping hand is never far away.

In order to use E-Ticket, you must make your reservation through your participating Travel Agent, call Continental or visit a local City Ticket Office.

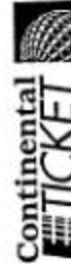
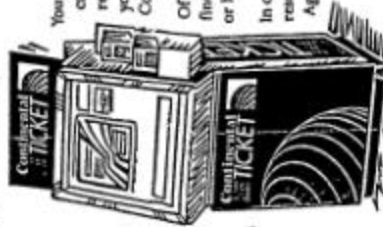
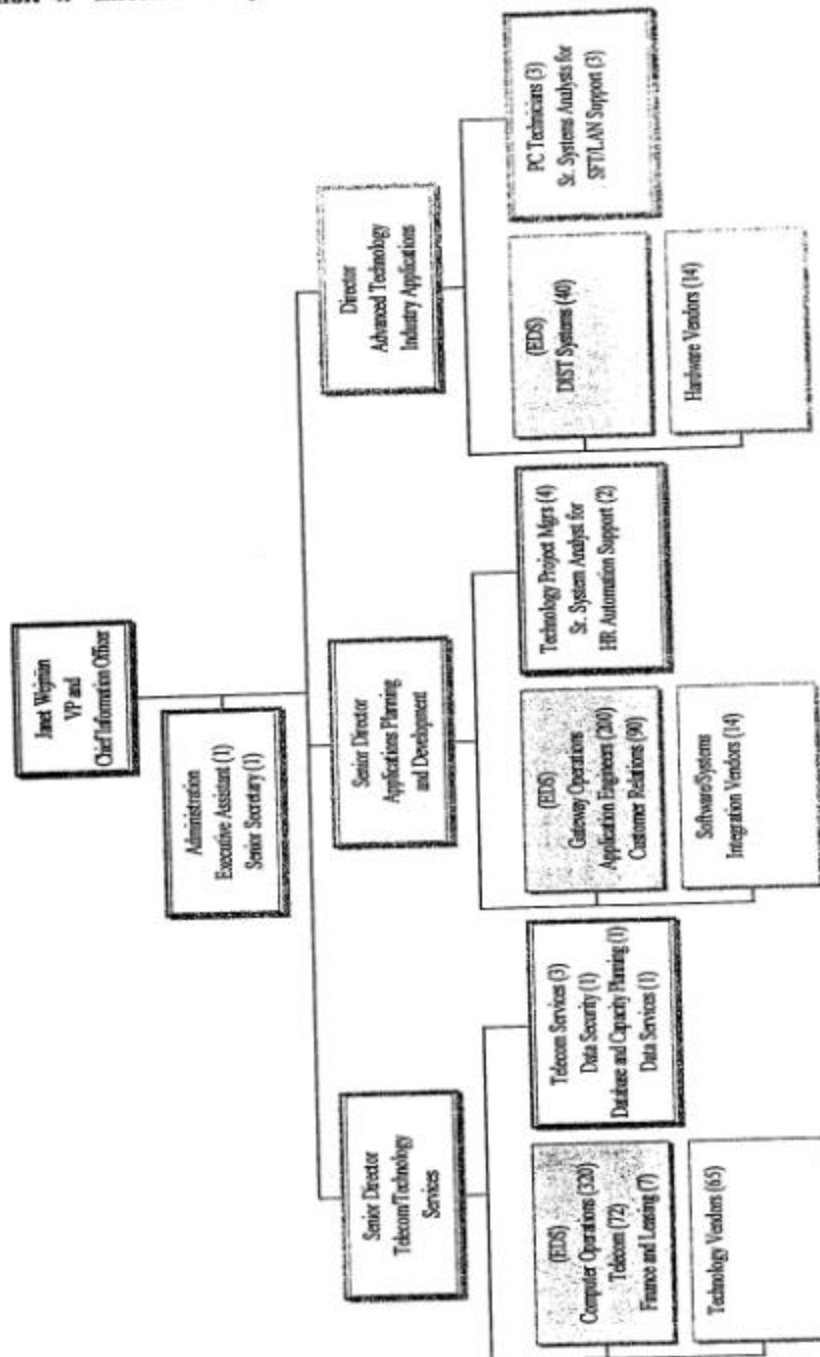


Exhibit 4: Information Systems Organization Chart



Note: The numbers in parentheses represent the number of employees within that function. The shaded boxes represent organizational responsibilities provided by EDS, the unshaded boxes represent those handled by Continental and their vendors.