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Southwest Airlines in Baltimore

Matt Hafner, the Southwest Airlines station manager¹ at Baltimore Washington International Airport (BWI), slowly shook his head. It was June 7, 2001, and he had just received the final operating performance numbers for May. Station performance had certainly improved since his arrival at Baltimore 11 months before, thanks to an intense focus on hiring and controls. Still, he knew there was a long way to go. Matt² had been with Southwest for 10 years and had worked in many different stations, from the smallest to now one of the largest. Baltimore was already bigger than Chicago and might even overtake Phoenix and Las Vegas, for Matt knew that Southwest planned to expand the Baltimore operation rapidly over the next few years. He wondered how the station could accommodate the additional growth when its operational performance still lagged Southwest's system-wide average (see **Exhibit 1**).

An Overview of Southwest's Strategy

Unlike the major U.S. airlines, Southwest Airlines viewed the car and bus as its chief competition. Advanced by Rollin King and Herb Kelleher, the company's founders, this notion permeated the company and drove its commitment to the most inexpensive fares and most frequent flights (up to 10 a day) between urban markets separated by 500 miles or less. This too flew in the face of prevalent industry practice, in which a "hub and spoke" system consolidated passengers from small markets at hub airports to assure relatively full planes for long-haul flights. It also meant that Southwest planes spent less time aloft relative to other carriers' planes. The time Southwest aircraft spent on the ground, as well as the physical stress on aircraft from a higher frequency of take-offs and landings, was costly and labor intensive: on the ground, a wide array of specialized handlers serviced the planes and processed the passengers.

¹ Southwest referred to each airport where it had a presence as a station.

² In keeping with the informal style of address used in this organization, we use first names for all employees.

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Southwest Airlines adopted a number of operating strategies to reduce operating costs and offset the productivity disadvantages inherent in short-haul, point-to-point flying. First and foremost, Southwest focused on turning aircraft around quickly at the gate to minimize an airplane's time on the ground—non-revenue producing time for an airline's most costly asset.

Second, Southwest used only one operating platform, the Boeing 737. This enhanced efficiency in several ways. Crews, furnishings, and spare parts were interchangeable and maintenance tended to be more predictable. Although there were differences between the early 737 Series 200 and the later Series 700, Southwest standardized the cockpit configuration as much as possible to minimize additional training requirements for pilots. The single operating platform also routinized cleanup, provisioning, and ramp operations (unloading and loading baggage and cargo), which helped speed turnarounds at the gate.

Third, where available, Southwest used less-congested airports with easy access to large metropolitan areas, both to avoid disrupting flight operations and to maximize aircraft time in the air. In large cities, Southwest often used older facilities, like Dallas's Love Field or Chicago's Midway Airport, that had been abandoned when new, larger airports were constructed.

Fourth, Southwest offered limited services, specifically no in-flight meals—only beverages and snacks—and did not transfer baggage to other airlines. Finally, Southwest offered open, single class seating, which created efficiencies in several ways. There was no need for computer hardware and software to sort and hold seating assignments, nor for the time and expense of printing boarding passes and verifying them as passengers boarded the aircraft.³ Perhaps more importantly, the open seating system encouraged customers to board eagerly to lay claim to their desired seats.

Quick turnarounds at the gate, however, required a high level of coordination among 12 distinct functional groups: pilots, flight attendants, gate agents, ticket agents, operations agents, ramp agents, baggage transfer agents, cargo agents, mechanics, fuelers, aircraft cleaners, and caterers. These groups were stratified by status, expertise, and were even spatially separated at the terminal. In the U.S. airline industry, these groups did not have a history of warm cooperation.

Over time, a set of human resource practices evolved at the company to facilitate coordination among these diverse groups. Southwest invested substantial amounts of time selecting employees for attitude, teamwork, and service orientation. A senior manager summarized Southwest's unwritten rules: "You have to be compassionate to internal and external customers. You have to have a positive attitude. You have to want to work and use common sense. You have to have a great sense of humor—humor diffuses stress. And you can't be an elitist."⁴

Formal training occurred for new hires at the two campuses of Southwest's "People University" in Dallas. New flight attendants trained for four weeks, new supervisors for three and a half days, and continuing supervisors received 80 annual hours of training. Front-line managers received a specially designed two-day course each year.⁵

On top of the company's pre-existing emphasis on hiring team players willing to go "above and beyond" their primary responsibilities, much of Southwest's training focused on team building. Cross-training was offered and employees were encouraged to switch jobs. Broad latitude was given

³ Instead, passengers received a numbered plastic card to indicate the order of boarding at the gate.

⁴ James Heskett, "Southwest Airlines: 1993 (A)," HBS case No. 694-023, p. 9.

⁵ Charles O'Reilly and Jeffrey Pfeffer, "Southwest Airlines: Using Human Resources for Competitive Advantage (A)," Stanford University Graduate School of Business case No. HR-1A, pp. 9, 10.

to employees to enable them to serve customers. One operating manager's rule was, "Do whatever you feel comfortable doing for a customer. We want people to ask for forgiveness, not for permission." Many cited the example of a manager who made a \$100,000 blunder and was promoted a few months later.

Southwest employed more supervisors per front-line employee than other major U.S. airlines, asserting that supervisors were the most important leaders in the company, short of the CEO. Supervisors had the responsibility to coach and advise front-line employees, and were expected to pitch in and help out actively with any front-line task.

Southwest also placed a high priority on resolving conflict between functional groups—when employees had a lingering work-related misunderstanding, their supervisors required them to get together to work it out. At the same time, Southwest focused on building positive relationships with its unions while negotiating flexible work rules that would allow employees to perform the work of other functional groups. Southwest was the most heavily unionized U.S. airline.

Finally, Southwest's culture centered on family, fun, and freedom. Family was more than a metaphor for company culture at Southwest: many employees reported family ties with other Southwest employees, something the company encouraged as long as those involved were not also in a reporting relationship. Employees regularly said that they liked their jobs because "It's fun to work here, and I have a lot of freedom in my job," often noting that freedom meant the opportunity to offer extraordinary customer service. Southwest differentiated its service in terms of the flair with which it was delivered. An operating manager commented: "We're kind of a big family here, and families have fun together. The passengers are part of the family too, so we have fun with them." Fun included playing games on board the aircraft, such as "Whose sock has the biggest hole?" as well as games and contests on the ground, particularly if a flight was delayed.⁶

Partly as a result of these practices, Southwest employee turnover was significantly lower than that of other U.S. airlines, and *Fortune* magazine had named Southwest one of the "100 Best Companies to Work For in America" three years in a row.

Results

Between 1972 and 2001, Southwest stock outperformed all other U.S. stocks.⁷ This and Southwest's position as the only consistently profitable U.S. airline⁸ validated its unconventional methods (see **Exhibit 2** for financial performance and **Exhibit 3** for comparison of Southwest Airlines to other U.S. carriers). On the customer service side, Southwest won the airline industry's "Triple Crown"—the fewest delays, the fewest complaints, and the fewest mishandled bags—not only for individual months but for entire years—1992 through 1996. Southwest also prided itself on consistently offering the lowest fares in the industry. The U.S. Department of Transportation in 1993 published a report on the so-called "Southwest effect," documenting the impact on fares and passenger volumes when Southwest entered a market. According to the report, when Southwest announced service on a new route, other airlines serving that route almost immediately reduced their fares, and sometimes increased their frequencies as well. The effect reduced fares by an average of 65%, and increased passenger traffic by up to 500% (**Exhibit 4** shows the "Southwest effect" on the

⁶ James Heskett, "Southwest Airlines: 1993 (A)," HBS case No. 694-023, p. 3.

⁷ Calculations performed on data supplied by CRSP.

⁸ Southwest was profitable in all but the first of its 30 years.

Baltimore-Providence market). Southwest employees liked to point out that their net impact was to offer the “freedom to fly” to a larger segment of the traveling public, expanding the overall market rather than just taking market share.

By January 2001, Southwest served 58 airports in 29 states and was the fourth largest domestic carrier in terms of customers boarded. The company operated more than 2,650 flights a day using a fleet of 342 Boeing 737s with an average age of 8.4 years—one of the youngest pure jet fleets in the domestic industry. Southwest’s success inspired competitors—including People Express, Midway, Value Jet, Continental Lite, Delta Express, MetroJet and the United Shuttle—to copy elements of its strategy, but none had generated sustainable profits from doing so. JetBlue was the newest airline to imitate elements of the Southwest model, and though its early performance was impressive, the jury was still out on its longer-term success. Even so, Southwest’s performance had slipped over time; the company had not earned a “Triple Crown” since 1996.

The Baltimore Station

In 1993, Southwest selected the BWI airport in Maryland, 30 miles from Washington, D.C., as its first East Coast gateway and began service from BWI to Cleveland and Chicago on September 15. One year later, the airport broke ground on a \$27.6 million expansion project to extend the terminal and create six more domestic gates. Southwest signed up for all of them. Through the 1990s, Southwest added more cities to its non-stop service from Baltimore (see **Exhibit 5**). After just seven years, Southwest’s share of BWI passengers reached 34%, displacing the perennial leader, US Airways (28.5%). Baltimore had become one of Southwest’s eight “mega-stations”—so called because it offered more than 100 flight departures per day. (**Exhibit 6** lists all cities served by Southwest.) Given the continued growth in number of flights projected by management, Southwest’s Baltimore gates would reach capacity limits later in 2001. Southwest’s bag sorting area had reached its capacity already. BWI was planning to renovate Concourses A and B to provide more gates for the company.

Executive Vice President of Operations Jim Wimberly explained the importance of BWI to Southwest:

Baltimore plays an important role in our system, competitively, given its location in the center of the East Coast. We’ve had a lot of serious discussions internally about how much more Baltimore can take given the facility constraints that we have, and the shortage of employees that we have there. It’s a customer service issue because we don’t want to put our customers through [an] experience in an airport where we can’t deliver the type of product that our reputation stands on.

One specific operational challenge in Baltimore was the volume of connecting passengers and their impact both on station performance and on the customer’s experience with Southwest. **Exhibit 7** compares BWI’s Southwest passengers to those at other large Southwest stations.

Passenger Connections as an Operational Challenge

Matt Hafner described the effect of passenger connections on Baltimore operations:

Over the past year, 800,000 passengers made connections here—about 25% of our total passengers at Baltimore—with probably an equal number of transferred bags. This makes us one of Southwest’s biggest transfer stations. Right now, our reservations system generates

passenger itineraries with a minimum connecting time of 35 minutes. This means that passengers can't book connecting flights with less than 35 minutes scheduled between the arrival of the first flight and the departure of the second flight.

Today, 83% of Southwest's revenue is from direct one-stop⁹ or non-stop flights. The other 17% of our revenue is from connecting flights. We do not want to leave 17% of our revenue on the table, but these connecting flights have complicated our service design. We might have three people a month going from Fort Lauderdale, Florida to Spokane, Washington, yet the computer system carefully adjusts the entire system schedule to make that flight convenient. This is compounded by the fact that we have given our people at individual stations and at customer service in Dallas the authority to make decisions about holding a flight. Our employees want to serve the customer—that's their job—so we end up holding flights pretty often. Now we are rethinking the practice of holding the 100 passengers ready to leave Nashville for Spokane—a hold that will ripple throughout the system—for the one person whose flight has not yet arrived from Fort Lauderdale.

Jim Wimberly placed BWI's case within the context of the total system:

Connections definitely are a challenge. It's not that the percentage of our passengers who connect has changed that much. Overall, for the system as a whole, connections have been relatively constant over the past 10 years, in the 20% range. What has changed is that we have some cities like Baltimore that have a disproportionate number of connecting passengers. So connections have become more concentrated in certain cities than they used to be in our system. For example at Baltimore, I think they're closer to 30%.

Colleen Barrett, Southwest's President and Chief Operating Officer, pointed out that any workable solution would have to fit Southwest's particular vision:

Most airlines' schedules are operationally driven. Ours is marketing driven. When we develop a new flight schedule, our first priority from a marketing standpoint is, "Where do we need non-stop flights?" The second priority is to create the optimum number of one-stop and two-stop direct flights from a marketing standpoint. The last priority is, "What can we make from connections?" Connections are a significant part of our revenue, but from a marketing standpoint, based on what the customer wants, it is our last priority.

Coordinating Southwest's Baltimore Operations: Flight 110

Southwest's airport operations were unique in the U.S. industry. Unlike other carriers such as American Airlines, which centralized aircraft turnaround and ground operations and managed each of its daily flights from its headquarters using an integrated computer system,¹⁰ Southwest decentralized this coordination, leaving it to employees on site at its airport stations. Coordination had two aspects: the coordination of Southwest flights into and out of a given station, and the coordination of each flight turnaround. Operations coordinators and supervisors managed the former task, and operations agents the latter, as discussed below. Like American, Southwest had managers responsible system-wide traffic flow based at Dallas headquarters. Unlike American, these

⁹ In which ongoing passengers to a final destination would stay onboard while an aircraft took on additional passengers at an intermediate airport.

¹⁰ See Espen Andersen and F. Warren McFarlan, "American Airlines: Object Oriented Flight Dispatching Systems," HBS case No. 195-046.

Southwest supervisors on duty (SOD) did not orchestrate local changes from Dallas but worked with the operations supervisors at individual airport stations to manage overall traffic flow.

Consistent with its high supervisory ratios, Southwest relied on operations supervisors to look several hours ahead of the course of the daily flight schedule in order to identify potential problems before they emerged. Constant contact with Dallas SOD kept the ops supervisors informed of systemic developments likely to affect traffic in and out of their station,¹¹ and also helped assure that the solutions they proposed did not unduly burden the system beyond their station. The ops supervisors, in coordination with the SOD, would then work to design solutions to these challenges. In practice these included holding planes or resolving delays, coordinating gate usage accordingly, changing planes, and so on. In addition to monitoring the schedule, the ops supervisors also mentored ops agents and were frequently at the gate with them helping with difficult turnarounds created by overbooking, delays, or baggage issues.

Southwest staffed its ops agents at much higher levels than other airlines did. Ops agents coordinated all aspects of flight turnaround, effectively spanning the boundaries of the 12 participating groups of handlers, and were empowered to organize and coordinate all aspects of the turnaround, from beginning to end, to maximize speed, productivity, and efficiency.¹² The high staffing levels allowed Southwest to assign a single flight to each ops agent (rather than the industry norm of multiple flights per agent). That agent would begin preparing for and tracking the single aircraft's turnaround an hour prior to its arrival and be totally focused on that flight up through its departure and the transfer of paperwork and information downstream to the ops agent at the now-outbound flight's destination.

The ops coordinator brought all the strands of activity together from the Coordinator's Room, a communications nerve center at the station, managing the execution of decisions made by the supervisory team and communicating with Dallas, ops supervisors, ops agents, and pilots in flight to ensure that all concerned were informed. The ops coordinator role was filled by ops agents on a rotating basis.

The following pages recount the how the Southwest team at Baltimore managed the turnaround of Flight 110 on June 7.

The Operations Coordinators

Alice, the on-duty ops coordinator, and Darlene, her assistant coordinator, worked from the Coordinator's Room on the tarmac level to bring in arriving flights and assign them to gates. In the room with them were the ramp coordinator and the customer service coordinator. The ops supervisors worked just outside the coordinator's office, and streamed in and out constantly with updates and information. During their 3:00 p.m. to 11:00 p.m. shift, Alice and Darlene were expecting 63 flights at Southwest's 16 gates, a typical evening. Their colleagues on the morning shift had brought in 64 flights to the same 16 gates. Alice and Darlene could view two of the gates directly through the large window facing the tarmac, and the other 14 via television screens mounted above and to their right. At a glance they could watch aircraft being marshaled into their gates, jetways being placed into position, and aircraft being serviced by the ramp crew assigned to each gate. They

¹¹ Delays caused by weather, or back-ups at particular airports, etc.

¹² Jody Hoffer Gittel, "Coordinating Services Across Functional Boundaries: The Departure Process at Southwest Airlines," in Ron Zemke and John Wood, eds. *Best Practices in Customer Services: Case Studies and Strategies* (Amherst: HRD Press, 1999).

were in radio contact, through a company specific frequency, with Southwest airplanes arriving or departing Baltimore.¹³

Throughout the day, Southwest employees continually updated OTIS (Operations Terminal Information System)—an internally developed system for tracking flight information. OTIS contained anticipated passenger totals (revenue passengers as well as non-revenue passengers such as Southwest employees), in addition to all the information that each station sent down-line to the next station receiving a flight. OTIS included information pertinent to Southwest's operations, such as the weather, system-wide, and particular flight delays. Each delay was tagged with its location and cause—boarding passengers, late arrival, equipment, radar, and so on.

Alice's OTIS screen tracked all flights bound for Baltimore. The left side of the screen listed all the incoming flights with their scheduled and expected arrival times. For every incoming flight, the right hand side of the screen listed its outgoing number and the scheduled departure time. Each flight entry had multiple status indicators, and double-clicking on them provided additional information about the flight (see **Exhibit 8** for a screen view of OTIS). Flights that were expected to arrive late or early required particular attention, since either event could require changes to gate assignments, with possible repercussions for all departments preparing to turn those flights around.

Darlene helped Alice coordinate maintenance responses to requests called in by inbound pilots, and by discussing with the dispatch SOD at Southwest's Dallas headquarters any local changes that might affect the scheduling of flights, planes, or crews beyond Baltimore. Darlene was also responsible for updating the Flight Information Display System (FIDS) that displayed information on gate assignments and arrival and departure times throughout the airport for Southwest employees and passengers.

Alice and Darlene had already noticed that Flight 110 from Nashville had left 40 minutes later than expected. Regularly scheduled to arrive at 8:15 p.m., it now showed up on OTIS as expected in at 8:55 p.m. Onboard were 33 passengers due to make connections in Baltimore. Six of them were connecting to Flight 232 to Buffalo, departing at 8:40 p.m. Even if Flight 110 could make up some time in the air, the delay would almost certainly jeopardize those connections. Three other passengers from Flight 110 were scheduled to transfer to Flight 1819 to Albany at 9:25 p.m. Twenty-four others had layovers long enough to make their connections, unless Flight 110 arrived much later than 9 p.m.

Southwest employees had the authority to hold flights in order to accommodate connecting passengers if no convenient alternative flights were available. Early in the day, plenty of reasonably convenient alternatives existed, and holding an early flight would propagate delays throughout the whole system. As the day progressed, these trade-offs shifted. Darlene decided to hold Flight 232 to wait for the connecting passengers from Flight 110. She called the dispatch SOD in Dallas to inform him of this decision, asking first whether he saw any reason not to hold Flight 232. Dispatch agreed with Darlene. Having decided to hold Flight 232, the challenge became how to minimize the delay as much as possible. Even though no passenger on Flight 232 was scheduled to make connections in Buffalo, all were eager to be home.

As Alice made radio contact with each inbound flight, she notified the pilots of passengers onboard who had tight connections. A customer service coordinator working with Alice notified the gate agents that Flight 110 had "hot passengers"¹⁴ who would have to be met when they arrived and

¹³ Pilots used other frequencies to communicate with the airport's control tower about approach, departure, and ground movement.

¹⁴ "Hot passengers" and "hot bags" were those arriving with connection times less than 35 minutes. They were accorded special attention.

directed to their connecting gates, with a particular urgency for the passengers connecting to Flight 232. The ramp coordinator working with Alice was making similar arrangements to get the “hot bags” expedited to the departure gates. The computer indicated that the six passengers connecting to Buffalo had checked a total of 10 bags and one stroller. The ramp coordinator called the ramp supervisor who would be working Flight 110 to let her know about the “hot bags.”

The Operations Agent

Doug, the ops agent assigned to turn incoming Flight 110 from Nashville, Tennessee into outgoing Flight 110 to Manchester, New Hampshire had been monitoring its progress for over an hour. At 7:30 p.m., the status column of the OTIS Coordinator’s Log program showed an icon representing a clipboard, indicating that Nashville operations had not completed full data entry to hand off Flight 110 to Baltimore operations, even though it was already aloft.

The display for Flight 110 turned red. This indicated that there was new information in the OTIS system—actual numbers of passengers and cargo bin contents broken down as to local, transfers, and those continuing to Manchester had just been sent from Nashville. OTIS also included Nashville’s Dispatch Report detailing other items in each cargo bin (e.g. a stroller in bin B) and the weight of mail and cargo continuing to Manchester. With this information, Doug filled out the top part of the Cargo Bin Loading Schedule (see **Exhibit 9**) showing where baggage and cargo were positioned on the incoming flight according to the final destination of the items. One of Doug’s responsibilities was to determine overall loading for the flight to ensure a stable flying configuration. A smooth takeoff required that the pilot set the correct tail “trim factor”¹⁵ adjustment based on weight distribution calculations. This compensated for front and rear weight distribution.

At 7:45 p.m., 60 minutes prior to Flight 110’s expected departure from Baltimore, Dallas sent through OTIS the final departure packet detailing an allowed fuel range at the time of departure. The minimum value of this range was determined by the requirements to make the trip safely. The maximum value of the fuel range was determined either by limitations on the weight the aircraft was allowed to carry during a landing, or by the attractiveness of local fuel prices. Southwest constantly monitored fuel prices at different airports, and this evening it would be advantageous to load as much fuel as possible onto the aircraft during the stop in Baltimore. Doug prepared a Fueling Invoice stipulating that the minimum requirement was 11,000 pounds of fuel, but requesting that fueling continue up to 18,000 pounds if time allowed.

At the moment, OTIS showed 151 booked passengers out of Baltimore on Flight 110, 14 more than capacity. The passengers included 91 originators, 20 connects, and 40 people who were continuing from Nashville. Southwest only charged a customer’s credit card when it issued the boarding pass. Customers therefore frequently made multiple flight reservations for the same trip, taking the flight best suited to their eventual schedule. “No-shows” were often a high proportion of apparent customers.

Doug was preparing for a fast off-loading of passengers and bags to Flight 232, and for the 15-minute turnaround that was required whenever a flight arrived late. As long as Baltimore could turn the flight around in 15 minutes, it would not be charged to the station’s on-time performance, even if it still departed late. Doug did not find fast turnarounds difficult for him personally; he had been with Southwest Airlines for 12 years, since the days when every flight was scheduled to turn around in 15 minutes. Over the past eight years, however, scheduled turnaround times had lengthened from 15 to 20 minutes, and for some flights turnarounds were now 30 minutes.

¹⁵ An angle adjustment made to the tail stabilizers of the aircraft.

Completing a 15-minute turn had become a real challenge for all departments. Thanks to extensive training when hired, people knew their individual jobs quite well. But fast turnarounds depended on coordination across very different functions and an understanding of the overall work process, and it seemed to Doug that those could not develop overnight, no matter how good the training programs and other resources. Due to Baltimore's rapid growth and challenges with employee retention, average tenure for Southwest's BWI employees was 27 months, compared to 75 months for Southwest as a whole. Half of the Baltimore staff working in customer service or on the ramp had been with Southwest for less than one year. Many of the supervisors had only been with Southwest two or three years, and were unaccustomed to playing the supportive role expected of them. Worse, the more challenging evening shift was less popular than the day shift, so lowest-seniority workers were more numerous at night. The short tenure of the staff affected their ability to respond quickly and easily to each other when conditions changed unexpectedly.

Arrival of Flight 110

At 8:45 p.m., Alice received the in-range call from Flight 110, announcing its arrival in 10 minutes and the weight of the remaining fuel onboard. She entered the information into OTIS, told the pilot his assigned gate number (B17), and asked him to note the departing gate information for passengers with tight connections. Darlene checked the FIDS screens to confirm that the expected arrival time for Flight 110 was now 8:55 p.m. and the expected departure time was now 9:10 p.m. Alice hit channel 3 on her radio to access all the department's communicating frequencies and the station public address (PA) system. "Flight 110 in range to B17, arriving late, turning into Flight 110 to Manchester. All departments copy." The phrase "arriving late" notified all departments that the regular 30-minute turnaround-time for the flight would now be shortened to 15 minutes.

Doug knew that his flight was in range when he heard Alice's announcement on the station's PA system. Almost simultaneously the OTIS display began to flash. Doug gathered his paperwork and headed out to the ramp; he had learned in his years with Southwest that "preparation was 90% of the battle." He nodded to the ramp supervisor for Gate B17, who would help stage the Flight 110 turnaround. Doug attached the Fuel Invoice and Cargo Bin Loading Schedule to a clip that hung by a rope from the upper rail of the jetway. He walked up the stairs outside the jetway and entered, noting that the two wheelchairs required for deplaning passengers were in place, along with two contract employees to assist with them. He also noted the new flight attendant crew was on hand, waiting for the flight's arrival to replace the incoming crew. Doug continued inside to greet the gate agents who had opened the gate for check-in an hour before the originally scheduled departure time. Doug learned that they had distributed all 97 boarding passes; the plane would be full on its final leg. With everything in place, Doug went back down the jetway and took his place at its controls in anticipation of the arrival of Flight 110.

The Turnaround of Flight 110

The ramp supervisor for gates B17 and B19 heard on her radio the in-range call from Alice and checked the staging for Flight 110. On top of the usual challenges, today she would have to immediately identify and off-load 10 bags and a stroller for the six passengers who were connecting to Flight 232 to Buffalo. Her team covered two gates and included a transfer driver, responsible for bags connecting to another flight; a local driver, who moved bags to baggage claim for those with Baltimore as final destination; and a lav driver who drained the restroom receptacles. Assigned to each of her gates were a lead agent and a bin agent. The lead agent was responsible for the carts, and reporting incoming and outgoing bag counts in the Cargo Bin Loading Schedule. The bin agent worked inside cargo bins loading and off-loading baggage and cargo.

The lead agent retrieved the Cargo Bin Loading Schedule that Doug had placed on the clip earlier. It told him that the 10 hot bags and a stroller for Flight 232 at Gate B15 were in bin A. Those would come off as soon as possible. The bin agent moved a conveyor belt vehicle into place between the fuel and provisioning truck. A second conveyor was stationed on the far side of the safety zone and would be moved into place when the plane came to a stop. He had already staged an appropriate number of empty carts. At 8:50 p.m., a bag runner arrived with a luggage cart holding the locally originating baggage for Flight 110 to Manchester. Transfer bags had been arriving over the past two hours from other incoming flights with passengers connecting to Flight 110, and they were piled up on the transfer cart, ready for loading.

At 8:55 p.m., as the plane turned in from the tarmac toward Gate B17, the pilot noted that everything was in place and ready. After guiding the plane to its "stop mark," the lead agent waited for the captain to signal that the engines had been turned off. Within 10 seconds of signaling engine shutdown, the provisioning truck had pulled up to the aircraft and was opening the door to restock provisions. The fuel truck had extended its hose to the proper location under the wing and within 75 seconds, the fueler was headed to the clip to retrieve his fueling instructions, placed there earlier by Doug. Within another 90 seconds, the hose was attached and fueling had begun. Forty seconds after engine shutdown, the first bags reached the end of the baggage conveyor and were placed on a cart. The 10 transfer bags and stroller for Flight 232 to Buffalo were located and driven to Gate B15. Less than two minutes after the aircraft had arrived at the gate, the rear cargo bin conveyor was in place and the aircraft began to disgorge baggage and cargo, including private shipments, U.S. mail, and company materials. All unloading was completed in 9 minutes 30 seconds. Half a minute later, both originating and transfer cargo was being up-loaded. After loading strollers, wheelchairs, and five additional bags and reporting them on the Bin Loading Schedule, the lead agent placed the Bin Loading Schedule in the clip at the bottom of the jetway.

As soon as the aircraft was in position, Doug had steered the jetway into position with warning bell blaring and locked it tight against the aircraft. Greeting the in-flight crew, he informed them of the six connects to Gate B15 and the three connects to Gate B13, and of the wheelchairs. As passengers moved to exit the plane the in-flight crew was working its way from front to back, cleaning the cabin area and confirming that the 40 passengers continuing to Manchester stayed onboard. At the other end of the jetway, inbound passengers with tight connections were greeted as they deplaned and escorted to their gates. After eight minutes, when the final passenger had deplaned, Doug began the boarding process for the Manchester passengers in groups of 30. Each of these three groups took about three minutes to board the aircraft. Doug smiled and greeted each passenger as he took their numbered boarding slip. After taking the last boarding pass and ordering the cards sequentially, Doug confirmed that 97 passengers had boarded. He then returned to the end of the jetway and retrieved the clip attached to the end of rope tied to the railing. The clip contained the Fuel Invoice, the Cargo Bin Loading Schedule with the actual number of bags in each bin, and a Lavatory Service Record stating that the appropriate cleaning had taken place. He made the final trim calculations based on actual passengers rather than reservations, the 18,000 pounds of fuel, and the actual baggage count and bin allocation. He passed one copy to the captain and kept one for himself.

As the last passenger took his seat, Doug picked up the cabin loudspeaker microphone and bade them all farewell, apologizing for the delay. Closing the aircraft door, he then retracted the jetway. The plane started to push back 30 seconds later and Doug gave the traditional salute to the captain through the window. It was 9:15 p.m., 30 minutes past the scheduled departure time for Flight 110, and 20 minutes since Flight 110 had arrived at the gate.

Meanwhile, the ops agent for Flight 232 to Buffalo had begun to board passengers as soon as she heard Alice's in-range call for Flight 110, 10 minutes before the flight's touchdown at BWI. Flight 110

landed just a few minutes before all of the passengers for Flight 232 from Baltimore were boarded. Before long a customer service supervisor appeared, leading the six connecting passengers from Flight 110. When the aircraft door closed and the jetway pushed back, it was 9:05 p.m., 25 minutes past the scheduled departure time, but only 10 minutes since Flight 110 had arrived.

Closing Out Flight 110

Walking downstairs, Doug found an available desk and began to close out Flight 110 to Manchester. Final information had to be double-checked for accuracy and then sent via OTIS to his counterpart in Manchester who would already be preparing for the flight's imminent arrival.

Doug first incorporated all last-minute load information onto his hard copy of the flight manifesto, including wheelchairs and gate claims for baggage, and double-checked his trim factor calculations with a calculator. He then moved from his desk to a computer terminal to input all handwritten information from the flight manifesto into OTIS. From the Cargo Bin Loading Schedule that the lead ramp agent had left for him on the clip, he noted specifically where bags and cargo for each final destination were located. Because the flight was late in the day, Manchester was the final destination for all passengers onboard.

Within 20 minutes, Doug had sent all flight information to Manchester and to Dallas headquarters. As he checked the screen to confirm that he had no more flights to work this evening, the ramp agent for Gate B17 entered the ops room and told Doug that he had just found three transfer bags for Albany in the B17 gate area. Having missed being placed on Flight 1819, the bags would go out on the first Albany flight in the morning.

Turning Baltimore Around

Matt Hafner talked about the progress that had been made since he arrived:

Our first challenge was stabilizing an under-staffed operation—we were 179 short for a staff normally running 500, and we were short 80 on the ramp alone (see **Exhibit 10** for Baltimore's organizational chart). Baltimore has a really tight labor market, and we were having a lot of problems getting and keeping people. We ended up assigning a lot of mandatory overtime, including some 16-hour days. It took a toll on morale here. Our people were really tired. We got into some bad habits.

To stabilize staffing, we shortened the long hiring process by hiring promising staff on the spot and paying them during the four- to six-week period while background checks and drug tests were in progress.¹⁶ Some don't make it through the training period and some early hires left because we were still requiring 16-hour days. Having so many new workers created a highly inexperienced workforce. We depended on experienced managers and borrowed employees from other stations. Staffing is stable now, finally, but we have to keep on our toes because we are growing again—we are adding seven more flights in October and new staff must be ready when those flights start.

Consistent with industry practices, Southwest paid on a tenure-based scale (See **Exhibit 11** for comparative union pay scales).

¹⁶ These checks and tests are mandated by the U.S. Department of Transportation.

Process Improvement

Since staffing levels were back to normal, and new employees had climbed the steepest part of the learning curve, Matt knew that further improvements in performance had to come from changing the way they operated. He began by balancing the workload, starting by limiting ramp supervisors' responsibility to two contiguous gates,¹⁷ and ensuring that flight turnarounds were not scheduled at both gates simultaneously. Matt also eliminated fixed gate assignments—the use of one particular gate for all flights to Chicago, for example. Southwest's high utilization of BWI gates allowed little flexibility in the schedule when changes occurred due to flying conditions or equipment failures. Fixed gate assignments reduced that flexibility even further by limiting the interchangeability of aircraft between gates.

Matt felt that these two changes were a good start and was thinking creatively about more such improvements. He knew that he could rely on his team for worthwhile suggestions, as process improvement at Southwest was both formal and informal, often led by employee suggestion. Formal mechanisms monitored operating performance and flagged problems—such as departure delays originating at BWI. Each occurrence, whether equipment- or staff-related, was labeled with a cause code and then subjected to normal improvement mechanisms. Formal processes tended to be remedial, however, while innovations often bubbled up informally. Matt elaborated:

Often we have found solutions while talking casually in the hallway. For instance, one of the op agents suggested a different seating arrangement at a gate, one that would improve traffic flow. He was given permission to initiate the change and it created a significant improvement. More often than not we will test any new measure on a Tuesday and again on a Friday to identify and remove kinks. Anything that falls apart during tests is thrown out.

We don't need approval from Dallas for our improvements unless they affect another station's operations. There is no formal suggestion program either, but management personnel have all worked their way up through the ranks, so we encourage ideas and observations from employees. I do prepare a monthly recap for my regional director, identifying a problem and telling him what we're doing about it.

Some aspects of operations were mandated by law, however, and could not be so easily changed. Jim Wimberly explained how this affected the formal and informal diffusion of organizational learning from one station to others:

Our flight operations, maintenance, and engineering manuals are FAA¹⁸ approved, the Bibles for how we operate and take care of our airplanes. We don't have the same discretion to make process improvements in those areas that we do for our ground operations. The ground operations manual describes standard operating procedures, but it's really used more as a reference book and a training manual for folks who have not been with the company for a long time. It's not the be-all and end-all to try to influence our employees' behavior.

Colleen Barrett described the company's emphasis on informal employee discretion and information exchange:

We constantly talk to our people, encouraging them to have joint regional meetings and discussions all the time that we don't necessarily facilitate. They do it themselves. They will get together and talk about the good things and the bad, what works and what doesn't. If one city

¹⁷ Rather than running them all over the concourse as had sometimes previously been the case.

¹⁸ Federal Aviation Administration.

isn't loading bags well, the downstream supervisors will contact them and talk about it. The upstream city might send a few ramp agents to observe and work downstream to become more effective. We encourage this. It's going on all over the system. I probably couldn't tell you half of it, but they know that they are totally free to do it.

Jim agreed:

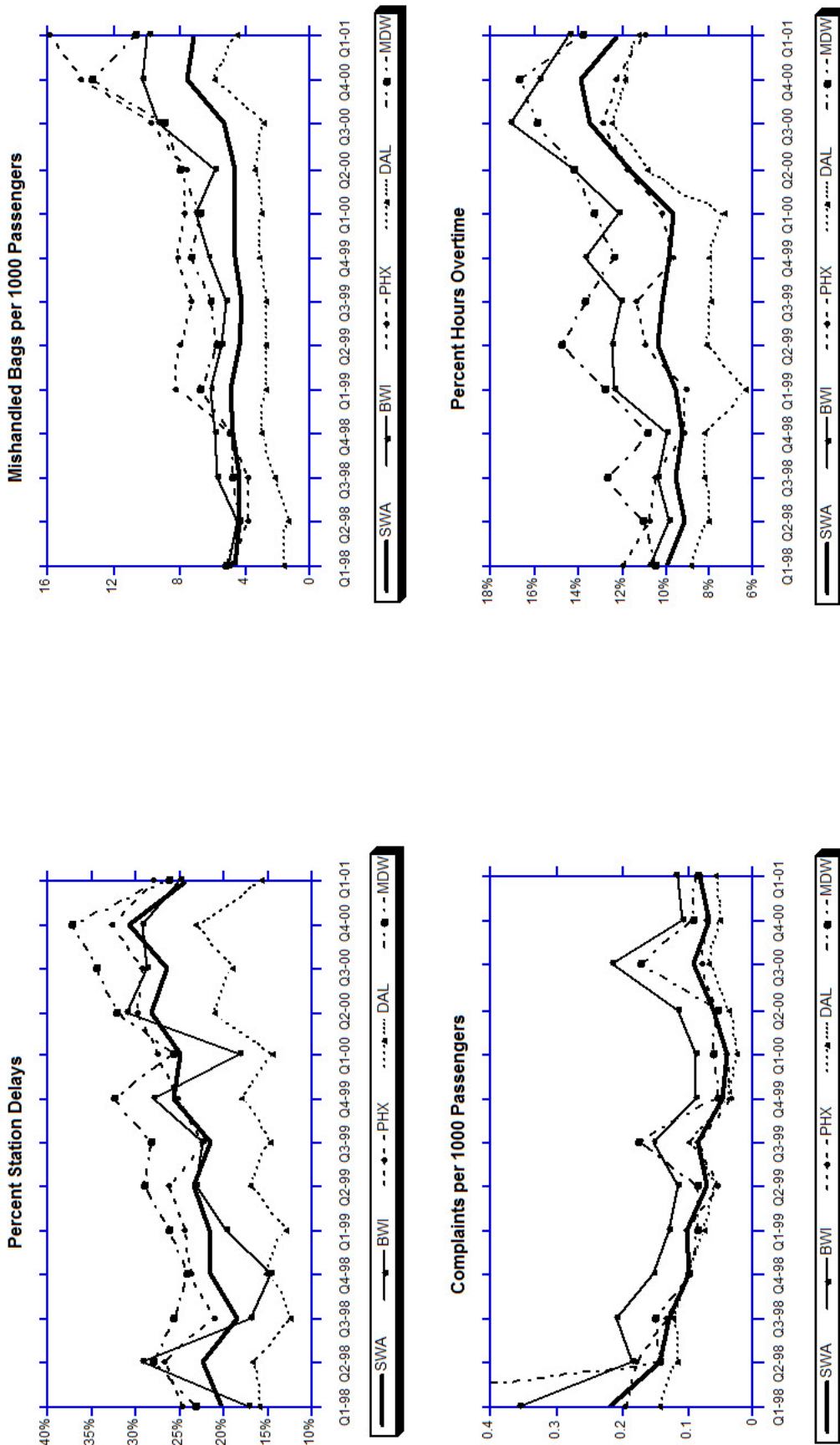
Really, there's almost an unquantifiable network of communication here, not just the airplanes flying around, but also our people. This place just oozes with information and that information flows.

We operate 2,800 non-stop flights in about 15 hours of actual flying time. From those 2,800 non-stop flights, there are 13,000 different itineraries that we publish for sale. When you throw in the vagaries of the air traffic control system, and the weather system, and the occasional airplane that goes out of service for mechanical problems, our folks do it better than anyone. We have to give our employees the latitude to literally play the hand that's dealt them in any given minute and make the best calls for our customers, and make the best calls for our employees everyday, and there's no way in the world you can orchestrate that or control that from [Dallas].

Hafner's Leadership Challenge

Matt Hafner was confident that he had the support of Colleen Barrett and Jim Wimberly to carry out the changes that were needed to bring Baltimore performance up to Southwest standards. He also knew he had the creative energy of Southwest employees at the Baltimore station to draw upon, and help from other Southwest stations whenever he needed it. At the end of the day, however, Matt was responsible for Baltimore's performance and would have to propose a course of action and lead the way toward implementation. Baltimore had become the heart of the company's East Coast operations, and he did not want to let Southwest down.

Exhibit 1 Southwest Airlines Operational Performance — Baltimore and Comparable Stations



Source: Southwest Airlines Co.

Key: SWA-Systemwide; BWI-Baltimore, MD; PHX-Phoenix, AZ; DAL-Dallas Love, TX; MDW-Chicago Midway, IL.

Percent station originating delays = Percent of flights that depart more than 15 mins. after scheduled departure time, or, for flights that arrive late, those that depart more than 15 mins. after arrival time.

Mishandled bags per 1000 passengers = Number of mishandled bags per 1000 passengers enplaned.

Complaints per 1000 passengers = Number of customer complaints received by company headquarters per 1000 passengers enplaned.

Percent hours overtime = Percent of total staffing hours that are classified as overtime.

Exhibit 2 Southwest Airlines Co.—Five-Year Summary

	2000	1999	1998	1997	1996
Selected Consolidated Financial Data ('000 except per share amounts) (1)					
Operating Revenues:					
Passenger (9)	\$ 5,467,965	\$ 4,562,616	\$ 4,010,029	\$ 3,669,821	\$ 3,285,178
Freight	110,742	102,990	98,500	94,758	80,005
Other (9)	70,853	69,981	55,451	52,242	40,987
Total operating revenues	5,649,560	4,735,587	4,163,980	3,816,821	3,406,170
Operating expenses	4,628,415	3,954,011	3,480,369	3,292,585	3,055,335
Operating income	1,021,145	781,576	683,611	524,236	350,835
Other expenses (income), net	3,781	7,965	(21,501)	7,280	9,473
Income before taxes	1,017,364	773,611	705,112	516,956	341,362
Provision for income taxes (3)	392,140	299,233	271,681	199,184	134,025
Net income (3)	\$ 625,224 (10)	\$ 474,378	\$ 433,431	\$ 317,772	\$ 207,337
Net income per share, basic (3)	\$1.25 (10)	\$0.94	\$0.87	\$0.64	\$0.42
Net income per share, dilute (3)	\$1.18 (10)	\$0.89	\$0.82	\$0.62	\$0.41
Cash dividends per common share	\$ 0.02200	\$ 0.02150	\$ 0.01889	\$ 0.01471	\$ 0.01303
Total assets	\$ 6,669,572	\$ 5,653,703	\$ 4,715,996	\$ 4,246,160	\$ 3,723,479
Long-term debt	\$ 760,992	\$ 871,717	\$ 623,309	\$ 628,106	\$ 650,226
Stockholders' equity	\$ 3,451,320	\$ 2,835,788	\$ 2,397,918	\$ 2,009,018	\$ 1,648,312
Consolidated Financial Ratios (1)					
Return on average total assets	10.1% (10)	9.2%	9.7%	8.0%	5.9%
Return on average stockholders' equity	19.9% (10)	18.1%	19.7%	17.4%	13.5%
Consolidated Operating Statistics (2)					
Revenue passenger carried	63,678,261	57,500,213	52,586,400	50,399,960	49,621,504
RPM (000s)	42,215,162	36,479,322	31,419,110	28,355,169	27,083,483
ASMs (000s)	59,909,965	52,855,467	47,543,515	44,487,496	40,727,495
Passenger Load factor	70.5%	69.0%	66.1%	63.7%	66.5%
Average length of passenger haul	663	634	597	563	546
Trips flown	903,754	846,823	806,822	786,288	748,634
Average passenger fare (9)	\$85.87	\$79.35	\$76.26	\$72.81	\$66.20
Passenger revenue yield per RPM (9)	12.95 ¢	12.51 ¢	12.76 ¢	12.94 ¢	12.13 ¢
Operating revenue yield per ASM	9.43 ¢	8.96 ¢	8.76 ¢	8.58 ¢	8.36 ¢
Operating expenses per ASM	7.73 ¢	7.48 ¢	7.32 ¢	7.40 ¢	7.50 ¢
Fuel cost per gallon (average)	78.69 ¢	52.71 ¢	45.67 ¢	62.46 ¢	65.47 ¢
Number of employees at yearend	29,274	27,653	25,844	23,974	22,944
Size of fleet at yearend (8)	344	312	280	261	243

(1) The Selected Consolidated Financial Data and Consolidated Financial Ratios for 1992 and 1991 have been restated to include the financial results of Morris Air Corporation (Morris)

(2) Prior to 1993, Morris operated as a charter carrier; therefore, no Morris statistics are included for these years

(3) Pro forma for 1992 and 1991 assuming Morris, an S-Corporation prior to 1993, was taxed at statutory rates

(4) Excludes cumulative effect of accounting changes of \$15.3 million (\$.03 per share)

(5) Excludes cumulative effect of accounting change of \$12.5 million (\$.03 per share)

(6) Includes certain estimates for Morris

(7) Excludes merger expenses of \$10.8 million

(8) Includes leased aircraft

(9) Includes effect of reclassification of revenue reported in 1999 through 1995 related to the sale of flight segment credits from Other to Passenger due to the accounting change implementation in 2000

(10) Excludes cumulative effect of accounting change of \$22.1 million (\$.04 per share)

Source: Southwest Airlines Annual Reports

Exhibit 3 1999 Results/Productivity: Major Carriers

Airline	Alaska	America West	American	Continental	Delta	Northwest	Southwest	TWA	United
Operating Revenues (\$ Millions)	1,695.6	2,164.0	16,085.5	8,381.5	14,901.4	9,868.1	4,735.6	3,308.7	17,966.7
Operating Expenses (\$ Millions)	1,518.9	1,966.1	15,082.6	7,932.5	13,640.3	9,099.2	3,954.1	3,651.4	16,608.8
Operating Profit (Loss) (\$ Millions)	176.7	197.9	1,002.9	449.1	1,261.1	768.8	781.5	(342.7)	1,357.9
Operating Margin	10.4%	9.1%	6.2%	5.4%	8.5%	7.8%	16.5%	-10.4%	7.6%
Net Income (Loss) (\$ Millions)	119.4	116.6	625.8	449.6	1,285.6	287.8	474.4	(353.4)	1,203.8
Net Margin	7.0%	5.4%	3.9%	5.4%	8.6%	2.9%	10.0%	-10.7%	6.7%
Wages, benefits, etc. (\$ Millions)	513.8	476.1	4,978.6	1,997.2	4,449.0	3,055.8	1,386.0	1,144.8	5,655.3
Wages as % of expenses	33.8%	24.2%	33.0%	25.2%	32.6%	33.6%	35.1%	31.4%	34.1%
Fuel/Oil (\$ Millions)	197.6	258.7	1,590.7	769.3	1,546.9	1,181.7	492.6	396.5	1,779.3
Fuel as % of expenses	13.0%	13.2%	10.5%	9.7%	11.3%	13.0%	12.5%	10.9%	10.7%
Passengers (Millions)	13.6	18.7	84.6	43.9	105.4	54.7	65.3	25.8	86.5
RPMs - Scheduled Rev. Svc. (Billions)	11.8	17.7	110.2	59.5	104.7	74.1	36.5	26.0	125.4
ASMs - Scheduled Rev. Svc. (Billions)	17.3	25.9	158.2	81.0	144.7	99.4	52.9	35.6	176.5
Actual Load Factor (Sche. Svc. %)	68.0	68.4	69.6	73.5	72.4	74.6	69.0	73.1	71.0
Breakeven Load Factor (Sche. Svc. %)	63.1	62.9	66.8	72.3	67.8	69.6	55.6	84.3	67.5
On-flight passenger trip length (miles)	867	947	1,301	1,356	993	1,356	559	1,009	1,450
RPM's per aircraft mile	92.1	97.8	114.3	113.0	128.8	144.7	92.6	109.0	137.6
ASM's per aircraft mile	135.6	143.0	164.2	154.7	178.0	194.0	134.2	149.1	193.7
Overall flight stage length (miles)	765	862	1,183	1,107	850	904	465	836	1,121
Employment, Total Weighted Avg CY	8,312	9,749	78,757	34,438	63,799	48,483	26,506	19,466	86,611
Fleet	89	123	697	636	581	410	312	184	590
Revenue per RPM (Yield) (cents)	12.6	11.4	13.1	12.2	12.6	11.6	12.3	11.4	12.3
Cost per ASM (cents)	8.8	7.6	9.5	9.8	9.4	9.2	7.5	10.3	9.4
Wages & benefits per ASM (cents)	3.0	1.8	3.1	2.5	3.1	3.1	2.6	3.2	3.2
Operating revenue per employee	\$203,994	\$221,971	\$204,242	\$243,379	\$233,568	\$203,537	\$178,661	\$169,973	\$207,441
Operating profit per employee	\$21,258	\$20,300	\$12,734	\$13,041	\$19,767	\$15,857	\$29,484	-\$17,605	\$15,678
Net profit per employee	\$14,365	\$11,960	\$7,946	\$13,055	\$20,151	\$5,936	\$17,898	-\$18,155	\$13,899
Average wage per employee	\$61,810	\$48,831	\$63,215	\$57,995	\$69,735	\$63,028	\$52,290	\$58,811	\$65,296
Passengers per employee	1,637	1,917	1,075	1,274	1,653	1,128	2,463	1,325	998
RPMs per employee	1,419,634	1,814,545	1,398,606	1,727,452	1,641,092	1,529,196	1,376,292	1,336,176	1,447,507
ASMs per employee	2,081,328	2,653,605	2,008,964	2,350,601	2,267,277	2,050,409	1,995,775	1,828,316	2,038,309
Employees per aircraft	93	79	113	54	110	118	85	106	147

Sources: USDOT, Bureau of Transportation Statistics, *Aviation & Aerospace Almanac*, 2001.

USDOT, Bureau of Transportation Statistics, *Air Carrier Traffic Statistics Quarterly*, fourth-quarter 1999.

Note: These data correspond to the airlines' entire system, including domestic and international operations.

ASM = Available Seat-Miles RPM = Revenue Passenger-Mile

This document is authorized for use only by Justin Park in 128R Service Innovation taught by VISWANATHAN KRISHNAN, University of California - San Diego from Mar 2019 to Sep 2019.

Source: Origin and Destination Survey Data, Average Coupons, U.S. Department of Transportation. Based on a 10% sample of traffic in both directions.

Exhibit 5 Cities Served Nonstop from Baltimore by Southwest Airlines, by Year of Service Initiation

1993	MDW—Chicago, IL	CLE—Cleveland, OH	
1994	STL—St. Louis, MO	BHM—Birmingham, AL	SDF—Louisville, KY
1995	BNA—Nashville, TN		
1996	MCO—Orlando, FL	TPA—Tampa, FL	PVD—Providence, RI
1997	FLL—Fort Lauderdale, FL	JAX—Jacksonville, FL	MCI—Kansas City, MO
	JAN—Jackson, MS		
1998	PHX—Phoenix, AZ	SAT—San Antonio, TX;	MHT—Manchester, NH
	HOU—Houston, TX	MSY—New Orleans, LA	
1999	ISP—Islip, NY	RDU—Raleigh—Durham, NC	LAS—Las Vegas, NV
	BDL—Hartford, CT		
2000	ALB—Albany, NY	AUS—Austin, TX	BUF—Buffalo, NY
	IND—Indianapolis, IN	ABQ—Albuquerque, NM	SLC—Salt Lake City, UT
2001	PBI—West Palm Beach, FL	LIT—Little Rock, AR	CMH—Columbus, OH
	ORF—Norfolk, VA		

Source: Southwest Airlines Co.

Exhibit 6 Cities Served by Southwest, by Size of Operation

Mega (100+ flights/day)	BWI—Baltimore, MD HOU—Houston Hobby, TX LAX—Los Angeles International, CA OAK—Oakland, CA	DAL—Dallas Love, TX LAS—Las Vegas, NV MDW—Chicago Midway, IL PHX—Phoenix, AZ
Large (60-99 flights/day)	ABQ—Albuquerque, NM MCI—Kansas City, MO SJC—San Jose, CA STL—St. Louis, MO	BNA—Nashville, TN SAN—San Diego, CA SMF—Sacramento, CA ONT—Ontario, CA
Medium (40-59 flights/day)	BUR—Burbank, CA SAT—San Antonio, TX AUS—Austin, TX TPA—Tampa, FL	ELP—El Paso, TX MSY—New Orleans, LA RNO—Reno, NV MCO—Orlando, FL
Small (20-39 flights/day)	ISP—Long Island Islip, NY SLC—Salt Lake City, UT CLE—Cleveland, OH PDX—Portland, OR SEA—Seattle/Tacoma, WA FLL—Fort Lauderdale, FL JAX—Jacksonville, FL	PVD—Providence, RI BHM—Birmingham, AL OKC—Oklahoma City, OK SDF—Louisville, KY TUL—Tulsa, OK DTW—Detroit, MI IND—Indianapolis, IN
Very Small (<20 flights/day)	LBB—Lubbock, TX SNA—Orange County, CA BOI—Boise, ID CRP—Corpus Christi, TX HRL—Harlingen, TX LIT—Little Rock, AR OMA—Omaha, NE TUS—Tucson, AZ ALB—Albany, NY BDL—Hartford, CT ORF—Norfolk, VA	MAF—Midland Odessa, TX AMA—Amarillo, TX CMH—Columbus, OH GEG—Spokane, WA IAH—Houston Intercontinental, TX MHT—Manchester, NH PBI—West Palm Beach, FL JAN—Jackson, MS BUF—Buffalo, NY RDU—Raleigh-Durham, NC

Source: Southwest Airlines Co.

Exhibit 7 Outbound onboard passengers

	1996 ^a	1997	1998	1999	2000
Systemwide					
Revenue passengers onboard		64,899,000	68,764,000	75,284,000	82,169,000
Locally originating %	76	76	75	75	77
Locally connecting %	9	9	10	11	11
Through %	15	15	15	14	12
BWI					
Revenue passengers onboard		1,497,000	1,906,000	2,870,000	3,641,000
Locally originating %	87	87	82	69	72
Locally connecting %	6	6	9	21	20
Through %	7	7	9	10	8
DAL					
Revenue passengers onboard		3,823,000	3,689,000	3,628,000	3,677,000
Locally originating %	70	70	70	72	74
Locally connecting %	19	19	19	18	17
Through %	11	11	11	10	9
MDW					
Revenue passengers onboard		2,659,000	2,860,000	3,160,000	3,571,000
Locally originating %	78	78	75	74	74
Locally connecting %	11	11	14	15	16
Through %	11	11	11	11	10
PHX					
Revenue passengers onboard		4,701,000	4,971,000	5,388,000	5,661,000
Locally originating %	58	58	56	55	56
Locally connecting %	22	22	23	24	26
Through %	20	20	21	21	18

Source: Southwest Airlines Co.

Notes: August totals for the years indicated

^a1996 figures have been estimated.

Exhibit 8 Screen Shot of OTIS System

Tuesday, June 5, 2001

Time since last refresh: 4:57

Page 2 of 5

Coordinator's / Radio Log

BWI

Total Arrivals: 127

DW1

Total Departures: 127

Route Number	Inbound						Outbound						Ops Agent	Booked
	Flight	Aircraft	Gate	Arrival Time	ETA	Origin	Flight	Aircraft	Gate	Departure Time	ETD	Dest.		
81 3	✓	145	347	B17	8:55	BDL	✓	145	347	B17	9:20	BNA	Derek	108
47 3	✗	457	658	C13	9:10	MDW	✗	457	658	C13	9:35	PVD	Scotly	120
85 3	✗	1402	649	B14	9:10	BNA	✗	1402	649	B14	9:30	BDL	STEVE	69
208 3	✗	1040	383	B16	9:25	TPA	✗	1053	383	B16	9:50	JAX	Keith	31
95 3	✗	510	303	B10	9:25	PVD	✗	510	303	B10	9:55	MDW	Stacey	117
323 7	✗	315	779	B15	9:30	RDU	✗	315	779	B15	10:00	ABQ	*Juan	138
261 7	✗	802	679	B13	9:35	BNA	✗	296	679	B13	10:05	PHX	Darlene	124
284 7	✗	87	374	C15	10:15	MCO	✗	87	374	C15	10:40	BUF	Scott	46
138 3	✗	212	609	B8	10:20	MCI	✗	94	609	B8	11:00	MCO	sundermeier	52
167 3	✗	420	316	B1	10:20	PBI	✗	615	316	B1	10:45	PBI	Mel	50
278 7	✗	1765	777	B17	10:35	BUF	✗	1765	777	B17	11:05	HOU	*Edith	154
244 7	✗	317	401	B19	10:30	HOU	✗	317	401	B19	10:50	ALB	Leo	77
80 3	✗	211	678	B11	10:35	BDL	✗	211	678	B11	11:05	FLL	Jimmie	63
10 H	✗	828	722	B14	10:40	CLE	✗	1867	722	B14	11:05	MDW	Derek	53
256 7	✗	1599	715	B3	10:45	ALB	✗	1599	715	B3	11:15	AUS	Kathleen	94
321 7	✗	157	726	B10	11:05	PVD	✗	157	726	B10	11:35	PHX	STEVE	151
118 3	✗	203	353	B16	11:05	FLL	✗	203	353	B16	11:30	BDL	Scotly	68
206 3	✗	380	398	C13	11:20	MDW	✗	380	398	C13	11:45	ALB	Keith	75
29 H	✗	412	332	B13	11:20	SDF	✗	1144	332	B13	11:45	JAX	Stacey	58
308 7	✗	136	720	B12	11:25	MSY	✗	136	720	B12	11:50	ISP	*Juan	130
147 3	✗	1166	333	B1	11:30	RDU	✗	1166	333	B1	11:55	CLE	Darlene	149
73 3	✗	1000	603	B8	11:35	ALB	✗	1000	603	B8	12:00	SDF		78
266 7	✗	215	769	B19	11:30	ISP	✗	215	769	B19	11:55	MCI		128
141 3	✗	1452	367	B11	11:45	STL	✗	1452	367	B11	12:10	MHT		122
174 3	✗	1045	329	B17	11:35	MHT	✗	1045	329	B17	12:05	BNA		121
42 3	✗	1776	712	B14	11:50	JAN	✗	1776	712	B14	12:20	PVD		140
152 3	✗	1079	622	B3	12:00	MCO	✗	633	622	B3	12:25	RDU		140
41 3	✗	84	614	B16	12:05	BNA	✗	923	614	B16	12:35	STL		150
218 5	✗	2141	730	B10	12:15	BHM	✗	405	730	B10	12:40	MDW		121
136 3	✗	881	508	B15	13:00	PVD	✗	881	508	B15	13:30	MDW		93
186 3	✗	333	382	C15	13:05	BNA	✗	513	382	C15	13:30	BNA		87

Total Arrivals: 127

Total Departures: 127

Source: Southwest Airlines Co.

Exhibit 9 Cargo Bin Loading Schedule



CARGO BIN LOADING SCHEDULE

OUTBOUND FLIGHT NUMBER: _____ AIRCRAFT NUMBER: _____ DATE: _____

☐ -200 ☐ -300 ☐ -500 ☐ -700 SCHEDULED DEPARTURE TIME: _____

THRU DR INFORMATION _____ DESTINATION _____

F	E	D	C	B	A	THRU LOAD INFORMATION: THRU DR INFORMATION	ACCURATE ☐	INACCURATE ☐	RESOLVED ☐

OUTBOUND BIN LOCATIONS

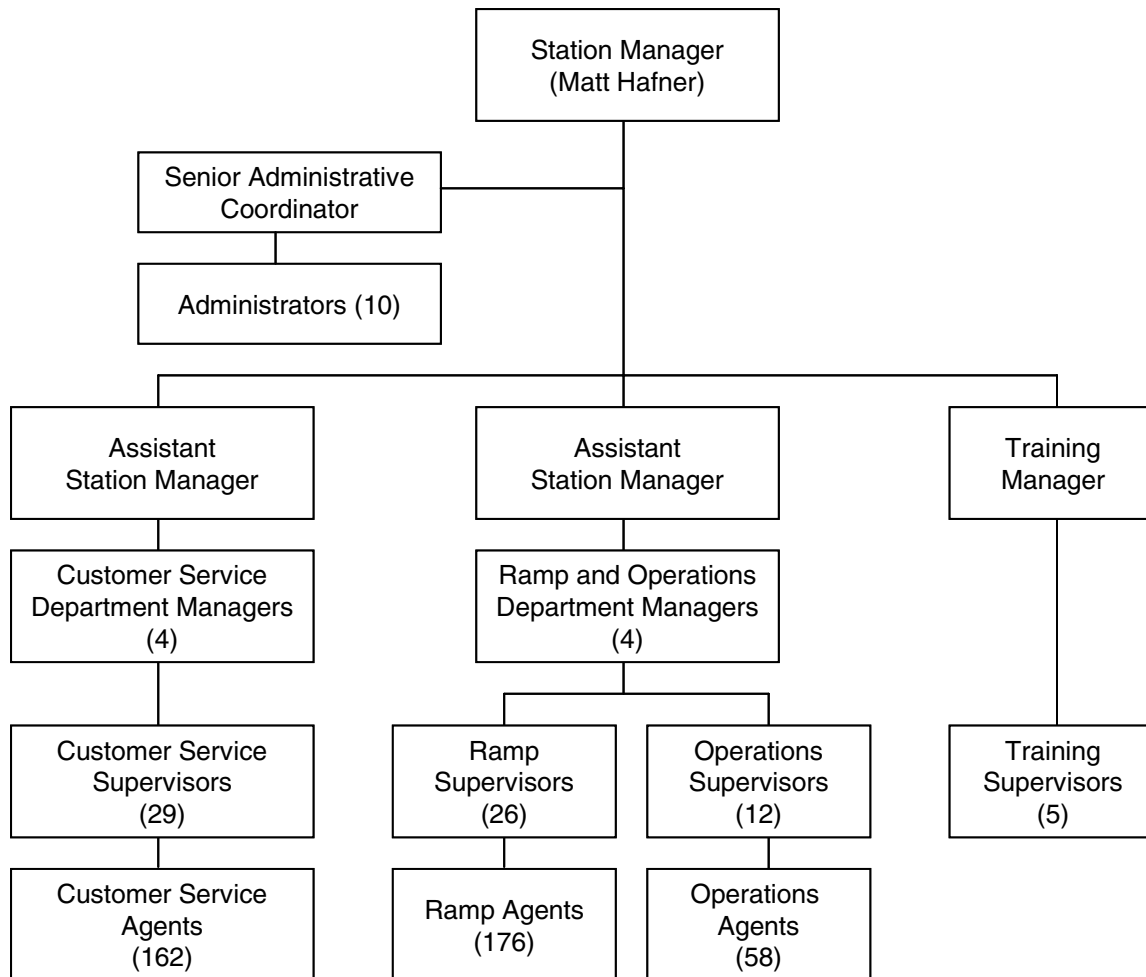
F	E	D	C	B	A	THRU LOAD INFORMATION: THRU DR INFORMATION	ACCURATE ☐	INACCURATE ☐	RESOLVED ☐

SECURE ALL BIN WEBBING BEFORE DEPARTURE

LOADING INSTRUCTIONS: _____

 LOAD AGENT SIGNATURE / EMP # _____

Source: Southwest Airlines Co.

Exhibit 10 Southwest Organization at Baltimore

Source: Southwest Airlines Co.

Exhibit 11 Base hourly compensation for Baggage Handlers

Fleet Service Clerk AA		Ramp Agents SWA	
Step 1	\$ 9.00	Step 1	\$ 10.18
Step 2	\$ 9.97	Step 2	\$ 10.92
Step 3	\$ 11.13	Step 3	\$ 11.52
Step 4	\$ 12.29	Step 4	\$ 12.27
Step 5	\$ 13.45	Step 5	\$ 13.30
Step 6	\$ 14.61	Step 6	\$ 14.32
Step 7	\$ 15.77	Step 7	\$ 15.03
Step 8	\$ 16.93	Step 8	\$ 15.73
Step 9	\$ 18.09	Step 9	\$ 16.44
Thereafter	\$ 22.05	Step 10	\$ 17.15
		Step 11	\$ 21.00

Notes:

- a) AA's Fleet Service Clerks and SWA's Ramp Agent have comparable contractual obligations.
- b) For AA and SWA, progression through pay rates (steps) is made on a tenure bases (one step per year).
- c) AA's stations, however, may hire applicants at higher pay rates (Step 2 and above, at the company's discretion) if Step 1 rates are not competitive in the market.
- d) AA employees receive longevity pay according to the following schedule: an additional one cent per hour per year longevity (to begin after third year of service); an additional three cents per hour per year after 15 years of service (to maximum of 30 cents per hour).
- e) AA and SWA rates listed above denote base pay; overtime, inconvenience pay (for afternoon and night-shift workers), and other adjustments are based on these rates. Rate schedules do not include profit sharing.

Source: Adapted from the agreement between American Airlines and Transport Workers Union of America (effective 3/1/01), and the agreement between Southwest Airlines Co. and Transport Workers Union of America for the period 6/14/01-6/30/06.