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Building Business Agility at Southwest Airlines

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Abstract: Southwest Airlines has grown from upstart to the largest U.S. airline in terms of number of passengers flown while recording 34 consecutive years of profitability. Through most of those 34 years, Southwest management emphasized high touch rather than automation as critical to business success. Over time, however, Southwest employees introduced technology-based innovations to support key processes, including the industry's first paperless ticketing system and early entry into web-based applications. By 2002 then-CFO (and subsequently CEO) Gary Kelly recognized that IT would be important to meeting the company's strategic objectives. He initiated a business transformation that relied on building a strong IT foundation. This case describes the IT and business changes Southwest introduced to help the company succeed in its increasingly competitive environment.

Keywords: Enterprise architecture, business transformation, IT management

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Building Business Agility at Southwest Airlines

In 2006 Southwest Airlines marked its 34th consecutive year of profitability. No other airline came close to matching its performance. And Southwest had achieved those results while growing from an upstart to the largest U.S. airline in terms of number of passengers flown.¹

Southwest had succeeded where others had failed by passionately pursuing both low cost and high customer touch. Low-cost tickets attracted passengers; extraordinary customer service kept them coming back. Staffed with energetic employees, Southwest developed a culture for making flying fun. Southwest executives told employees to do what was best for the customer, and management rewarded individuals for going out of their way to enhance the customer experience. Friendly staff, personalized letters, and proactive problem resolution were the norm.

Despite its success, Southwest faced a challenging competitive landscape. JetBlue was leading a wave of new, innovative, low-cost

competitors; established airlines were winning labor concessions that increasingly allowed them to compete on the basis of price; and the benefits of Southwest's industry-leading fuel hedging practices would gradually erode. To address these challenges, management was positioning the company to drive both cost and customer service benefits from information technology.

The reliance on technology represented a significant departure from Southwest's past. Early on, the company had eschewed information technology because it was too expensive:

“Back in the '70s, technology wasn't low cost, plus it was very experimental, so we had only what we absolutely needed. I mean, we had cash register tickets, literally. You didn't get a ticket like you got from the other airlines; you got a cash register receipt that showed you paid \$35. And it didn't even say 'from' or 'to.' It just had a flight number on it.”

—Colleen Barrett
President and Corporate Secretary

Management had also been concerned that reliance on technology was contrary to Southwest's

¹ Based on DOT statistics on passengers enplaned at all United States cities, for 2006. Further details available at <http://www.transtats.bts.gov/carriers.asp>.

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passion for customer service, which emphasized the importance of personal touch. Thus, Southwest sometimes chose to distinguish itself from other airlines by *not* investing in technology:

“Historically we prided ourselves on being very innovative insofar as the airline business is concerned, certainly insofar as customer service is concerned. But we never, never wanted to be on the forefront of technology.”

—Colleen Barrett
President and Corporate Secretary

But as technology matured and Southwest grew, the logistics of operating a big, highly integrated company forced a growing dependence on IT. In 1989, Gary Kelly became Southwest’s CFO and started looking aggressively for ways IT could improve efficiency and lower the firm’s cost structure. By 2007, Kelly was CEO and Southwest Airlines had found that technology could lower cost without compromising customer service:

“I think in many cases we’ve got the best of both worlds, where we’ve enhanced customer service through automation, and we’ve also lowered our costs through automation. And that’s just a grand slam homerun. It is really a joy to see how, in a twenty-year time horizon, we’ve gone from being a really low tech company to one that’s on the cover of Business Week.² We’re one of the twenty-five most innovative companies in the world and we do have automation.”

—Gary Kelly
CEO

Going forward, Southwest intended to seize additional opportunities created by technology to lower costs and enhance customer service. In addition, management wanted to increase its ability to respond to unexpected business conditions and market challenges. Toward that end, management had reorganized the Technology staff, simplified its technology environ-

² *Business Week* noted that Southwest was “a whiz at wielding operational improvements to outfly its competitors.”

ment, and radically changed its approach to IT investment and implementation. By early 2007, Southwest had succeeded in becoming an IT-enabled company, but it was still very much in the midst of driving benefits that would ensure long-term success:

“We definitely got way behind on the technology side, and we’re in a catch up mode, making really, really significant investments right now, to add more functionality and honestly get our systems to a point where we can react more quickly.”

—Laura Wright
SVP, Finance and CFO

Background and History

Southwest Airlines began carrying passengers in 1971 between Dallas, Houston, and San Antonio. From the start, the business strategy was to offer frequent, conveniently timed flights and low fares on short-haul routes. Restricted by the 1979 Wright Amendment from flying out of Dallas to non-neighboring states,³ the airline nonetheless grew both organically and by acquisition so that by the end of 2006 it served 63 cities in 32 states. In 2006, Southwest’s 482 aircraft carried more than 95 million passengers on more than 3200 daily departures. Profits were \$499 million on revenues of \$9.1 billion.

Southwest’s history of profitability was partly due to having the lowest operating costs, on a seats-per-mile basis, of all the major airlines. Several factors contributed to their low-cost structure, including the use of a single aircraft type, a high-utilization point-to-point route structure, and a fuel hedging program that protected the company from the full impact of rising fuel costs.⁴ Management also attributed its low-cost advantage to hardworking, innovative, highly productive employees. South-

³ The Wright Amendment was intended to protect the Dallas-Fort Worth airport. Restrictions were being eased out between 2006–2014.

⁴ Fuel hedging saved the airline \$675 million in 2006, but fuel costs were consuming a growing share of operating costs (26% in 2006, net of hedging gains).

west's 32,600 employees, 82% of whom were covered by collective bargaining agreements, owned more than 10% of the company's stock.⁵

These employees had gradually built a very different airline: no first class service; no seat assignments; no executive lounge; no drink carts (drinks were served from trays); boarding on a first-come, first-served basis; flight attendants wearing sports clothes and telling jokes. Its lack of perks did not diminish (and perhaps enhanced) the company's reputation for great customer service. As of 1987, Southwest consistently received the fewest complaints per passenger of the major US carriers.⁶ Management insisted on satisfied, productive employees, and its efforts to sustain momentum ranged from the company's annual costume contest on Halloween to its strict recruitment policies:

"We say we hire for attitude and we train for skills. And that doesn't mean we would hire a pilot who couldn't fly an airplane. ...But it does mean that we wouldn't hire a pilot no matter how skilled or a mechanic no matter how many letters of recommendation, if there was something about their attitude or behavior or demeanor during the interview process that turned us off and that said he wouldn't be a good fit." —Colleen Barrett
President and Corporate Secretary

Management was committed to retaining the low-cost airline status. Indeed, a key metric at Southwest was employees per plane, which had dropped from 90 in 2002 to 68 in 2006. [See Exhibit 1 for some of the company's key metrics.] But Southwest considered its real competitive advantage to be its employees and the customer service they provided:

"Of course all of us have this low cost vision in our DNA, so we can't ignore it. But for the most part we're really more focused on our higher calling, which is, 'What does that

⁵ Facts and figures in this paragraph and the prior one are from Southwest's 10K report dated February 1, 2007.

⁶ Complaint statistics from the Department of Transportation's Air Travel Consumer Report.

optimal experience look like that will maintain that customer service lead?' Of course, people are a big part of that. You can have lots of gadgets and lots of expensive things on your aircraft, but if you have bad people and bad customer service, it cancels the other out. So, people are core to our strategy in delivering great customer service."

—Kevin Krone
VP, Marketing, Sales, and Distribution

In early 2007 Southwest was functionally organized. [See Exhibit 2 for a partial organization chart.] The executive team was close-knit and most members had long tenure at Southwest, many starting at the bottom of Southwest's career ladder. They pursued four overarching business objectives: financial success, operating efficiency, customer satisfaction, and safeguarding their firm foundation (meaning their employees and the Southwest culture). Management viewed these objectives as interconnected, in that financial success depended on operating efficiency and customer satisfaction, and both of these were dependent on dedicated, empowered, happy employees. Thus, most business initiatives had to satisfy all four objectives—positive financial impact, simultaneous improvements in productivity and customer satisfaction, and employee buy in of the initiative.

Information Technology at Southwest

Despite Southwest's low-tech profile, the company's innovative spirit and survival instincts drove it to develop several strategic applications of information technology. In the mid-1980s, the major airline reservations systems raised fees, effectively squeezing out smaller players. In response, Southwest developed its own reservation system. This reservation system evolved into the industry's first ticketless system, which eliminated the need to print and process paper tickets altogether.

In March 1995, the marketing department launched Southwest.com. A year later Southwest became the first airline to sell tickets on its website. Offshoots of Southwest.com for busin-

esses (SWABIZ.com) and Spanish-speaking customers were also industry firsts. In 2002, the airline introduced kiosks for self-service check-in, in large part to alleviate the long lines that resulted from post 9/11 security initiatives. By 2006, more than 70% of passenger revenue was generated by Southwest.com, which had become the most frequently visited airline website. In addition, more than 50% of customers were relying on Southwest.com or kiosks to check themselves in for their flights.

Southwest embraced the cost savings resulting from customer self-service. Perhaps more importantly, management recognized that self-service technology actually improved the customer experience:

"[Without self-service technologies] we would have lines way out the doors at every location. The customer experience would have been really crummy. But, because customers can choose self-service over a face-to-face transaction, or both, we were able to be much more productive and offer a much better customer experience." —Jim Ruppel
VP, Customer Relations/Rapid Rewards

By the mid-1990s, Southwest employees were regularly identifying potential innovations from IT. Demand for new systems soared. The Technology organization could not keep pace:

"We were trying to build all of these new applications and infrastructure, but the organization wasn't poised for that. We were growing the department—I think if you look back at '98 or '99, net attrition, we tried to grow the department 60% in one year."
—Robert Jordan
EVP, Strategy, Procurement, and Technology

Between 1996 and 2002, Technology staff grew from around 60 people to almost 1,200. Technologists tried to respond to business requests, but the dramatic growth divided their attention, increased coordination costs, and made it difficult to deliver solutions:

"Our technology groups were just not well orchestrated, not well organized. They were trying to do too much and trying to please

everybody. So there was a tremendous conflict over the years with things being delayed. It was hard to make [internal] customers happy because they wanted what they wanted when they wanted it. But I don't think we ever did a good enough job in defining what we wanted. It was, 'Hey, I want a solution and you go figure it out.'"

—Gary Kelly
CEO

By 2001, Southwest's systems were addressing some local needs, but they weren't supporting the business objectives:

"Everything was built in silos, on different platforms. There were a whole host of big gaps in functions. So even though we were spending a lot of money on technology, there were many places where we had no technology in the business." —Jan Marshall
CIO

As Southwest was struggling to generate business value from its IT investments, the security requirements of a post-9/11 world further exposed the limitations of the company's systems. In late 2001, then CFO Gary Kelly (named CEO in 2004) initiated a business transformation at Southwest Airlines.

The Southwest Transformation

The Southwest transformation involved fundamental changes in both technology delivery and business process execution. To jumpstart the technology transformation, Gary Kelly recruited the Feld Group,⁷ an IT consulting company. The Feld Group worked with senior managers to develop a current state analysis and a future state plan for business and IT design. They

⁷ Gary Kelly initially sought the advice of Charlie Feld, CEO of the Feld Group. Feld later sent Tom Nealon and Jan Marshall to guide Southwest management through their analyses. Nealon eventually served as CIO from late 2002 until October 2006, when Jan Marshall assumed the position. As CIO, Nealon reported directly to Gary Kelly. When Marshall became CIO, she reported to Bob Jordan, EVP of Strategy, Procurement, and Technology. This new reporting structure formalized the relationship between Technology and business strategy at Southwest.

analyzed the gap between the current and future states of the business and identified fundamental changes required to close the gap, noting, in particular, the implications for technology:

“It was very logical things. We all had to agree that we were going to have one foundation instead of ten. We needed one version of the truth, not multiple databases full of fares, multiple copies of the schedule, multiple this, multiple that. We’d had all these siloed technologies that had been created over time and just sort of glued together.”

—Gary Kelly
CEO

Rationalizing data and tearing down silos involved three major technology-related changes at Southwest: (1) an overhaul of the IT unit (called Technology at Southwest); (2) design and implementation of a robust technology foundation; and (3) adoption of disciplined processes for prioritization and delivery of new systems.

Fixing the Technology Organization

The chaotic demand for IT solutions in the late ‘90s had not only led to technical silos, it had created a fragmented Technology organization:

“There were big groups of technologists that weren’t even in Technology. Tech Services was off in another area. We had a lot of development going on in business areas, and then there was our interactive marketing group in marketing, who had done Southwest.com and Rapid Rewards.”

—Jan Marshall
CIO

Southwest centralized all of their technologists under CIO Tom Nealon. Development staff reported to Jan Marshall’s application portfolio team, while the remainder of the Technology unit comprised infrastructure services under CTO Kerry Schwab. Over time, the Technology staff was reduced through attrition and reassignment from around 1200 to 890 people. The number of job titles decreased from 140 to fewer than 30:

“We clarified roles and accountabilities across the job titles. Directors or senior directors have managers reporting to them, managers have teams reporting to them and there’s nothing in between. It’s very flat.”

—Jan Marshall

To ensure strong performance from Technology staff, Southwest emphasized human capital management. In 2003 Southwest formalized assessment and professional development processes:

“We have what we call ‘people ops reviews’ about every other month, where we focus on the bottom and the top performers. For the bottom performers, we’ve got a process that manages their performance either into acceptable range or out of the organization. For the top performers, we look to re-recruit them—are we providing the recognition, the opportunities, the training that they need to continue on?”

—Jan Marshall

Management also worked to improve performance through shared language and standard IT processes. Traditionally, each team, even small ones, had defined their own methodologies. For example, the team that replaced kiosks in airports used its own processes for installing, testing, and monitoring kiosks. Meanwhile, database administrators had deployed totally different processes for database projects:

“The thinking was that each team was going to be the best they could be. They would naturally pick the best tools to do what they were trying to do. There was no compromise for the sake of consistency.”

—Kerry Schwab
CTO and VP, Technology

Over time, Technology teams converted to a standard set of tools and processes. The goal was to ensure effective delivery and reliable service through what Kerry Schwab referred to as “just enough methodology:”

“Without spilling over into bureaucracy, we have introduced process and technology that just saves a lot of time. Everybody is speaking the same language. The expectations are the same. If somebody wants to

*work somewhere else in the department, the transition is much smoother. Working on one team is much closer to the experience of working on another team.” —Kerry Schwab
CTO and VP, Technology*

The growing professionalism of the Technology organization resulted in noticeably improved outcomes:

*“Before, they didn’t have any accountability. They never got done on time. They’d go over budget. Now it’s all monitored and, you know, we’ve just had some terrific things come out of there in just the last five years.”
—Laura Wright
SVP Finance and CFO*

Exhibit 3 shows how the Technology department had evolved by early 2007.

Building a Technology Foundation

Before Southwest Technology could support a business transformation, it had to fix existing technologies and systems that were broken. System outages were common in 2002. In 2003, the reservation system went down for two hours. Accordingly, early efforts focused on immediate fixes of the company’s technical vulnerabilities. The Technology unit fixed problems with key applications, implemented a new testing methodology, and addressed needs like power, redundancy, and backup.

After approximately 18 months of fixing the worst offenders, Technology leaders could turn their attention to reducing the technology silos that had proliferated in the infrastructure. A key element of this effort was to standardize the core infrastructure technologies. Towards this end, the infrastructure services team identified what they called “styles and stacks.” The styles equated to types of applications (e.g., transactional, historical, analytical) and the stacks identified the technology components and development tools that supported each style.

As long as a development team could meet its objectives with a standard stack, they could quickly get to work on delivering a solution. If the standard stack did not meet the needs of a

particular project, the leader would work out a solution with the architecture working group. The architecture working group, which was headed by CTO Kerry Schwab, attempted to balance the need to enforce standards with the need to meet project requirements:

“In some cases, we ask them to compromise a little bit. We say, ‘We know that is what you want, and that would work best, but we have this already, and we think it would work.’ Or it might go the other direction where we say, ‘We are going to make an exception here. We understand why what you want is not going to fit into one of our predefined styles and stacks.’ And then, further, if it is something that looks like it might come up again, we look at what changes do we need to make. Is there an additional tool we need to add? Is there a tool we have that needs a version upgrade? Is there a missing stack?” —Kerry Schwab

Schwab’s Technology Infrastructure organization was also working to reduce baseline costs. Technology teams renegotiated contracts with vendors, standardized desktops (while outsourcing some commodity processes to their desktop provider), implemented a desktop refresh plan to reduce desktop support costs, and analyzed help desk calls to identify needed fixes to applications. These efforts cut baseline IT costs by about 10%, freeing up resources for more strategic needs.

As infrastructure technologies became more reliable and cost-effective, Technology turned its attention to providing needed business integration capabilities. They focused on Southwest’s “sacred transactions”—those transactions capturing core operating data across the company. Management recognized that Southwest’s internally developed reservation system was at the heart of the company’s sacred transactions and that it had become outdated. In 2005, Southwest initiated a two-year project to rewrite its reservation system and redesign key files associated with its sacred transactions.

Implementing IT Governance

Even as Technology leaders worked on fixing the Technology unit and rationalizing the technology infrastructure, they sought to engage business managers in the transformation effort. While some positive impacts could be delivered by making improvements within Technology, management agreed that business leaders had to define their IT priorities and ultimately drive organizational change. This started with an education process:

“Our Technology Leadership Team and I met with three different executive steering groups monthly for the first two years to bring the executives up to speed on what technology we were building for them and how it fit. And folks could see what we were building for everyone else. The objective was a higher level awareness of what the value was.”

—Jan Marshall
CIO

By fall of 2006, these executive steering groups had been superseded, as a means of achieving alignment, by a set of seven company-wide business strategy teams, each consisting of 12–15 senior managers. The intention of the strategy teams was to focus management on company-wide priorities rather than isolated objectives. Each team had a senior executive leader and typically met twice a month. Most of Southwest’s 30 senior leaders were on two or three strategy teams and thus were spending a significant amount of time discussing company-wide objectives and priorities:

“The strategy teams are a great way for people to learn about other people’s departments and functions, and then also to participate and engage in the process... The strategy teams are really helping a lot with prioritization and communication and even some of the arbitration that needs to be done like, ‘Well, hey, this is really important to Customer Experience so let’s delay this project over here to get this done.’” —Kevin Krone
VP, Marketing, Sales, and Distribution

In 2007, 80% of Southwest’s Technology projects were aligned with a strategy team. The role of the management team did not stop with project prioritization. Business leaders owned responsibility for project and value delivery. A new tollgate process ensured they were engaged in the delivery and implementation process. Tollgates were part of Southwest’s “just enough methodology” philosophy that managers throughout the company started to refer to as the SWA-Way (a two-syllable term).

The tollgate process was a phase-end review of project progress involving a review of project deliverables followed by an hour-long meeting with the CIO and key business and Technology stakeholders. At the meeting both business and technology stakeholders would clarify project status, scope or design and seek help with problems or obstacles that might impede progress or eventual business value:

“The tollgate process is now accepted by all departments, and there is no more mystery to [the project delivery process]. You don’t have to be involved in the day-to-day, or you may not even have a decision that affected your group during this particular phase that they are working on, but you know where the whole project sits.”

—Jim Ruppel
VP Customer Relations/Rapid Rewards

The CIO set aside a full day every week to participate in tollgate meetings. To ensure project teams were well-prepared for the meetings, the CIO, initially Tom Nealon and subsequently Jan Marshall, made a point of reading every report prior to the meeting. Approximately 50 of Southwest’s projects each year were designated as strategic projects requiring tollgates. Managers throughout Southwest attested to the value of the tollgate process:

“The delivered systems are not always faster, but they’re better—much better tested, better thought out in terms of how it fits in the long term, delivered with less risk than in the past. The end customers are involved. They have to test, they have to design. They have to be involved in the requirements.” —Laura Wright
SVP Finance and CFO

Changing SWA

Initial technology-related changes delivered notable benefits, such as more reliable systems and more strategic allocation of Technology resources. Ultimately, however, Southwest management expected to see the impacts of system implementations on operating costs and customer service. These benefits could only be realized through business process changes.

To spearhead early initiatives, Southwest instituted a committee called “Change Initiatives,” which reported to Gary Kelly. The focus of the group was to drive the major projects in the company. At first Technology leaders played the dominant role in deciding project priorities and defining change requirements:

“Technology became a driver of change and Technology became the force in the business that was saying not just, ‘Here’s what I think about technology,’ but, ‘Here’s what I think about your business, and here is what you need to be doing in order to improve.’ For a period the business resented that. So the business was being dragged along by Technology in some cases willingly, in other cases less willingly.” —Robert Jordan
EVP, Strategy, Procurement, and Technology

The early period of “Technology-push” helped Southwest introduce improvements in IT infrastructure and some core systems around the booking engine, crew scheduling, internet-based customer service, and employee benefits. Over time, however, ownership of change initiatives started to move back to business leaders:

“The business has really started to drive change, embrace it — not in every area, but some areas quite a bit. So now, I think we’re flipping back to where we need to be, which is the business is leading and Technology is partnering.” —Robert Jordan

One initiative intended to apply technology to support both increased efficiencies and enhanced customer service was known as “Redefining Excellence” in Ground Operations. Headed by SVP Greg Wells, Ground Operations was Southwest’s largest department, encom-

passing all 11,000 Southwest employees who worked at airports. The objective of the Redefining Excellence initiative was to redesign processes across the airport, including ticket counters, boarding, and baggage handling, to maximize the use of Southwest resources. Technology solutions, including Southwest’s new reservation system, would eventually support the change effort, but Southwest intended to implement process changes as opportunities were identified.

The Redefining Excellence initiative kicked off in 2004 at the Phoenix airport with a town hall for senior managers and Southwest employees to discuss the need for change. Management found an environment eager for process improvement. A team of eight full-time Southwest employees followed up with a six-month review of operations at the Phoenix airport, one of Southwest’s largest. By early 2007, four of Southwest’s largest airports, Phoenix, Chicago, Baltimore, and Las Vegas, had introduced what Greg Wells referred to as a “monumental change effort.” But these changes had not come easily:

“It ends up that we are offering much better service. We’re also saving money in how we use our staffing, but it is change. Some of it is little change and some of it big change, but winning the hearts and minds of our people has been the biggest challenge.”—Greg Wells
SVP, Operations

Recognizing the difficulty of change, Wells was more concerned with buy-in than with rapid implementation. He noted that introducing changes engineered by a corporate team was not a natural fit at Southwest:

“In the past we have come up with ideas and said, ‘Here’s the memo, read it, and we’ll start it tomorrow.’ And that approach never worked. Instead, we spend a lot more time pulling all the users into the planning meetings, helping design it. I think the longer we talk about it and the more we ease into it and take our time, the better we do.” —Greg Wells

The Redefining Excellence team, which had grown to 45 people by 2007, was working with two airports at a time. The largest airports took four to six months, but management expected smaller stations to require considerably less time. Wells noted that while standardized processes offered efficiencies, Southwest employees took great pride in their work, and they wanted input into the design of processes for which they were responsible. His team attempted to balance employees' need to be in control of their work situation with the company's need to eliminate non-value-adding costs:

"Now that we've completed a couple [of airports], we can say, 'We saw this work in the bigger stations. Can we somehow adapt this to your location with your help? You guys are the experts.' Each airport is different and each airport management is different, so we do make some tweaks. But when it's all said and done, we want to be as efficient as we can be." —Greg Wells
SVP, Operations

Another project focused on customer relationship management. Like Redefining Excellence, this project was an umbrella project involving multiple systems and process changes, implemented incrementally. Customer relations staff had 40 icons on their computers; all representing systems that could potentially help them address a customer need or resolve a customer complaint. The objective was to eventually collapse those isolated systems into a single modular system with all the capabilities accessible via a single icon. Some of the new functionality would also enable additional customer self-service, as the same features could be exposed on Southwest.com or the airport kiosks. For example, one feature converted vouchers from paper (which had to be cashed in at an airport) to an electronic form (which could be cashed in online).

As Southwest implemented components of the customer relationship management project, demands on customer relations staff eased and they could resolve customer issues faster. The

incremental implementation plan, coupled with airline growth, meant that the company did not need to lay off employees, although the number of customer relations staff decreased from around 220 in 2000 to 150 in early 2007. New processes in customer relationship management involved less radical change than Redefining Excellence, but management needed to reassure employees that the new systems would enhance their jobs:

"What we will do is adapt the skills they have to the new skills that are required, and no, they are not going to lose their jobs. Are their jobs going to change? Yes. I'm very worried about the cultural impact, if you will, of changing. And we will do some change management things to prepare for when the new system comes in. You know, it will be very exciting for everyone." —Jim Ruppel
VP Customer Relations/Rapid Rewards

One way management motivated employees to change was through company-wide training on the business goals of the company. A program called "Knowing the Score" helped employees see their activities in light of the company's performance:

"Gary is almost maniacal about sharing information. In the past, you would have a pretty good view of what your targets were and how you were doing, but you didn't necessarily have a detailed view of everything that was going on. Now, for example, everybody in the company can see what our return on invested capital target is and whether or not we are hitting it." —Kerry Schwab
CTO and VP, Technology

Motivating employees to change was a special challenge in the only airline that had recorded 34 straight years of profitability:

"When you say, just for an example, 'Our earnings in 2006 were \$499 million,' and then you say, 'now we've got to be more efficient, we've got to be more productive,' they say, 'Well wait a second. We just made \$499 million.' So sometimes it is confusing

to our employees. ‘Knowing the Score’ is really an attempt to make sure that they understand that we’re not trying to push harder just for the sake of pushing. There is a business reason why we’re making these requests.”

—Kevin Krone

VP, Marketing, Sales, and Distribution

Pursuing Agility

In the early days, Southwest prided itself on its agility and innovativeness. Its people were unquestionably the source of agility:

“If you go back to the inception of Southwest, the tools we used to change the business were the people we had. We were small enough at that time that you didn’t really need a lot of technology. So it was low tech/high touch, and you could see that if you look at the story of the ten minute turn.⁸ What it was about was teamwork.”

—Kerry Schwab

CTO and VP, Technology

As the company grew, complexity also grew, and Southwest found its formula for agility through people was no longer adequate. In the 21st century, management felt that Technology would also have to be a source of agility. At a minimum, it could not be an obstacle:

“We have always stayed back and watched technology, often letting somebody else discover it, perfect it, fine tune it., Then we would try to leapfrog their technology and improve upon it. Today though, I think, technology is moving so fast that we’re not able to do that as much as in the past.”

—Greg Wells

SVP, Operations

To ensure that Technology made Southwest more—not less—agile, senior executives had

⁸ The 10-minute turn referred to the amount of time taken to empty and fill a Southwest plane at a gate. Gary Kelly referred to the 10-minute turn as an outcome of the “warrior spirit of our employees” responding to the need, in Southwest’s early days, to make three airplanes do the work of four. (Gary Kelly speech to Houston Forum, October 27, 2004.)

worked to (1) focus attention on the company’s highest priorities for Technology support, (2) get needed systems in quickly, and then (3) drive the value from them. They had made enormous progress on the first two, but driving value from systems was still a challenge:

“The business has gotten much better at understanding what they want to do, when they need it, what the true scope is, what the true costs are, all of which are good things. What we’re still not really good at is, when it’s all said and done and the project is over and we’re all happy that it’s over, we’re not very good at going back and proving that we’ve captured the benefit. So I think we need to get much, much better because with our cost pressures we simply must ensure that we capture the benefits. We don’t have the luxury of spending \$5 million on something and hoping the value materializes.”

—Robert Jordan

EVP, Strategy, Procurement, and Technology

Looking ahead, management could see significant challenges to Southwest’s successful business model. As traditional carriers sought to compete on price and new entrants introduced amenities not available on Southwest, the company was assessing its opportunities to grow profitably. Many of the most obvious opportunities to grow challenged the principles on which Southwest had built their airline. For example, Southwest was steadily moving toward longer routes. Moving from short haul to longer routes increased demand for food on board and led to more checked bags.⁹ Both developments could impede the rapid turnaround of planes and increase the company’s ratio of employees per plane.

In 2006, Southwest had entered its first code-share agreement with ATA Airlines. Management saw codesharing as an opportunity for rapid growth. But, because other airlines assigned seats, Southwest was not yet posi-

⁹ New security restrictions, introduced in the fall of 2006, limited the liquids that passengers could bring on board and had already increased the number of checked bags.

tioned for significant codesharing. International flights, through codeshares or new Southwest routes were also a possibility. However, international flights would require the ability to store passport information. Southwest could also move into smaller U.S. cities. But smaller markets could not support the company's standard plane, the Boeing 737, and smaller planes would add complexity to its operations.

In the short term Southwest had ordered 37 new 737s for delivery in 2007 which would increase seating capacity 8 percent. This would allow the company to achieve some growth by simply pushing the existing business model. But pressures to abandon aspects of Southwest tradition would persist:

"If we want to keep growing—and we have to grow—we're going to have to get creative."

—Greg Wells
SVP, Operations

The Technology unit considered the implications of potential changes as the company built and enhanced systems. For example, the new reservation system would include options

to support seat assignments, codeshare agreements, and international travel. This meant that Technology would be mindful of industry standards as it delivered new systems:

"We're trying to design more in an industry way on the backend. How we communicate information to ATA, for example, is more industry standard. There is constant pressure from the industry to do things similarly to how they do it. And we try as much as we can to do that when and where it makes sense."

—Jan Marshall
CIO

Southwest management sensed that its people—armed with supporting technology—would succeed in capturing the opportunities that lie ahead:

"I think the real beauty of [our change initiatives] is not the fact that we're changing but that we're teaching our people how to change. And if we keep that going, keep our employees used to change, we're going to be okay."

—Greg Wells

Exhibit 1: Key Metrics

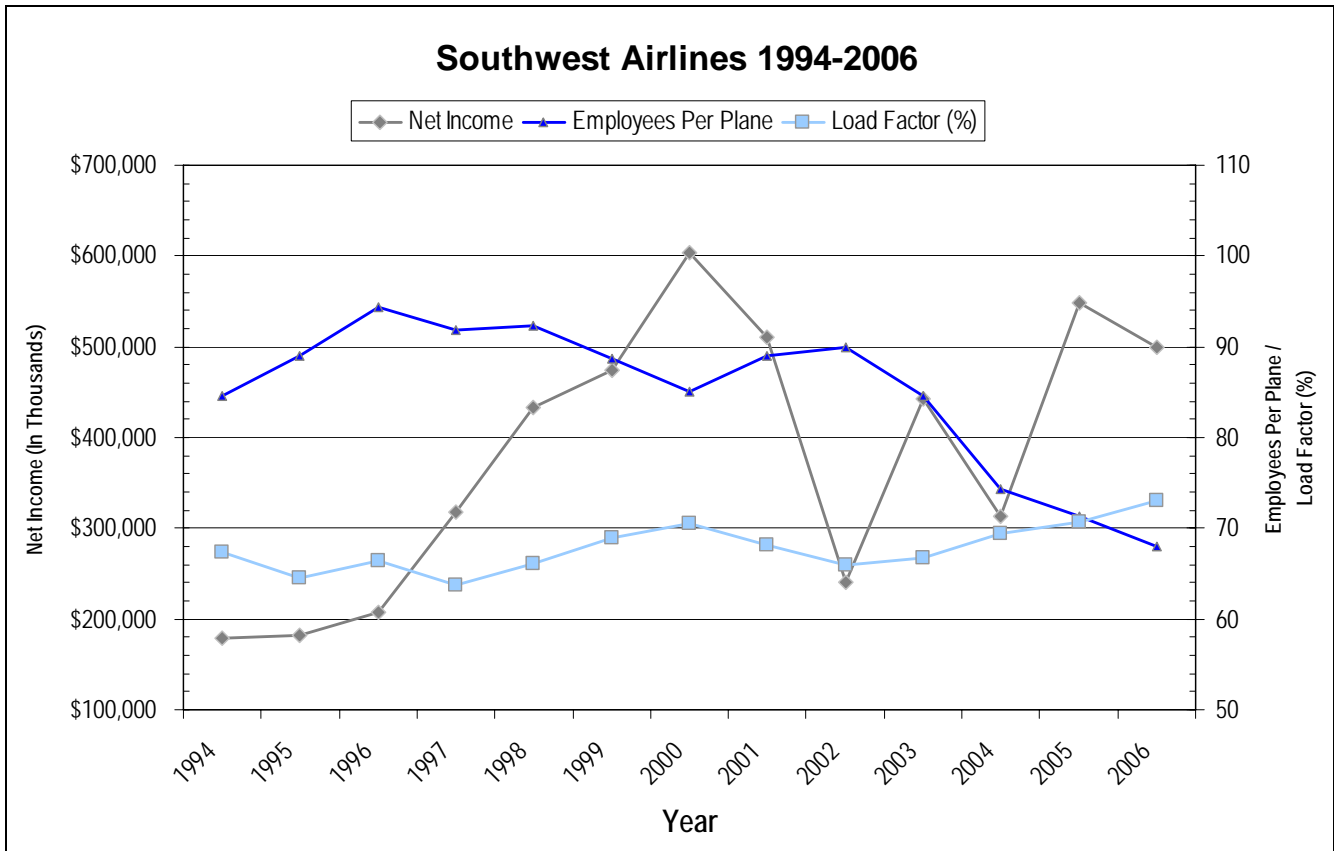


Exhibit 2: Organizational Charts

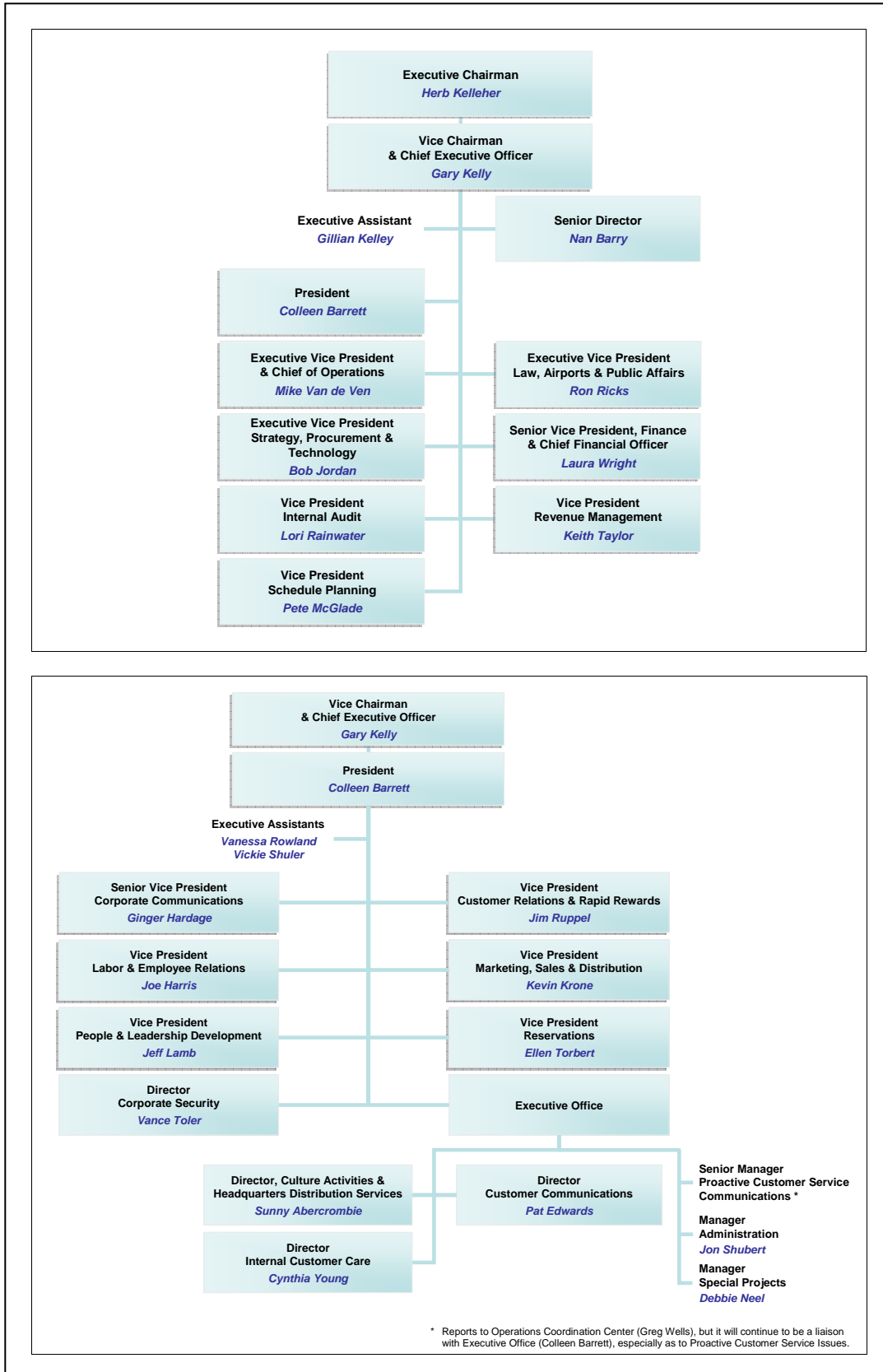
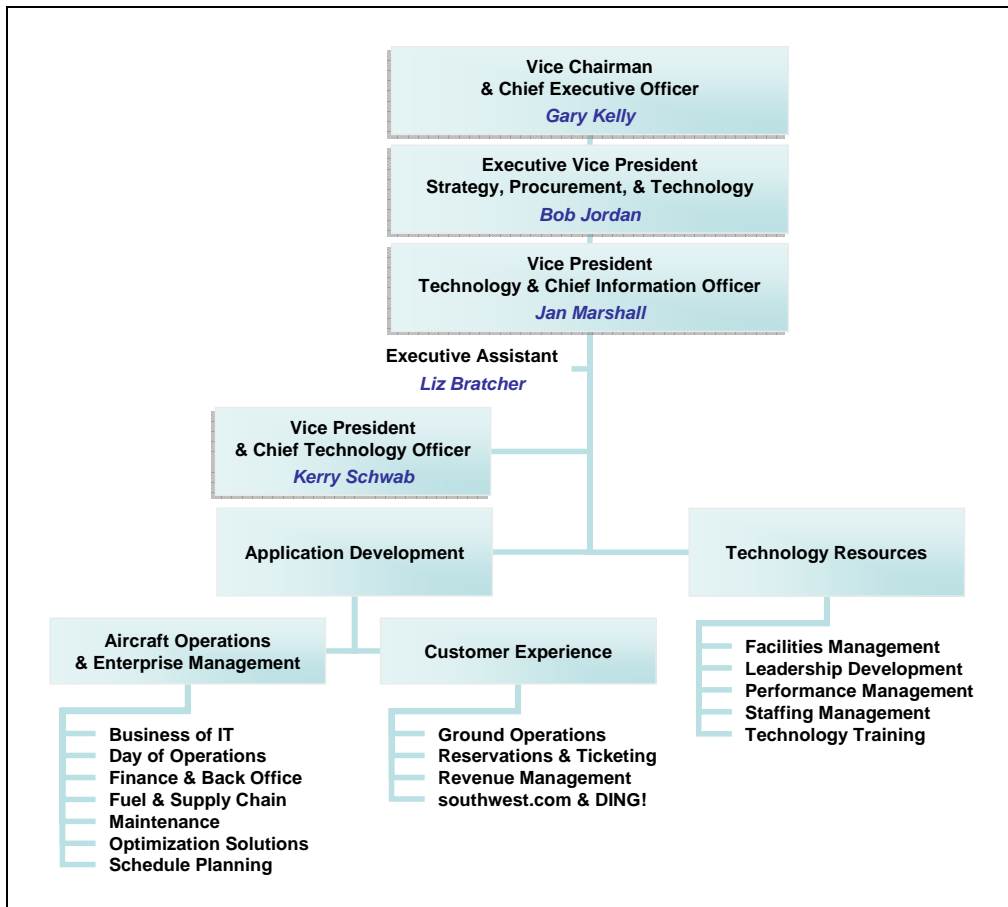


Exhibit 3: Technology Department Organization Chart



CISR MISSION

CISR was founded in 1974 and has a strong track record of practice based research on the management of information technology. As we enter the twenty-first century, CISR's mission is to perform practical empirical research on how firms generate business value from IT. CISR disseminates this research via electronic research briefings, working papers, research workshops and executive education. Our research portfolio includes:

- Effective IT Oversight
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Since July 2000, CISR has been directed by Peter Weill, formerly of the Melbourne Business School. Drs. Jeanne Ross, George Westerman and Nils Fonstad are full time CISR researchers. CISR is co-located with the MIT Center for Digital Business and Center for Collective Intelligence to facilitate collaboration between faculty and researchers.

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