

**CLIFF PURINGTON and CHRIS BUTLER**  
with **SARAH FISTER GALE**

# **BUILT to LEARN**

**THE INSIDE STORY OF  
HOW ROCKWELL COLLINS  
BECAME A TRUE  
LEARNING ORGANIZATION**

**Built to Learn**

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The Inside Story of How Rockwell Collins  
Became a True Learning Organization

Cliff Purington

Chris Butler

with Sarah Fister Gale

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This book is dedicated to all the people who have shared their life experiences and provided me the guidance that has contributed to my personal and professional growth; especially to Rebecca, my wife, who has always been my number one fan and gave me the courage to think outside of the box.

Thank you Rebecca.

—Cliff Purington

To Elizabeth, for whom all books were precious—especially this one. I know you would have been proud.

—Chris Butler

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# Preface

Cliff Purington was hired as learning director of Rockwell Collins in late 1998 with the mandate to transform the company into a dynamic learning organization. At the time, the company's training programs were fragmented, duplicated, and largely unused. The \$17.3 million training budget featured approximately 167 individually titled courses delivered multiple times per year in a classroom setting. The training process itself was back-end focused with little accountability and no processes for choosing or managing training, and its results were questionable, which is fairly typical of most organizations of a substantial size.

Shortly after his arrival, Cliff turned to Chris Butler, president of The Performance Engineering Group, for assistance in bringing clarity and organizational-development expertise to the project. Together, they began researching the Rockwell Collins environment and pinpointing the cultural barriers that would stand in the way of this transformation.

As a result of that research and organizational assessment, Cliff and Chris built a comprehensive strategic plan for change that was tied directly to Rockwell Collins's business goals. They linked all learning activities to the company's business objectives—reducing the overall cost of learning while increasing its quality and making learning and development activities accessible to more than 17,000 employees worldwide, twenty-four hours per day, seven days per week. With the support of senior management, who were floored by the extensive detail of the plan and the research supporting it, they implemented their objectives, transforming the aerospace giant into an organization centered on a strategy-based, technology-driven learning approach. In

the process, they expanded the company's learning offerings by 400 percent while saving it \$23 million over three years—and that's a conservative estimate.

Most important, Rockwell Collins employees are now taking advantage of the company's learning offerings in record numbers because for the first time the training meets their direct needs on the job. Because most of the content is delivered via technology directly to the employees' workplaces, they have easier access to just-in-time learning designed to help them at the source of their problems, and at their critical time of need.

This book is founded on the lessons and principles derived from our experiences at Rockwell Collins. It explains how to become a learning organization and describes the critical cultural barriers that must be surmounted in order for that process to succeed. It explains the role e-learning plays, and how not to fall into the technology traps to which so many companies fall prey. The ten-step process laid out in these pages shows readers how to transform any company—regardless of size or industry—into a learning organization by focusing on the front end of the process, the culture, and the long-range vision of the business.

# Acknowledgments

We would like to acknowledge the Rockwell Collins department of learning and development. The entire change initiative was successful only because of the risk taking, dedication, and very hard work of these consummate professionals. Steve Junion, Jim Kalisch, Greg Schaefer, Margaret Flynn, Damita Wash, Tracy Covington, Pamela Johnson, and Teresa Ulrich are the people who made it all happen.

—Cliff Purington and Chris Butler

This book would not have been possible without the support and understanding of my wife Carol and my son Nicholas. She kept the home fires burning while I traveled extensively in order to see this very demanding project through. Nicholas always greeted me with a beautiful smile and the warmest of hugs whenever I returned home from my travels.

Thank you.

—Chris Butler

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# Introduction

*“The ability to learn faster than your competitors may be the only sustainable advantage.”*

ARIE DEGEUS

## **Why Become a Learning Organization?**

Every time employees leave your organization, they take with them critical knowledge that you may never be able to replace. With every resignation or termination, every retirement, every transfer, valuable slices of your wealth, your knowledge capital, are lost, and your ability to succeed suffers as a result.

In the past, wealth and success were tied to an ability to make and move hard goods. Employees were simply there to support the process. But we are in a new era of wealth creation. No longer is success tied only to the development and distribution of physical products. The determinant of success in this economy is more abstract than that. You can't hold it in your hands, heft its weight, run it through your fingers.

Today, the driving force behind the creation of wealth—and the only thing that guarantees success—is *knowledge* and the ability to move information. Regardless of your industry—whether you manufacture goods or sell ideas—the speed and agility with which you acquire and disseminate skills, knowledge, and information will determine your competitive advantage.

To succeed in a knowledge-driven economy, not only do you need to gather and share new corporate data, you need to capture the infor-

mation that already resides in the corners of your organization. You need to find a way to cull the knowledge that is being so carefully guarded by employees who have learned how to survive in your knowledge-is-power culture. You must also create processes to save the knowledge carelessly discarded by those who do not value it or have fidelity to you.

The concept of employer/employee loyalty is dead, especially in key business units where critical knowledge collects. According to the Giga Group, “Of today’s 3 million IT workers, 30 percent are actively seeking new jobs and another 40 percent are passive job seekers.” In other words, 70 percent of all IT workers feel little obligation to their employers, and for a small incentive they can be lured away by your competition. Sales-force turnover rates are similarly grim.

Every time one of your employees moves on, that individual takes away *your* knowledge—the only commodity you have to differentiate yourself in this rapidly changing economy. Every abandonment, every lost nugget of information about your systems—your clients, your processes—does irreparable harm to your organization and your potential for success within your industry. Even if you make your employees happy, you cannot keep all of them forever—nor would you want to—but you have to find a way to keep their knowledge and share it with those who replace them.

Few companies have strategies in place to gather the valuable knowledge held by departing workers. They also haven’t put much thought into the impact of mass retirements on their knowledge structure. Baby boomers have been the mainstay of industry for decades. They hold the key positions in most Fortune 1000 companies and the lion’s share of corporate history and knowledge, and they are all about to retire. How will you capture and retain their expertise?

The only way to secure your knowledge—and your competitive advantage—is to turn your company into a learning organization where information sharing is integral to the business process. In a learning organization, individuals don’t hoard knowledge the way they do in every other company. They distribute it freely because the culture and reward system encourage them to do so. A learning orga-

nization's employees actively seek the skills, knowledge, and information they need to perform and transform themselves into better, faster, more effective employees. Its managers empower employees to seek training when necessary, and they create a climate and culture in which education, skill acquisition, and knowledge sharing are not only supported, they are required. This is a critical point. A learning organization has the infrastructure, the environment, and the support in place to foster this constant process of knowledge accumulation and dispersion.

This transformation requires a vast cultural change. Corporate culture isn't what the employees do, but the manner or style by which tasks get accomplished. To become a learning organization, you must be prepared to first diagnose your culture, then tear down the cultural barriers that stand in the way of an environment in which employees are empowered to seek new skills and knowledge as they are needed. You need to establish a new mindset that understands the value of a training philosophy that ties learning to the needs of the business.

The importance of learning and the speed at which your employees acquire needed skills isn't new. This subject has been the focus of myriad books and articles over the past several years and has been touted within the corporate world as the most important single competitive element a company can attempt. Training professionals have used this hyperbole to capture additional budgets to roll out new programs and expand more of the same old stuff, delivered in the same old traditional method. Recently, they've extolled the benefits of e-learning as the Holy Grail that will finally solve all the training problems of the past. This was the same thing we heard when videotapes arrived on the scene three decades ago. How effective were they?

The reason these training programs fail is that they exist in a vacuum. They have no bearing on individual business units and no link to their strategic goals. Most training initiatives rarely tie to any specific business objectives, causing managers to see these efforts as nonessential perks or necessary wastes of money to achieve established training requirements rather than critical components of achieving success.



The transformation to a learning organization requires more, however, than just apprising the training department of the company's core business objectives. Even when they are made aware of business imperatives, many training departments fail to take the time to evaluate the core learning necessary to achieve those end goals. They make cursory investigations into the process, then fall prey to the "training can fix it" mentality—even if training isn't necessary to solve the problem. Most companies see training as the only answer when a problem arises, but it almost never is.

Press an employee to do something and ask, "Can you do this task?" An employee who says yes doesn't need training. Unfortunately, most corporate cultures expect trainers to blindly accommodate their requests for training. It's far easier for managers to put a sales group through training than to reflect on the quality of the product, the validity of the sales process, or the effectiveness of their own management styles. Training is an easy out, and when it doesn't improve performance, trainers are an even easier target. They get blamed for offering ineffective learning when the lack of learning wasn't the problem to start with.

The learning-organization transformation eliminates that skewed approach to training because it rebuilds the culture, attitude, and motivation surrounding the education process. Champions of the learning organization revamp their learning environment, converting management and employees' approach to skill and knowledge acquisition from a passive, often dismissive style, to an active, vibrant, self-fulfilling system in which every person takes responsibility for his or her performance and abilities. They turn the culture, the "how we do it" learning style of the company, on its ear, eliminating passive training options and replacing them with proactive learning opportunities. They stand up to the minority, who may try to tear down their efforts out of fear or laziness, and force a revolution for the good of the business.

Tying learning to the strategic and tactical goals of the organization is at the core of the learning-organization transformation. When you turn your company into a learning organization, every training opportunity is hardwired to the business objectives of the enterprise,

because that is the only way that learning will add value to your company. The connection between learning and the business will prove that time spent acquiring new skills and knowledge directly affects the bottom line. That's what makes training a valued component of the business process. Once a company hardwires its learning to the business goals and attaches all curricula design to the eventual training-delivery measurements, the return on investment of learning becomes obvious.

## **The Role of E-Learning**

This transformation is not achieved through an e-learning initiative, although e-learning is often part of the process. Technology enables us to build learning organizations because it allows employees to benefit from the speed and flexibility of an anytime, anywhere education system. But e-learning is just the vehicle. On its own, it is no better than the videotapes that no one watches or user manuals that no one reads.

Many companies have tried to make the transition to a learning organization, only to invest millions of dollars in failed solutions. They failed because they didn't understand what they were trying to do, assuming that throwing enough money at flashy online-training solutions would mean they were dedicated to learning.

They offer their employees technology tools but ignore the cultural revolution required to make them useful. Becoming a learning organization is far more challenging than just implementing technology. It requires a major shift in cultural attitude toward learning. E-learning is a radically different approach to knowledge transfer. It requires employees to seek out knowledge rather than have it delivered to them. Unless you transform the attitude, support mechanisms, and reward system, you give your employees tools that have no value and no context. The best e-learning system in the world cannot flourish in those circumstances.

If you want to succeed at this transformation process, forget technology for the moment and think about your environment. You have to rethink your culture, your reward and recognition processes, your

vision, and your determinants of who succeeds and why. You must give up your knowledge-is-power mentality and create a culture in which information sharing is at the foundation of what makes the company run. A learning organization practices genuine teamwork, in which all members are valued. It has strong leadership to support the learning goals, it has open lines of communication that flow up and across the organization, and the roles and responsibilities of every employee are clearly defined. Only after you've committed yourself to this monumental change effort can you appreciate the role that e-learning will play in supporting the change.

We succeeded in transforming Rockwell Collins, the aerospace giant based in Cedar Rapids, Iowa, into a learning organization, because our online-learning initiatives had purpose. They were designed to support the goals of the company and enhance the key skills of the employees. We held their hands, marketed the system, and set the stage for users by showing them the value of our initiative. The transformation initiative removed incentives that supported the old system and put in place new processes for reward. We targeted cultural issues and either eliminated or worked around them. The result was a learning-organization transformation supported by technology-delivered training that has saved the company millions of dollars over three years.

## **The Role of Trainers**

By giving employees the power and support to pursue learning and linking learning to the business vision, you will transform the training department from a peripheral, nonessential unit to a key contributor to the success of the company. Training's job in a learning organization is to offer instructionally sound, performance-based, quality training that supports the needs of the organization—not to provide random training events to solve problems that are not related to skill or knowledge gaps.

You will no longer measure training's effectiveness through seat time and classes delivered, because you will be focused on the front end of the process. You will have processes in place to determine whether

training is necessary and linked to defined business requirements, and the training you offer will be based on instructional-system-design principles.

As a result of this transformation, learning will finally be recognized as an essential part of the process and the learning team will garner new levels of respect and power within the organization.

Accomplishing this shift is a monumental goal for trainers on their own because they rarely hold the positions of power necessary to create cultural upheaval, and that's what it takes to achieve this metamorphosis. This process will be far more successful if the training department has the support and voice of organizational leaders who have the authority to cause profound change and the desire to make sure their most valuable assets, their employees, are competent and skilled to meet the demands of present and future business objectives.

To achieve the organizational change necessary to become a learning organization, you need an all-encompassing strategic plan that defines where the company is today, where it needs to be in the future, and how you are going to get there. By following our method for becoming a learning organization, you will learn how to build a strategic plan that will win the active support of management.

By following our ten-step process you will create within your organization a new learning environment that will tie every learning opportunity to the business goals of the company. It will reduce your costs, improve your training quality, change end users' attitude toward training, and win you the respect and admiration of your management team.

At first it might be a bitter battle to convince skeptical executives, many of whom will have been burned before by training propositions. However, this proposition will succeed because this time you will have a fail-proof plan—the one laid out in this book.

## **The Learning-Organization Transformation**

The following chapters present a ten-step process for converting your company, any company, into a learning organization. Whether yours is

a Fortune 1000 company or a mom-and-pop shop, this process will teach you how to link your learning to the business. It outlines every action necessary to renovate bloated, disjointed, hierarchical training systems into streamlined, flexible, performance-based, culturally focused learning organizations. By following these steps, you can guarantee your competitive advantage in an economy that values knowledge over everything else.

Skeptical? That's understandable, but not only does this book lay out the process, it shows in detail how it worked to transform Rockwell Collins. We chose Rockwell Collins as our primary example because it is a conservative, change-averse company with a history of cynicism toward new ideas and a highly cautious approach to transformation. Even under those circumstances, the impact of this learning-organization process has been unparalleled. *Within three years of implementing our strategic plan at Rockwell Collins, we saved the company \$23 million on training expenditures while expanding its training offerings by 400 percent.* If we can make this happen at Rockwell Collins using this process, it can be done at any company regardless of the size, culture, or industry.

A major reason for the success of our implementation was our converting a largely classroom-based environment to one that used technology-delivered courses, but at the core of the process, the reason it was so wildly successful, was our transformation of the learning culture. We tore down old wasteful systems and replaced them with structured, front-end-focused processes, which guaranteed that every training course offered was directly linked to a business result.

The strategic plan we implemented changed the way Rockwell Collins's employees looked at training, it changed management attitude, and it created a new culture in which learning is a critical component of the business process.

As you read through the recommended steps in our ten-step process, keep in mind that while they are critical on their own, they are not linear events. Many of these steps must be approached simultaneously in order for the process to work. While you are researching your culture, you must also be looking for leaders and

evaluating the latest tools and technology available to the training industry.

Read through the entire process before you begin your transformation, or you may waste valuable time focusing your efforts on a single goal when many things could have been accomplished.

## TEN STEPS TO BECOMING A LEARNING ORGANIZATION

1. Understand the business.
2. Conduct the organizational assessment.
3. Define your core objectives.
4. Plan your strategy.
5. Select your vendors.
6. Build the business case.
7. Take the show on the road.
8. Implement.
9. Assess and modify.
10. Celebrate your success.

With the guidance provided in the following chapters, you will be able to make the same profound changes in your organization that we accomplished at Rockwell Collins. You will learn how to evaluate your current culture, pinpoint key objectives, and write a compelling business plan that will cause your leaders to pay close attention to you. Ultimately, if you follow the steps we've laid out, you have the potential to save millions of dollars, restructure the cultural attitude toward learning, vastly improve the quality of your training system, and guarantee your department's standing as an asset to the organization.

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## PART I

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# Plan Your Work

Before you can implement a single piece of technology or change anything about the current state of learning at your organization, you need to collect as much data as possible about the business, its training history, and the needs of each of the units. Using the information you gather during this phase, you will build a comprehensive strategic plan that will transform your company into a learning organization.



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# STEP 1

## Understand the Business

*“Human beings, who are almost unique in having the ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so.”*

DOUGLAS ADAMS, *LAST CHANCE TO SEE*

### GOALS FOR STEP 1

1. Understand each business unit’s strategic goals, challenges, and concerns.
2. Meet with every business-unit leader to develop key relationships.
3. Let each business-unit leader know you will be back with a plan to address their needs.

Behind every great business initiative is a powerful, charismatic, forward-thinking leader who has the authority to make dramatic change happen with the support of management and the acceptance of the employees. Think of Jack Welch at GE or Lee Iacocca at Chrysler. Both were persuasive, focused leaders who weren't afraid to make initially unpopular decisions for the good of the company and its future. They tore down the existing unruly cultural environments and rebuilt them as lean, united workplaces where change—and ultimately success—was possible. Far-sighted, incisive, and controversial, these leaders recognized the need for change and were willing to risk challenging the popular opinion.

Becoming a learning organization requires similar drive, ambition, and dedication to purpose. It is difficult to initiate change from within the training department alone because even the most charismatic and business-savvy trainers rarely have the power to significantly affect the decisions made within the company. Trainers require the help and support of executives to champion their cause.

To have any success at all in transforming your organization, you need to secure the support of executive managers who have the authority to draw attention to the initiative and cause change. These executives will become your champions, singing your praises and driving the company to back your efforts. With your help, they will come to understand the power and value of learning and will be willing to commit their time and voices to help you change the way employees gather knowledge and learn.

These leaders will do more than just help you implement a new training program; they will help you develop and put into practice ideas that transcend the company and the industry. Their support will allow an environment to develop where employees are empowered to build upon their knowledge and apply that knowledge directly to the company's business objectives. They give you the power to reinforce the culture change necessary to become a learning organization.

## **Finding Your Leaders**

Ideally you are the powerful, charismatic leader within your organization ready to cause and capable of causing radical cultural change.

You recognize the need to transform the way employees and management approach and manage their knowledge, skills, and training, and you have the desire and ability to make that transformation happen.

If that is the case, congratulations on your new assignment—to lead your company’s transformation into a learning organization. It will be a long, hard journey but you can find comfort in knowing you’ve taken the first and most difficult step.

If you don’t happen to be that charismatic leader, the next most ideal situation is that somewhere in your company is an executive just waiting to take on the task of championing this transformation to a learning organization. This person is an executive-level leader who understands the power and value of learning and is willing to commit his or her time and voice to helping you change the way employees gather knowledge. This person will support your cause, talk you up to other executives, and fight for every dollar you need to make this transformation happen because he or she knows that the only way for your company to continue to be successful is for it to reinvent itself as a learning organization. All this person needs is for you to provide the idea and a plan, and together you will make this process happen.

Unfortunately, both scenarios are extremely rare. The reality is that very few executives understand the true value of training and its impact on the bottom line.

What’s most likely is that you are a trainer or learning director who is passionate about learning and who has the ambition and desire to support this transformation process, but you don’t have enough power or authority on your own to demand the change necessary to make it happen.

Therein lies the irony in the journey to becoming a learning organization—those who are zealous about learning are not powerful enough to enforce change, and those who have the power don’t understand the tremendous impact learning, when it’s tied to the business objectives, can have on an organization.

Fear not, however. You can still make this process work, but you will need help. No matter how much sweat and time you are willing to invest in the effort to turn your company into a learning organization, it won’t happen without the power and support of executive leaders

who are in a position to champion your cause. As a trainer, you may not have the corporate voice to inspire change, but when you are backed up by someone who does, someone who is not afraid to shake up long-held traditions and value systems that don't belong in today's economy, you can make things happen.

And the more champions you have, the better. There should be leaders all over the organization championing your cause so you can build support throughout the company in the shortest amount of time. The more leaders you have to support you, the more likely the masses are to follow along. Remember that one-third of the people will be happy to change, one-third will fight change tooth and nail, and one-third will remain on the fence until they know what everyone else will do. With many well-placed leaders, you'll get the support of the top two-thirds, and the rest will have no choice but to follow.

These leaders won't be involved in the day-to-day grind of the transition process. They will not be in charge of selecting vendors, interviewing staff, or managing the rest of the mundane details that a massive change initiative entails. They will be the voice of the project, the ones who demand that unit managers pay attention to your directives as you implement your strategic plan. They will fight for your budget, celebrate your successes, and advertise your strategic plan at every board meeting and in every employee interaction. They will be briefed regularly on the change process—what's been done so far and what is left to do. And whenever necessary, they will use their authority and power to help push the process along, whether it's to get IT on board with the implementation of new technology or convince skeptical managers that the process is not only worthwhile, it's a mandatory part of the new reward and recognition system.

Because you are unlikely to find executives already committed to the learning process, you'll have to create them. This process begins by introducing yourself to them, showing a willingness to listen to their needs, and investing the time and energy to educate yourself about their business. People who are respected in an organization understand the business. If you don't understand the fundamentals of how the company operates, what its goals are, and what role train-

ing plays in achieving those goals, this lack of knowledge will severely erode your credibility.

Training departments often get bad reputations when they offer solutions without adequately examining the problems. To be taken seriously and to cause the transformation necessary to become a learning organization, you need to tie the strategic-learning transformation directly to the goals and objectives of the entire organization. To do that, you must have a thorough understanding of the company, how it operates, and what skills and issues are critical to each business unit.

In this phase of the project you will meet with every key leader in your company—every executive and manager of a major business unit. This is the first step to creating the all-encompassing strategic plan that will define where your company is today, where it needs to be in the future, and how you are going to get there. It's time to put yourself in front of the executive team and let them know that change is afoot and to find out exactly how the organization runs, at an enterprise level and in each major business unit. In these meetings you will discover what drives their business needs, what their processes are, what frustrates them, and what they'd like to see done differently.

By exploring the business processes with these leaders, you will gain critical insight into the kinds of training changes necessary to achieve their goals. But, most important, you'll get valuable face time with key executives who will play significant roles later on in supporting and championing your cause.

## **Finding a Solution**

You may feel overwhelmed at the prospect of trying to nail down meetings with all of the key leaders in your organization, but don't. We have never met business leaders who wouldn't spend time discussing how an initiative could either contribute to their business objectives or save their units time or money. Most will be surprised that you are interested in understanding their needs.

Before you meet with anyone, do your homework. Arm yourself

with a deep understanding of the business drivers in your company. Read the five-year plans of the company and each business unit; familiarize yourself with the established goals and processes of each area of your organization; and read the bios and background material of each executive. Look at your past training budgets and the allocation of funds to each unit. Examine the decision-making process used to choose and deliver training and the impact it has had on the business.

When you meet with these people, it's important that you come off as educated about the business and your role in it so that you can ask pertinent, open-ended questions and speak their language. If you go in blind and unprepared, you will look like an amateur and reinforce the opinion that trainers typically exist in a vacuum. This situation will do serious damage to an already tentative relationship.

Once you are confident of your company knowledge, contact each unit leader and tell them you need ninety minutes of their time to talk about their business objectives, their biggest concerns relative to the accomplishment of those objectives, and their honest evaluations of the current learning environment. You need at least that much time to capture their attention, gather information, and generate excitement about your plans, and it's probable you'll spend hours together during that meeting.

Ask open-ended questions about their needs and their biggest issues, then let them do the talking. This is not a time for you to promote yourself or your process; it's a time for you to learn about the needs of the organization. Listen to what they have to say about the organization and the role training plays. The information you collect at these meetings will be the foundation of your strategic learning plan. There will be plenty of time for you to talk later on.

As you explore the business through these interviews, get beyond details about the products you make or services you offer. Talk about the culture, the attitude, and frustrations they have with the existing processes. Although many leaders may not be able to articulate their needs in the language of learning professionals, they are more than capable of communicating the specific issues that affect their business.

For example, when we met with the vice president of operations, he

didn't ask for a training solution to combat the loss of tribal knowledge. At the time, he didn't know enough about what the learning and development team could offer to put that need into a training context, but because we listened to his needs and asked about his obstacles, we unearthed the problem. His best people were retiring and taking valuable core knowledge with them. In response to that "need," The Performance Engineering Group (PEG) ultimately invented QuickLearns, computer-based tutorials featuring subject-matter experts performing key tasks. This cost-effective, rapid-development methodology revolutionized Rockwell Collins's ability to train product-development teams in a fraction of the time the old mentoring system took. PEG has since created more than 500 QuickLearns for Rockwell Collins, and these QuickLearns are a key component of our high-quality, cost-effective training system. Because we took the time to talk with executives in their language, we found a way to save the company millions of dollars, to vastly improve productivity, and to secure the company's ability to deliver products even if key people left the company.

When you conduct your own executive meetings, ask "Why?" at least five times to get at the heart of what concerns them. For example, an executive may tell you that training isn't of much help to his people. That information alone reveals little about the problems the organization faces. But further questioning will eventually reveal the real issue: Training isn't timely or it's of poor quality or there are too many scheduling conflicts.

Find out everything you can about their operations—the day-to-day tasks of team members; their five-year plan; and the biggest concerns they have about their people, their deadlines, and meeting their goals. Ask business questions, such as: "Who are your customers?" "How is your product manufactured?" "Who are your suppliers for the raw materials?" "Do you sell through distribution or directly?" Ask them how training has contributed to meeting their goals and how it's failed them. When you know what is important to them, you will better see where their training needs reside.

Before you leave them, set their expectations. Tell them what you plan to do with this information and when you will return with a plan



of action. Let them know this isn't just an informational interview but the beginning of a revolution that will change the way your company conducts business.

Connecting with business leaders and tying their needs to training offerings is rarely considered part of the trainer's job, but it's critical if you are going to win the approval of management and ultimately be successful. Even if you learn nothing new in these meetings, the face time alone will be a valuable contribution to your process. It makes you familiar to them and it sets their expectations for more to come. It shows them that you are interested in their needs, not just in your own.

Be prepared to hear a lot of negative information and comments about the training department. You may have to go back two or three times before you get people talking about the future and positive changes. Don't be dismayed if you only get an earful of complaints about how HR and the training department have screwed up.

This is a time to build relationships and your integrity. It will likely be the first time any trainer has put in the time and effort to learn the intricacies of the business and their needs. They will appreciate and remember your effort, and this will aid you down the line. A manager of training who does just this one thing will develop a significant amount of credibility in the eyes of senior executives, which is critical because you cannot make this transformation happen without their support.

## QUESTIONS TO ASK EXECUTIVES

This is not a checklist so much as it is a guide to help you organize these meetings for maximum information gathering. The goal of the interviews is to find out the needs, values, and problems each business-unit leader faces. The following questions will lead you toward the information you need, but it's up to you to dig down to the root issues:

1. Who are your customers?
2. What positive things do they have to say about you? What is their biggest complaint?

3. Who are your competitors?
4. What is the one thing that you are most concerned about?
5. How is your product manufactured?
6. Who are your suppliers for the raw materials?
7. Do you sell through distribution or directly?
8. What tasks do executives and their teams do every day?
9. What skills do your team members need to do their jobs?
10. Where do they most often fail or fall short?
11. What is your vision for this unit?
12. Tell me about the past five years. Have you achieved your goals? Have they changed? What affected your ability to meet your goals?
13. What concerns do you have about your team?
14. What are your business objectives for the quarter? The year? The next five years?
15. What are your biggest challenges in achieving those objectives?
16. How has training contributed to your ability to achieve your goals in the past?
17. How has it failed you?
18. If you were in charge of training, what would you do differently? What has been the biggest impact training has had on your organization?
19. When or where has training been a failure?
20. If you had a magic wand, and time and money weren't an issue, what would you have the training department do for you?
21. If you don't achieve your strategic business goals, what will be the consequences to your organization?
22. What will be the consequences to you, personally?
23. What will be the payoff to meeting your strategic goals?
24. What do you like best about what training has done for your organization?

*(continues)*

25. If you could change any two things about training, what would they be?
26. On a scale of 1 to 10, how important is it for your employees to be able to access training immediately?
27. On a scale of 1 to 10, how much "tribal knowledge" do you lose in any given year?
28. How does that loss affect your ability to meet your strategic goals?

## Talking to the People

The meetings with executives should be the primary focus of this phase of the project. However, you'll also want to spend time talking to employees about the work environment. You need to understand how people feel about their jobs, their managers, and their goals.

If time permits, get into the trenches. Work with the team so you can understand the issues they face on the job. That experience will be invaluable in helping you to target training to meet their needs. It may mean getting your hands dirty on the factory floor, or working in the front lines for a few weeks. It may mean interviewing employees about their daily job tasks. The goal is to learn enough about the process so that you can empathize with the needs of management and employees. It will help you understand the cultural attitude of end users and the obstacles that frustrate their ability to perform their jobs and acquire skills.

If you can find a way to do so, get involved with the daily business of the units. The effort alone will show that you are committed to understanding the needs of employees and management and are interested in helping address them. While time constraints prohibited our spending much time on the line at Rockwell Collins, when Cliff Purington worked at Lockheed Martin he spent several weeks working on the launch pad at Cape Canaveral to learn the work environment, and he helped launch the Mars Observer.

Similarly, when Chris Butler was working on a major culture-change initiative for a health-insurance company, he spent a week in a claims center listening to the phone calls from insurance clients to customer-service reps. The experience gave him a sense of the skills used by, and problems faced by, customer-service reps in their day-to-day work, and it gave him real insight into the culture of the organization. The customer-service reps would frequently tell clients things that weren't part of the company policy but were enforced by a supervisor, usually to the detriment of the policy holders. For example, service reps were not allowed to suggest medical services to clients unless they specifically asked about them even if their policies covered them.

Find an approach that works for you and for the leaders of the business units. In other words, ask the business-unit head how best to learn about the environment. Don't just focus on what's easy for you. This phase of the process is as much about making yourself a familiar and friendly face in the organization as it is about learning the business. It doesn't pay to irritate executives this early in the process.

## Meeting Leaders at Rockwell Collins

Within two weeks of our arriving at Rockwell Collins in June 1998, we met with all fourteen business-unit leaders and the CEO to find out how they felt about training and to explore the state of Rockwell Collins's learning process. We had long discussions about their priorities and problems, and what role training played in helping them achieve their goals. As a result of these conversations, critical issues came to light that would later become the basis of the six key goals of our strategic plan.

For example, through these meetings we discovered that:

- Many of Rockwell Collins's units run on three shifts seven days a week but training was offered from 8:00 A.M. to 5:00 P.M., Monday through Friday only.

- There was no consistency in the processes used by project managers because they weren't getting project-management training and certification.
- The training that was offered was not considered applicable to employees' business needs and specific job tasks.
- Training was needed at the worksite, but because all of the training was classroom based, anyone outside of the Cedar Rapids office—60 percent of the employees—had to travel to Cedar Rapids for training.
- Senior people who'd been with the company for decades were retiring in masses, and their expert knowledge was not being captured for future employees.

This anecdotal evidence suggested that the training department was internally focused and explained why the business units didn't hold the training department in high esteem. This data showed that in order for the learning to have any relevance and value, it had to be linked directly to Rockwell Collins's business goals. It also showed us that learning needed to be as close to the work environment as possible; the level of quality needed to be increased; and learning and development activities needed to be accessible to Rockwell Collins's 17,000 employees worldwide, twenty-four hours per day, seven days per week.

At this point in the process these were theories. It would take a great deal more research and several interviews to support this evidence before we built the plan.

## Setting Expectations

None of the information gathered in these meetings was a surprise because we had already done our homework and could see the writing on the wall. It was clear from the start that while Rockwell Collins wanted to be a learning organization, it didn't have the understanding or structure to create an atmosphere where learning was a valuable element of the organization's success.

Even though we didn't learn anything new, the real value of these meetings came from the fact that we met and networked with these leaders. We established their trust and promised solutions to their problems. We gave them the chance to vent their frustrations at the training process as it existed to this point, and we got them excited about the future. Our plans sparked their interest because we made it clear that our goal was to help them achieve theirs.

We pointed out that they were paying for training out of their annual budgets and asked if it wouldn't be great if together we could use those dollars to make sweeping changes that would directly affect their rates of success. By and large they agreed.

Managers are not interested in the philosophy of training; they are interested in success rates and dollar figures. When we made connections between the two and tied our vision to managers' needs, we could not help but capture their attention and support.

At the end of each meeting we clearly established what our intentions were: to further research the state of training in the organization and to be back in three months with a strategic plan. This plan would outline how we would deliver a critical targeted training solution that would help them achieve their goals better, faster, and cheaper.

## **Maintaining Business as Usual**

Even though there were eighteen people in the existing training department at the time we began this process, we did not involve them in these initial meetings with the executives. Because Rockwell Collins is a medium-sized organization—17,000 employees in 63 locations—this process was manageable without involving a team of people. A larger organization would probably require several ambassadors to conduct the meetings. However, the fewer people you involve in this step of the process, the more succinct your information will be, and the message you send will be more consistent.

Our decision to manage these meetings alone was not entirely based on company size, however. At the time we began this process,

the training department at Rockwell Collins was actually part of the problem. Its members were internally focused and unorganized, and they had gone months without any leadership. Their sole job was to field requests for training and find external experts to fly in, conduct a class, and leave. There were no needs analyses conducted, no knowledge captured, and no process in place to evaluate the effectiveness of the content.

After years of delivering these random training offerings that weren't tied to any business or learning objectives, the department had an indisputable reputation as a group that spent piles of money with no accountability. The members of this group were demoralized and frustrated with their lack of power and their inability to relate to the needs of the business units.

We were new faces and we had the power to establish new, lasting relationships with leaders who had long been skeptical of the abilities of Rockwell Collins's trainers. They had no existing bias against us and were at worst suspicious of our motivation and follow-through.

Even though our goal was to completely reinvent the learning culture and offerings at Rockwell Collins, until we were able to build a plan and launch it, training as it had existed to this point had to continue. It would be months before we would be ready to implement our plan, and employees still needed training, despite the fact that the current system was fatally flawed. So instead of sending the team out to be berated and ignored, we kept them working on business as usual, using them as sounding boards to discuss the information we uncovered.

We also gave them assignments to research training technology, such as learning-management systems, e-learning courseware offerings, and live-conferencing tools. This served dual purposes: It rounded out our research for the plan, and it educated the members of the training team, who would be the ones to create and support the transformation, about the tools and techniques available in the training market.

Eventually, the training team would be brought into the process, and their roles and tasks would be reinvented, but for the time being

keeping them on task while we explored the culture of Rockwell Collins was the smoothest way to begin the transformation process.

**YOU ARE READY TO MOVE ON TO STEP 2 IF:**

- 1.** You have educated yourself about the past accomplishments, future goals, and overall vision of the company and each individual business unit. This is done by reading the business plans, vision statements, and any other historical data that will inform you not just about the training history of the company but also about the key business strategies of the company. Gathering this information will establish a base of knowledge that will buy you infinite credibility with the executives whose support you require. It doesn't take much effort and it establishes you as a knowledgeable businessperson.
- 2.** You have met with every business-unit leader in your organization to introduce yourself, to share at a high level your intentions, and to ask them about their strategic goals, challenges, and concerns. These meetings lay the foundation upon which longstanding relationships with key executives will be built. These are the people who will decide whether your project thrives or fails.
- 3.** Before leaving these executive meetings, you make sure every leader knows that you will be back with a strategic plan to address their needs.



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## STEP 2

# Conduct the Organizational Assessment

*“Personally I’m always ready to learn, although I do not always like being taught.”*

SIR WINSTON CHURCHILL

### GOALS FOR STEP 2

1. Gather all empirical data that relates to training.
2. Select an outside consultancy to help with your research effort.
3. Conduct focus-group studies of employees across the company.
4. Conduct informal interviews about employees’ attitudes toward training.
5. Survey employees about cultural impacts on learning.
6. Establish a training baseline.
7. Research the training trends in your industry—including your competitors and customers.
8. Research the latest trends in the training industry.

Long before you begin selecting off-the-shelf e-learning or any other “solution” to a learning issue, you need to evaluate the culture and history of your business and assess the current environment. The mistake most companies make in this process is in assuming that e-learning is the catalyst for change. They believe that if they can just get a robust library of courses up and running through the company intranet, employees will be transformed miraculously into active seekers and disseminators of knowledge. Conveniently, when their e-learning efforts fail, they feel completely justified in blaming the technology, tossing it aside as an overly hyped fad that failed to deliver.

Unfortunately, the cliché “Build it, and they will come” does not apply in this case. Businesses churn themselves through a handy, if costly, cycle in their misguided attempts to become learning organizations. Certainly they don’t benefit from their dismal failures, but because the technology is the problem, no one but the vendor is really to blame, leaving the key in-house players immune to repercussions.

In the years since launching our learning-organization transformation, dozens of major companies, including Boeing, Weyerhaeuser, Miller Brewing, Dow Chemical, John Deere, and Motorola, have come to benchmark our learning-transformation process. Many of them have told us stories about the failures of their own e-learning initiatives. Usually the problem was that they built vast virtual universities without conducting the necessary up-front work or evaluating the change initiatives required to prepare the culture for e-learning. They implemented technology without considering the cultural impact that such a new approach to learning would generate.

E-learning is about more than technology—it’s a different way to learn. It requires that people take an active role in their own development. No longer are they viewed as empty vessels to be filled with knowledge; they must be champions of their own education. Without a shift in culture, passive learners will not actively seek training. Self-paced training is a waste of money in the hands of people who haven’t been guided in its value.

Companies that have failed at e-learning missed this point com-

pletely. But because you are reading this book, you will not make the same critical mistakes that so many of your predecessors have made.

Transformation is about change, not technology. You are about to learn how to implement attitude adjustments that will trigger the transformation in employees from passive receivers of knowledge to active seekers. You are about to re-create the environment in which learning takes place. Only after you achieve that can you succeed at technology-based learning.

If you have already made that critical mistake, if you built a virtual university and it failed, don't be dismayed. Even if you failed completely and think you should scrap any further efforts, there is still hope. You can probably save a significant amount of the costs incurred by starting at the beginning of our process and holding the expenditures for infrastructure in abeyance until you do the preliminary work. Do the analysis, talk to the executives, assess your culture, and create a sound business plan that addresses the fundamental cultural and learning needs of employees. Then you can return to your technology investments and evaluate whether what you've chosen fits your requirements.

## **Learning's Role in Corporate Culture**

In the step of the process that is the subject of this chapter, you will assess your organization's history of training and its impact on the culture and the people who operate within the conventions of that culture. Forget technology for the moment and think about your environment and your employees' experiences within it. Organizational culture has as much to do with a company's success as does its products, research and development efforts, technical competencies, and even its market share.

By *culture*, we're talking about how the majority of employees perform their tasks and their attitude toward that process. It's about how things get done within the overall structure of the company. Corporate culture isn't what the employees do but rather the manner or style with which they do it. You'll recognize culture not by what's writ-

ten in your value statement but by what employees say about your processes and approach to business. When employees say, “This is how we do things around here,” they mean “This is our culture.”

In a learning organization, values must be aligned with business strategies. The best strategic planning in the world will not lead to performance enhancement if your organization’s business goals and corporate culture are not properly aligned.

Organizational assessment is critical to this change process. We cannot stress enough how important assessment is. It is *always* better to get too much data rather than not enough. You must develop a thorough understanding of the attitudes toward training, the structure and infrastructure that support training, perceptions of the current courses offered, and any other data that will give you a clear picture of the organization’s training needs and goals.

You need to determine what kind of culture you have and how that culture will support or struggle against your efforts. The strength of your culture is the first indication you’ll get of how difficult the transformation will be. A strong corporate culture that doesn’t value learning will be much harder to change than a weak one that doesn’t value learning, because weak cultures are easier to change. Of course, a weak corporate culture that does value learning has its own inherent problems for an e-learning initiative.

The data you collect during this process will shed light on the gaps in knowledge and behavior, the obstacles that stand in the way of change, and the people who will present the most obstacles to your quest to make your organization better.

Talking to executives is only the first step. While you are meeting with them during Step 1, you need to begin gathering research to define the current state of the organization. This is Step 2. That cultural assessment will give you the information you need to build and support a plan to turn your company into a strategic-learning organization.

The assessment cannot be confined to the walls of your own business. As you gather internal data, look outside to see what customers think of your efforts and how the competition is doing things differently. This perspective will give you valuable insight into shortcom-

ings that you cannot possibly see when you are immersed in the existing corporate culture.

Every time we assess a company, we talk to outsiders to get their opinions, and the data often contradicts management's opinion of itself. For example, when The Performance Engineering Group was hired by a building-materials company to determine why it consistently placed third among its competition, management saw the company as the best in the business and assumed that the problem lay with their sales and marketing efforts. However, a survey of their own customers and the competition's showed that they saw no significant differences among the top three providers. This verified that the corporate culture was out of touch with the industry—and it also showed management that any minor improvements they made to their products or services had the potential to differentiate them from their competitors.

Lessons like this one illustrate how difficult it is to get an accurate read on a culture when you operate from within it. And, it's why an aggressive, well-rounded cultural assessment is critical to give you an honest view of your existing environment and needs.

## Collecting Existing Data

A cultural assessment involves two styles of data collection—gathering existing historical data that relates in any way to training, and interviewing employees about their needs and attitudes toward training and the learning process. Both types of information will be used to support your initial hypotheses, provide important elements in building your case for change, and create appropriate learning strategies and financial algorithms to support your plan. It will also begin to expose the cultural barriers that stand in the way of meeting the company's strategic goals and give you potential tactics to overcome them.

The historical data that you amass should include:

- Past training statistics, including hours of training offered in a given time period, number of employees trained, and the amount of money spent to develop and deliver each class.

- Seat time—the total number of hours all employees actually spent in training during a given time period.
- The number of cancellations and no-shows.
- The number of times each course was conducted since its creation.
- The number of classrooms used.
- The process used to develop each class, from needs assessment to delivery.
- Satisfaction surveys, “smile sheets,” rating happiness with training, and course reviews.
- The delivery mechanism of each class—instructor-led, computer-based training (CBT), mentoring, and so on.
- The number of hours employees spend in class for each business unit and each geographical location.
- Financial breakdowns of where every training dollar is spent, including such things as travel, materials, classroom costs, labor costs, lost productivity, and the like. Financial comparisons will be a critical part of your final plan and pitch, so get as much detail as possible.
- The business plans of each unit.
- Training requests made by units and the time it took to fill those requests.
- ROI data to support training initiatives.
- Locations where the training was conducted.
- The cost of food and beverages.
- The curriculum design standards, quality of learning outcomes, and learning goals.

Seat time is one of the most valuable metrics to collect because survey after survey shows that lost productivity associated with seat time accounts for 65 percent of the true cost of training in any organization. Also, seat time should be translated into dollar values. When you calculate a fully loaded cost for an employee who's earning \$20 per hour, you find that the seat time expense for a two-day workshop is \$432. If there are twenty similar employees in the class, the seat time cost is more than \$8,600! Multiply those numbers by hundreds of two-day seminars and the real cost of training becomes clear. Most companies don't track seat time and give only a grudging acknowledgment that it in fact represents a major expenditure.

Any information you can find that relates to the existing training structure will be relevant to your organizational assessment. For now, simply collect it, in whatever form you can find it. Later, you can organize it into a coherent model that supports your observations.

## Getting Perspective on Culture

In most cases, you will struggle to complete the organizational assessment alone, not because you are inept but because you are too close to the source. Culture manifests itself in special types of behavior patterns that are exhibited by nearly all members of the organization and are based on key underlying beliefs or values.

When you have been in a company for more than six months, you may be unable to see the critical issues because you've spent so much time learning to ignore them, though not necessarily consciously. It's difficult to be brutally honest about the shortfalls of your own organization, especially if you contribute to those shortfalls, which is why it is imperative to hire someone from the outside to help with the assessment.

In almost every company for which we've done assessments, inevitably management identifies a broad array of questions, typically covering one or two delicate areas, that it wants to strike from the employee surveys. Typically these efforts have to do with internal pol-



itics. Management might say that an objectionable question deals with a subject that's too sensitive, but what if the question is important to the cultural assessment of the company? Usually it is, but on their own, they'd never ask those questions.

In most organizations, management assumes certain things about its employees or customers, and if it surveys at all, it's to validate what management already believes. You may be surprised at what you find out.

For example, Chris Butler worked with a building-materials manufacturer that wanted its research and development and engineering departments to be better at helping their internal customers. To get a feel for the relationships and attitudes that existed within the organization, he surveyed all the manufacturing facilities to which this group provided expertise.

The responses were dramatically revealing. The members of the engineering group didn't have a clue as to how the plant people felt about them. These employees operated under the belief that the quality of their work spoke for itself. Its leaders were stunned to learn that most of the plant people found them arrogant and insensitive. When Butler delivered the results, he included a lengthy list of recommendations that he was able to generate from the data-collection process. The vice president who requested the assessment said, "I expected pretty good information, but what you've given me is a five-year strategic plan."

Easily 25 percent of the questions Butler asked the plant personnel were originally opposed by the executives in the engineering group. Had he not asked the questions, he never would have developed the data that lead to our enthusiastically received recommendations.

Discoveries like these are what make assessment so critical. The exploration of your company's culture and value systems will unearth deeply ingrained biases and attitudes that exist but are never mentioned. The data you collect will be the blueprint for your strategic plan, so be sure your team has the necessary objectivity to accurately assess the environment—otherwise, your information will be incomplete and misleading, which will have a deleterious effect on the transformation process.

## Setting a Baseline

Rockwell Collins used the services of The Performance Engineering Group (PEG) to gain that valuable outside perspective on its culture. We collected data that gave us a vast vision of the history and impact of training over the past seven years. We looked at the five-year strategic business plans for the company and each business unit; we collected the last two biannual “best place to work” surveys, which Rockwell Collins conducts every other year to monitor employee satisfaction; and we compiled a seven-year history of training at the company.

We were loaded with data. From it we discovered several important—if not entirely surprising—facts about the history of learning and the value that was placed on it at Rockwell Collins. For example:

- Of the more than 1,400 individually titled courses delivered in the previous seven years, 76 percent were delivered one time to an audience of no more than eight people.
- Sixty percent of the cost of training is employees’ time away from their jobs, which is in keeping with the national average of 65 percent.
- Forty percent of employees received fifteen or fewer hours of training per year.
- Fifty-three percent of employees said that they’d had to cancel their attendance at a scheduled training event because of work demands.
- Up to 50 percent of registered trainees were no-shows because of scheduling conflicts.
- Forty-eight percent of employees left a training event because of work demands.

On its own, this data didn’t give us a complete picture of the attitude and culture surrounding training at Rockwell Collins, but it did

lead us toward certain conclusions, and it gave us our baseline of the state of training at Rockwell Collins when we began this process.

A baseline is an invaluable collection of data that you will use repeatedly during the transformation process to monitor and prove your progress. It's a snapshot of all the training that transpired during a given time period, defined by every measure you have available.

Creating a baseline is important because it is the only proof you'll have that things have changed. You will refer to this baseline a hundred times in the coming years to justify what you are doing and prove what you've done, so make it as detailed as possible. Also, because the baseline data is usually so bad—a condemnation of what's been going on—it becomes a very useful tool when selling your new strategy to the organization.

Baseline data should be compiled from all of the details given previously, including number of classes delivered, hours of seat time, number of times each course was delivered, dollars spent overall and per course, personnel involved, travel costs, number of classrooms used, hardware and software costs, who received what training, documented results of training (if any), cancellations, no-show rates, and survey responses. The more information you collect, the more valid your argument for change will be. Once you have all of that data, boil it down to material and labor costs. If you or someone in your training department doesn't have the expertise to "massage" this data adequately, get outside support. Don't be afraid to ask your finance people to help you too.

Those dollar figures will be used as comparisons in your strategic plan. With them you will be able to contrast where your training budget was going with what you could be getting if management followed your advice.

Corporate memory is extremely short, and without this baseline you'll be hard pressed to convince executives that their company was not always the well-oiled learning organization you are about to transform it into.

Our baseline covered all of the training delivered in 1998, the year we began the process. That was the starting point with which all costs

and measurements were compared. In the baseline, we projected the total cost of training materials and labor over four years if nothing were changed, factoring in a 3 percent increase per year, and then we compared that number with the cost expectations of our strategic plan. We used that baseline information in our plan and our sales pitch to show the dramatic cost differences we could realize over four years. See Figure 2-1.

In the plan we ultimately crafted, we estimated that Rockwell Collins would save \$31 million, or nearly 40 percent of its training budget, over four years. This was a conservative estimate based strictly on hard numbers, such as labor, travel, and off-site expenses—airfare, hotel costs, and the like—and reduction of on-the-job hours lost to training. The savings did not reflect return on investment attributable to improved job performance or an expected increase in employee-retention rates that would be due to the increased quantity and quality of training. If these less quantifiable paybacks had been factored in, Rockwell Collins would have realized a savings of twice that much.

Those baseline numbers were used liberally throughout the plan, and we backed them up with more than forty algorithms to show payback that was validated by our finance group. Even though cost savings was not a primary goal of our plan, the cost comparison had a profound impact on our supporters.

To this day, Rockwell Collins's executives refer to the baseline when any changes are made in the learning and development department. The organization still asks about seat time and average hours of training per employee per year, among other items, but those queries are becoming fewer and fewer. Without that baseline, it would be impossible for us to show the profound changes and savings that have occurred.

## **Researching the Training Industry**

Along with compiling baseline data, we also gathered information from outside the company. We read trade journals, white papers, and research reports about recent trends in the training industry to support

**Figure 2-1. Baseline chart.**

**Project Oasis Forecasted Savings**

<i>Category</i>	<i>Year 1 Total</i>	<i>Year 2 Total</i>	<i>Year 3 Total</i>	<i>Year 4 Total</i>	<i>Four-Year Total</i>
Baseline (1998 + 3%)	\$17,429,750	\$17,952,643	\$18,491,222	\$19,045,958	\$72,919,573
Oasis implementation	\$10,663,149	\$9,494,405	\$10,318,833	\$10,815,489	\$41,291,876
Overall savings	\$6,766,601	\$8,458,238	\$8,172,389	\$8,230,469	\$31,627,697

The baseline in this chart compares the cost of training over four years if Rockwell Collins had continued its old system with the cost savings of our learning-organization transformation, forecasted out over four years. To date, we've saved the company \$24 million over three years, and we expect to hit our four-year target of more than \$31 million saved.

our theories and strategic goals. We looked at training-industry stats from the American Society of Training and Development (ASTD), including the average percentage of salaries spent on employee education, average total dollars spent per employee on training, and trends in alternative learning, e-learning, and the classroom.

We learned that in 1998 training costs were expected to increase 2 to 4 percent per year—which led us to factor a 3 percent annual increase into our annual projected baseline budget. We also found that 94 percent of more than 3,200 companies surveyed by ASTD had set a goal of becoming learning organizations.

At the time, e-learning was just becoming a popular choice among companies of all sizes and industries, and the cost benefits were being touted as the new miracle solution for training woes. The Government Alliance for Training and Education estimated a savings range from 30 to 70 percent using computer-based learning instead of the classroom, and *The Multimedia Monitor* suggested that retention rates for e-learners increased 25 to 50 percent over those who were trained in the classroom. While we knew e-learning alone couldn't change Rockwell Collins, the data was making it clear that it would play a role in transforming the company into a learning organization.

## **Motorola—An Intriguing Yardstick**

To support our industry data, we gathered case studies of benchmark companies that had become learning organizations. Some of the studies we conducted ourselves and other data we gleaned through research. We compared our current system with Motorola University's, which was touted as one of the most cutting-edge learning environments at the time.

Our comparison showed us that while Motorola made forty hours of annual training mandatory for every employee, Rockwell Collins "allowed" its employees thirty hours or less per year. Motorola's customers and suppliers received training, it had a distinct learning and development department separate from HR, and its training was integrated, global, and state of the art. None of those factors was in effect at

Rockwell Collins. The comparison highlighted the differences between companies that value learning and knowledge and those that don't.

We used Motorola's model as a guide for restructuring the learning group's roles and responsibilities at Rockwell Collins, and eventually our efforts surpassed what Motorola had only begun to accomplish. All of this data became part of the detailed strategic plan we put together over the coming months and was used to sell our story to the organization. Ironically, three years later Motorola came to us to benchmark our learning transformation. It had taken its own process as far as it could go and wanted guidance on what steps it should take next.

These days piles of research are available to support the need for a company to become a learning organization. Along with this book, you can find research reports at the Web sites of ASTD and Forrester Research. Peruse back issues of *Training* magazine and *Online Learning* magazine to find case studies of companies that have made the transformation, as well as statistics supporting your intentions. The data is out there. You just need to take the time and make the effort to find it.

## Talking to Your People

Gathering historical and industry data is only part of the organizational-assessment process. Most of what you need to learn about your environment does not exist on paper. It exists in the minds and hearts of your people. Along with hard statistics, you need to gather their stories, opinions, and ideas. You need to get inside their heads to find out how they feel about learning in general, about your training offerings in particular, and about the organization's approach to learning and the value it places on educating employees. Do this through focus groups, surveys, and formal and informal interviews.

The more you communicate with your people, the more accurate, honest, and robust your data will be and the more buy-in you will get when implementation time arrives. People will remember you; they will see your effort, drive, and irritating determination; and they will respect you for it. They will expect great things from you, and then all you'll have to do is deliver.

After meeting with all of your executives, contact the people who report to them to ask the same questions. How do they feel about training? Do they value learning? What are their issues and challenges on the job, and how can training help them? After you've met with all of the managers, meet with employees, individually and in groups.

Remember that face time is critical, so whenever possible conduct these interviews face to face, even if it means traveling to remote offices. Take advantage of every opportunity you get to find out what people think about training, and what they want from the training department. Be aggressive in your pursuit of employees' time. If they won't come together for focus groups, go to them. Work your way into any meeting that's going on and start asking questions. Go to employee orientations to gather information about what new employees expect in the way of training. Attend staff meetings and working lunches to hear what the existing staff has to say. Use classroom time to ask people their opinions of the present training system.

After our initial interviews with Rockwell Collins's executives, we talked to employees across the organization at every opportunity to flesh out our data. We conducted formal focus group studies with hundreds of Rockwell Collins employees to record their attitudes and experiences with learning at the company. Outside of the focus group settings, we met informally with as many employees and managers as possible to discuss the state of training. Anywhere there were people gathered we were there. We made our presence known throughout the organization, developed relationships with key individuals, set expectations for change, and got everyone thinking about how training impacted their lives, careers, and ability to achieve success.

To support these discussions we also conducted a formal written survey of employees regarding their attitudes toward learning at Rockwell Collins and their readiness for change. A survey can deliver mountains of valuable data in a short amount of time, and that data will be a powerful addition to your strategic plan. High-tech organizations especially respond better to hard data than to the theories and stories that you collect from interviews. A well-crafted survey will give



you the quantifiable information that will impress number-crunching decision makers.

We found most of the anecdotal data we needed through interviews with management and employees, but the survey data gave us hard numbers with which we could back up our observations. For example, we knew from talking to people that most employees had cancelled training at the last minute because of work demands, but thanks to our survey, instead of saying only that lots of employees had cancelled training, we were able to say that 92 percent of employees had cancelled training three or more times in the past year.

## Being Survey Savvy

Unless someone within your company has a background in surveying, it's important to get outside help in building a survey that asks the right questions in the right way. An objective consulting firm will also help eliminate the fear that employees typically have when being brutally honest about their employer's shortcomings. No matter how "anonymous" you allow internal surveys to be, employees will hesitate to hand you ratings that they think could affect their job security. A consulting group experienced in survey design and administration will get a much better and more honest response rate.

If you insist on conducting your survey in house, ask every question twice: once to rate performance and once to judge importance. For example, in asking about communication styles between employees and managers, one question might ask employees to rate the following comment: "My manager gives me frequent and useful feedback." The second asks them to rate the comment "Frequent and useful feedback is important to me."

When you craft a survey in this style, data quickly falls into one of four categories: skills or issues that relate to high performance and are of high importance, which means they are critical to the success of the organization and are performed well; those that relate to high performance and are of low importance, which means they are done well but don't affect organizational objectives; those that relate to low per-

formance and are of high importance, which means they are done poorly and are of great importance to the success of the company; and those that relate to low performance and are of low importance, which means they are done poorly but have no value to the organization.

Based on those categories, you will quickly see where you need to focus your efforts and dollars—on the low-performance/high-importance issues. You'll also see where that money can come from—the budgets for low-performance/low-importance areas (because they are not tied to the goals of the organization), and the high-performance/high-importance areas (because the company is already succeeding in this area). See Figure 2-2.

A third party can analyze the results and break them down into target areas using statistical-survey software, or you can purchase the software if someone has the skills to manage the analysis in house. The software can quickly organize survey data and return the results in a format that pulls key issues into the spotlight—if you have the expertise to gather the correct information in the appropriate format.

At Rockwell Collins, we sent out hundreds of paper-based surveys to employees in all departments across the organization. We opted not to use Rockwell Collins's intranet to deliver the survey because some of the issues we were trying to get at had to do with computer access at work, e-mail at work and home, and so on. We weren't sure who had what because data on employee access to technology didn't exist at that time. If we had known in advance that most employees had access to the company's intranet, we would have conducted our surveys online.

The survey touched on three key areas of the company and dealt largely with employees' ability and willingness to embrace alternative forms of learning. One-fourth of the questions focused on existing technology: "Do you have sound cards?" "Do you have Internet access at your desk and at home?" The answers to these questions gave us a picture of what hardware our team would ultimately have to work with and how ready employees were to receive technology-based learning.

Half of the questions focused on employees' attitude toward alternative learning. We refrained from asking specifically about Internet-based learning and focused instead on what employees wanted from

*(Text continues on p. 52)*

**Figure 2-2. Survey sample.**

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## **City of Utopia**

### **Organizational Diagnosis Questionnaire**

#### *Survey Instructions*

The City of Utopia is committed to continual improvement. To further that commitment, we are conducting an employee survey to find out where we need to improve our efforts and where we need to continue successful efforts. We would appreciate your taking the time during work (*today if possible*) to complete and mail this survey in the provided postage-paid envelope. The surveys will be processed by an outside firm to provide *complete anonymity* to all employees. Neither employees of the City of Utopia nor the Continuous Improvement Process consultant will see the survey responses of any individual. If everyone gives open and honest responses, we will have the information we need to truly make this the best organization it can be.

The survey has two sections. The first section asks for demographic information such as work unit, years with the city, and so on. This data will not be used to single out the responses of any one individual. Please check the appropriate response.

The second section, which is the main body of the survey, contains a list of statements. You are asked to make two judgments about each statement. First, you are asked how much you agree that the statement *describes* our organization. For instance, the tenth statement is “My relations with my work unit are friendly.” Do you *Strongly Agree* that the statement describes your experience here, or *Agree*, *Disagree*, or *Strongly Disagree*? The second judgment you are asked to make concerns the *importance* of the statement. Importance should be judged against the Vision Statement, which is listed at the top of each page. For instance, how important is it that your relationships with your work unit be friendly, if we are to achieve our vision? Is it *Very Important*, *Important*, *Unimportant*, or *Very Unimportant*? Please circle your responses.

Please complete the entire survey. We estimate it will take about thirty minutes to complete. *You may use up to one hour of your work day*. When you have completed your survey, please mail it in the postage-paid envelope no later than Friday, March 1.

Thank you for taking the time to complete this survey. Your involvement is an important part of the Continuous Improvement Process.

## City of Utopia: Organizational Diagnosis

### Questionnaire

1. I have worked for the City of Utopia for (check one):
- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Less than 2 years    | <input type="checkbox"/> 2 years to 5 years   | <input type="checkbox"/> 6 years to 10 years |
| <input type="checkbox"/> 11 years to 15 years | <input type="checkbox"/> 16 years to 20 years | <input type="checkbox"/> 21 or more years    |

2. My position in the organization is classified as (check one):
- |                                  |                                     |   |
|----------------------------------|-------------------------------------|---|
| <input type="checkbox"/> Manager | <input type="checkbox"/> Supervisor | <input type="checkbox"/> Nonsupervisory |
|----------------------------------|-------------------------------------|---|

3. I work in the following (check one):
- |  |   |                                    |
|--|---|------------------------------------|
| <input type="checkbox"/> City Manager's Office | <input type="checkbox"/> City Attorney's Office | <input type="checkbox"/> Personnel |
|--|---|------------------------------------|

*Police Department*

- |   |   |                                 |
|---|---|---------------------------------|
| <input type="checkbox"/> Administration | <input type="checkbox"/> Support Services | <input type="checkbox"/> Patrol |
| <input type="checkbox"/> Investigation  |   |                                 |

*Fire Department*

- |   |   |                                     |
|---|---|-------------------------------------|
| <input type="checkbox"/> Administration | <input type="checkbox"/> Support Services | <input type="checkbox"/> Operations |
|---|---|-------------------------------------|

*Electric Department*

- |   |                                      |                                     |
|---|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Administration | <input type="checkbox"/> Engineering | <input type="checkbox"/> Operations |
|---|--------------------------------------|-------------------------------------|

*Community Development*

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Building Inspection             | <input type="checkbox"/> Facilities Maintenance | <input type="checkbox"/> Golf           |
| <input type="checkbox"/> Parks and Forestry              | <input type="checkbox"/> Recreation             | <input type="checkbox"/> Planning-      |
| <input type="checkbox"/> Public Works/Eng.               | <input type="checkbox"/> Sanitation             | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Streets & Storm Drainage Maint. |   | <input type="checkbox"/> Other          |

*Finance-Fleet*

- |  |  |                                      |
|--|--|--------------------------------------|
| <input type="checkbox"/> Accounting      | <input type="checkbox"/> Operations-Purchasing | <input type="checkbox"/> MIS-Utility |
| <input type="checkbox"/> Risk Management | <input type="checkbox"/> Warehouse             | <input type="checkbox"/> Billing     |

*Human and Cultural Services*

- |  |  |                                 |
|--|--|---------------------------------|
| <input type="checkbox"/> Library               | <input type="checkbox"/> Youth Services  | <input type="checkbox"/> Museum |
| <input type="checkbox"/> Muni. Court/Probation | <input type="checkbox"/> Senior Services |                                 |

*Water/Wastewater Utilities*

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Administration    | <input type="checkbox"/> Engineering      | <input type="checkbox"/> Water Resources |
| <input type="checkbox"/> Operations/Maint. | <input type="checkbox"/> Treatment Plants |  |

Questions 4 and 5 are optional.

- |                      |                                    |  |
|----------------------|------------------------------------|--|
| 4. I am (check one): | <input type="checkbox"/> Female    | <input type="checkbox"/> Male          |
| 5. I am (check one): | <input type="checkbox"/> Caucasian | <input type="checkbox"/> Non-Caucasian |

(continues)

	Indicate to what extent you agree or disagree that each statement is true of this organization.				How important is this issue to achieving our vision?			
	1. Strongly Disagree	2. Disagree	3. Agree	4. Strongly Agree	1. Very Unimportant	2. Unimportant	3. Important	4. Very Important
1. My immediate supervisor gives me frequent feedback.	1	2	3	4	1	2	3	4
2. I have the information I need to do a good job.	1	2	3	4	1	2	3	4
3. Rewards are clearly tied to performance.	1	2	3	4	1	2	3	4
4. I can always talk with someone at work who can help me solve work-related problems.	1	2	3	4	1	2	3	4
5. City employees resolve conflicts appropriately.	1	2	3	4	1	2	3	4
6. My immediate supervisor gives me useful feedback.	1	2	3	4	1	2	3	4
7. I understand how my job performance helps this organization provide services.	1	2	3	4	1	2	3	4
8. City employees spend this organization's money wisely.	1	2	3	4	1	2	3	4
9. The goals of this organization are clearly stated.	1	2	3	4	1	2	3	4
10. My relations with my work unit are friendly.	1	2	3	4	1	2	3	4
11. I know what new projects this organization has planned.	1	2	3	4	1	2	3	4
12. This organization favors change.	1	2	3	4	1	2	3	4
13. Existing systems and structures help me attain my goals and complete my tasks.	1	2	3	4	1	2	3	4
14. Employees' attitudes toward this organization are positive.	1	2	3	4	1	2	3	4
15. This organization is not resistant to change.	1	2	3	4	1	2	3	4
16. The feedback I receive from my immediate supervisor helps me improve my work performance.	1	2	3	4	1	2	3	4
17. In my work unit, employee input is used to help determine goals.	1	2	3	4	1	2	3	4
18. The structure of work in my unit is well organized.	1	2	3	4	1	2	3	4
19. Work tasks in my unit are assigned logically.	1	2	3	4	1	2	3	4
20. My immediate supervisor supports my efforts.	1	2	3	4	1	2	3	4

	Indicate to what extent you agree or disagree that each statement is true of this organization.				How important is this issue to achieving our vision?			
	1. Strongly Disagree	2. Disagree	3. Agree	4. Strongly Agree	1. Very Unimportant	2. Unimportant	3. Important	4. Very Important
21. The goals of my work unit are clearly stated.	1	2	3	4	1	2	3	4
22. I know what my opportunities are for promotion.	1	2	3	4	1	2	3	4
23. Managers and supervisors act on my input.	1	2	3	4	1	2	3	4
24. I know where this organization stands on important public issues.	1	2	3	4	1	2	3	4
25. This organization has the ability to change.	1	2	3	4	1	2	3	4
26. This organization's work plans help its performance.	1	2	3	4	1	2	3	4
27. My supervisor's manager helps my work unit achieve its goals.	1	2	3	4	1	2	3	4
28. My supervisor is supported by his or her manager.	1	2	3	4	1	2	3	4
29. Other work units are helpful when I need assistance.	1	2	3	4	1	2	3	4
30. Leadership efforts in this organization result in success.	1	2	3	4	1	2	3	4
31. My job offers me the opportunity to grow as a person.	1	2	3	4	1	2	3	4
32. Internal operations run smoothly.	1	2	3	4	1	2	3	4
33. I understand the priorities of this organization very well.	1	2	3	4	1	2	3	4
34. Most employees don't try to protect their turf at the expense of achieving this organization's goals.	1	2	3	4	1	2	3	4
35. The policies and procedures of this organization help me get my work done well.	1	2	3	4	1	2	3	4
36. I understand the priorities of my work unit well.	1	2	3	4	1	2	3	4
37. Managers and supervisors are sufficiently trained in using procedures (for example, conducting performance evaluations, job interviews, etc.).	1	2	3	4	1	2	3	4
38. I know what my opportunities are for growth.	1	2	3	4	1	2	3	4
39. Employees initiate conflicts appropriately.	1	2	3	4	1	2	3	4
40. Employees adapt well to change.	1	2	3	4	1	2	3	4

(continues)

	Indicate to what extent you agree or disagree that each statement is true of this organization.				How important is this issue to achieving our vision?			
	1. Strongly Disagree	2. Disagree	3. Agree	4. Strongly Agree	1. Very Unimportant	2. Unimportant	3. Important	4. Very Important
41. This organization offers me the opportunity for promotions.	1	2	3	4	1	2	3	4
42. City Council actions have a positive impact on the day-to-day running of my department.	1	2	3	4	1	2	3	4
43. I have established the relationships I need to do my job properly.	1	2	3	4	1	2	3	4
44. Work units are organized in a way that helps this organization achieve its vision.	1	2	3	4	1	2	3	4
45. The division of labor in my work unit is flexible.	1	2	3	4	1	2	3	4
46. Our leaders focus on this organization's goals.	1	2	3	4	1	2	3	4
47. People get promoted because of their achievements, not because of who they know.	1	2	3	4	1	2	3	4
48. My immediate supervisor provides clear direction.	1	2	3	4	1	2	3	4
49. My immediate supervisor has ideas that are helpful to me and my work unit.	1	2	3	4	1	2	3	4
50. I agree with the goals of my work unit.	1	2	3	4	1	2	3	4
51. This organization's control processes (for example, rules and regulations, policies and procedures) help its performance.	1	2	3	4	1	2	3	4
52. This organization's systems and structures encourage cooperation and collaboration.	1	2	3	4	1	2	3	4
53. There is little unresolved conflict in this organization.	1	2	3	4	1	2	3	4
54. My immediate supervisor gives feedback without hurting others' feelings.	1	2	3	4	1	2	3	4
55. Leadership practices support this organization's stated values.	1	2	3	4	1	2	3	4
56. Employees cope with change well.	1	2	3	4	1	2	3	4
57. The pay and benefit policies of this organization are fair to all employees.	1	2	3	4	1	2	3	4
58. This organization's systems and structures serve as an incentive for employees to participate fully.	1	2	3	4	1	2	3	4

	Indicate to what extent you agree or disagree that each statement is true of this organization.				How important is this issue to achieving our vision?			
	1. Strongly Disagree	2. Disagree	3. Agree	4. Strongly Agree	1. Very Unimportant	2. Unimportant	3. Important	4. Very Important
59. Tasks are divided in a logical manner within this organization.	1	2	3	4	1	2	3	4
60. I get along well with my immediate supervisor.	1	2	3	4	1	2	3	4
61. I get along well with my supervisor's manager.	1	2	3	4	1	2	3	4
62. Politics plays a minor role in employees' achieving their work goals.	1	2	3	4	1	2	3	4
63. Managers and supervisors ask for input.	1	2	3	4	1	2	3	4
64. Occasionally I like to change things about my job.	1	2	3	4	1	2	3	4
65. I personally agree with the vision statement of this organization.	1	2	3	4	1	2	3	4
66. If I have a problem with my immediate supervisor, I have someplace to go to get it resolved.	1	2	3	4	1	2	3	4
67. The division of labor in my work unit helps this organization reach its goals.	1	2	3	4	1	2	3	4
68. I feel free to give feedback to anyone in this organization regardless of position or title.	1	2	3	4	1	2	3	4
69. My work unit's actions and outputs are consistent with this organization's goals and objectives.	1	2	3	4	1	2	3	4
70. My relations with my work unit are professional.	1	2	3	4	1	2	3	4
71. My supervisor's manager treats us fairly.	1	2	3	4	1	2	3	4
72. The salary I receive is appropriate for the job I do.	1	2	3	4	1	2	3	4
73. The leadership practices of this organization help its progress.	1	2	3	4	1	2	3	4
74. In your opinion, what are the most important things this organization can do to help achieve the vision statement?								

Again, thank you for taking the time to complete this survey.

An effectively designed organizational survey will provide keen insight into the cultural attitude of the company.



their learning experience. For example: Would they like to be able to start and stop training at their convenience? Would they like training at their desks? The data would establish the mindset about, and understanding of, alternatives to classroom-based learning.

Finally, we asked questions about how cultural issues affect employees' ability to learn. It is very important at this point in the formulation of the survey to understand some of the overarching cultural elements of your company. Because of our organizational-development backgrounds, we knew that there were going to be some significant cultural issues at Rockwell Collins. For example, we knew that a major cultural value at Rockwell Collins was that if you were at your desk or in your office you should be working on *work*. This philosophy was driven by Rockwell Collins's many years as a provider of military gear to the federal government, whose contracts require that all employees account for their time. Because of this belief that if employees are at their desks they should be working, we knew that people would have a difficult time taking e-learning courses at their workstations.

We also knew that the old training model required employees to sign up for a course months before the actual class date. As a consequence of a very dynamic work environment where the workload can change daily, many people had to cancel their attendance at courses they'd signed up for. Therefore, we designed questions to open up discussions about employees' frustrations with the enrollment process.

It is important to note that direct questions about an organization's culture generally are not answered in any meaningful way. "Does Rockwell Collins's culture interfere with your attendance at training classes?" is an example of a question that wouldn't elicit useful data because it is too vague and general. However, there are ways of phrasing questions that allow you to get the equivalent data. For example, we asked questions such as "Have you ever canceled a course that you registered for?" and "Have you ever left a class early?" The responses to these questions showed us how work interfered with the learning process and, just as important, gave us data to sup-

port the need for learning kiosks or dedicated computer stations away from the workplace.

We received a response rate of approximately 50 percent over two weeks, which is better than average for this type of survey. We obtained valuable hard data that we would later highlight in our business case, including the fact that 62 percent of employees wanted to receive training outside of the traditional classroom setting; 72 percent wanted to be able to start and stop learning when they wanted to; and 75 percent of Rockwell Collins's employees wanted to learn at their own pace. This survey data added further detail to the picture that was developing of Rockwell Collins's need for and attitude toward training.

## **Lessons Learned at Rockwell Collins**

Combining the hard data with the information gleaned from the interviews, focus groups, and surveys, we learned a great deal about the culture and attitude of Rockwell Collins's employees.

We discovered that management paid lip service to the idea that employee education is important. While the company talked a lot about the value of training and noted its importance in the corporate value statement, too many employees canceled training programs or left early because of other, "more important" commitments for us to believe that training was truly considered an important part of their development. Employees wanted training, but they were not allowed to make it a priority. Managers consistently used or withheld training, not to achieve strategic performance goals, but to reward or punish team members.

Our research further showed that the idea of e-learning was alien to this conservative group, which for fifty years had held training exclusively in classrooms. For example, one of the comments we received to the question "Would you like to be able to start and stop learning whenever you like?" was "Yes, but won't that be really disruptive to the instructor?" While a comment like this initially produces

giggles on our part, a more serious look underscores the adage “You can’t know what you don’t know.” Keep this in mind as you begin to assess your organization’s readiness for e-learning.

The classroom was so ingrained in their understanding of the training process that they were convinced one had to be in a classroom in order to learn. And because managers had the attitude that an employee who isn’t working is goofing off, we knew it was going to be very difficult to provide learning opportunities at employees’ desks.

We also discovered that like many other organizations, Rockwell Collins approached learning as a passive process. Employees had the attitude that it was the company’s responsibility to educate them, and that they were passive, often grudging vessels to be filled with knowledge. This was an important environmental factor that would significantly affect our transformation process, because in a learning organization employees are expected to actively seek knowledge and take responsibility for their learning. The passivity we encountered was an indicator of the need for major change in the attitude toward learning.

It’s the same passive attitude that was instilled in all of us from the first day of kindergarten. We arrive at school and are told to be quiet and obedient children. This model doesn’t change throughout our educational experience. It goes on all the way through college and often into graduate school—you must be quiet and listen to the expert who has come to give you knowledge. Unfortunately, this model places the entire burden for learning on the shoulders of the instructor. That’s not all bad when they’re educating six-year-olds. But it isn’t an ideal model when the intended audience is adults.

Every organization we’ve ever worked in or been associated with as consultants has used this model for the training and development of its employees. The move away from this model is one of the fundamental shifts that must take place in every company that is serious about becoming a learning organization. This is why moving into an e-learning environment from a classroom environment is first and

foremost a shift in corporate culture. You are moving from the passive “Fill me up, I’m an empty vessel” learning system to one that requires a contract between employee and employer. Each side has an equal but different role. Employees must now take responsibility for acquiring the skills and knowledge needed to perform their jobs. Employers must provide clear, direct feedback to each employee about any skill or knowledge gap and create an easily accessible way for that employee to acquire the needed skills and knowledge.

If you think about the transition to e-learning in these terms, you can easily understand why “even though you built it, they don’t come.” Employees are used to being taken to the schoolhouse and fed the knowledge. Now they have to go there of their own volition and learn at their discretion. Your responsibility as the leader of an e-learning initiative is to make it as easy as possible for this transformation to take place.

Further confounding Rockwell Collins’s attitude toward training was the fact that the training department was internally focused, was unmanaged, and had zero accountability. There was no common design standard for the development of courses. The subject-matter experts who performed as trainers at Rockwell Collins were acting on their own and creating programs based on their individual tastes, so it was impossible to predict the quality or strategy of any course. Repeatedly, in all of our data, the value of the training that was being offered was rated below average. Employees frequently told us that the best part of any course was the free lunch.

That was of course for those who worked the day shift. Third-shift employees, weekend employees, and anyone off site had little to say about the quality of training because they had little access to it. Courses were offered in the classroom only Monday through Friday from 8:00 A.M. to 5:00 P.M. And, even though 60 percent of Rockwell Collins’s 17,500 employees worked outside the Cedar Rapids area, all training was delivered at headquarters, which meant that global employees either didn’t receive training or incurred considerable travel costs for it. Over and over, the data told us that the training

department wasn't meeting the most basic training needs of vast segments of the population.

The last critical obstacle we discovered through our research was that there was a great deal of cynicism toward learning at Rockwell Collins. People were very distrustful of the survey itself, almost to the point of paranoia.

One day, we were sitting in Cliff Purington's office when an irate manager barged into his office—in spite of the fact that a meeting was in progress—and began berating him for pushing a survey that was clearly biased in favor of alternative learning. Her perception was that the questions were designed to kill all classroom training at Rockwell Collins. If anything, the opposite was true. We attempted to have an unbiased survey, but we also wanted to show the need for change. Purington asked the irate manager, "If Rockwell Collins didn't want unbiased data, why would they have hired an outside group to write and analyze the survey?" The manager left without answering the question.

Rockwell Collins has a strong culture, and certain elements of it had the potential to create significant obstacles to our success. There was a "knowledge is power" attitude, and those who had the expertise guarded it jealously. There was little individual responsibility and a tyranny of the minority. It took very few people to bring new initiatives to a crashing halt.

Without the assessment, we wouldn't have known that some of these barriers were deeply ingrained in the company. Even if we had crafted the same strategic plan, if we had not been aware of the cynicism, the disconnected attitude toward the value of training, and the confusion about e-learning, our team would have had serious problems with the initial implementation.

The company's culture had elements that were antithetical to its becoming a learning organization, and in order to succeed at our mission we first needed to address those attitudes. Because we knew about them in advance, we were able to create strategies that worked around them, as opposed to confronting them head on.

**YOU ARE READY TO MOVE ON TO STEP 3 IF YOU:**

1. Have gathered all empirical data that relates to training over the past five to ten years in your company. That includes budgets, surveys, smile sheets, ROI evaluations, seat time, cancellations, percentage of employees trained, and so on. This data gives you an overall vision of the training experience of the past and sets the baseline from which your future accomplishments will be judged.
2. Have selected an outside consultancy to help with your research effort. No one can effectively judge the culture or success of the company from the perspective of operating from within it. Find a trusted outside expert to give you feedback and guidance on your efforts.
3. Have conducted focus-group studies, informal interviews, and employee surveys to give you anecdotal and statistical data about employees' experiences with and opinions of the existing training structure and corporate culture.
4. Have researched the training trends in your industry—including your competitors and customers—to get an idea of what other companies are achieving and what it's possible to achieve if you change your current approach to training. Together, all of the data you collect in this phase will give you the raw material for your strategic plan.

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## STEP 3

# Define Your Core Objectives

*“No problem can be solved from the same consciousness that created it. We must learn to see the world anew.”*

ALBERT EINSTEIN

### GOALS FOR STEP 3

1. Identify recurring themes in your organizational assessment data.
2. Define your top three to seven core objectives.

Depending on the size and layout of your company, the amount of existing data you need to collect, and the willingness of employees to participate in your fact-finding research, completing all of your cultural and historical training research can take anywhere from weeks to several months. The more an organization’s culture values data, the



more data you will need to gather and wade through, and the more persuasive the data must be.

It's critical to be thorough, but time is also a factor. The sooner your research is complete, the faster you can implement your strategic plan and begin to affect the culture of learning at your organization. To accelerate the process, approach every aspect of the research time simultaneously. While you are meeting with executives, compile your historical data, distribute surveys, and schedule focus groups. This is not a linear process. All of your data points affect one another.

Even with a limited surveying approach, it took us several months to gather all the data. From the day we began meeting with executives at Rockwell Collins to the day we presented them a draft of our plan, three months had passed, and we should have had it completed sooner.

You will know the research gathering is coming to an end when you have clear ideas about what the key training issues are and you have hard statistics to support those ideas. Patterns will have begun to emerge. Skill and knowledge issues that relate to business problems will have cropped up continually in interviews and focus groups, and these issues will lead you back to historical data and survey results. These patterns are indicators of the problems within the work environment that must change if the organization is to transform itself into a learning organization. Finding them will help you define your core objectives.

Core objectives are the foundation of your initiative, showing you what you need to do in order to close the gap between where you are today and where you need to go. Core objectives are enterprise-level solutions to the shortcomings in your learning system. Embedded in these objectives are the business requirements of the company, which are usually expressed in quantifiable terms such as time or money. For example, a core objective may be to reduce the amount of time it takes to deliver company-wide training on key products, or to spend less to achieve the same training results. As you implement your plan, these business requirements will become the signposts that let you and your supporters know that you are achieving your strategic goals.

If you have some analytical background, identifying the issues

that continually arise based on the research you've collected shouldn't be difficult. There may be dozens of them, but you need to focus your attention on those critical few that are enterprise level and directly tied to the culture and strategic business goals of the company. For example, training the sales team to correctly use a new sales-force automation system so that you can get a company-wide view of customer contacts may be a critical enterprise-wide objective, whereas training a handful of computer-illiterate sales reps how to use a spreadsheet program may be a training need but does not tie directly to business goals and therefore doesn't rate as a primary endeavor.

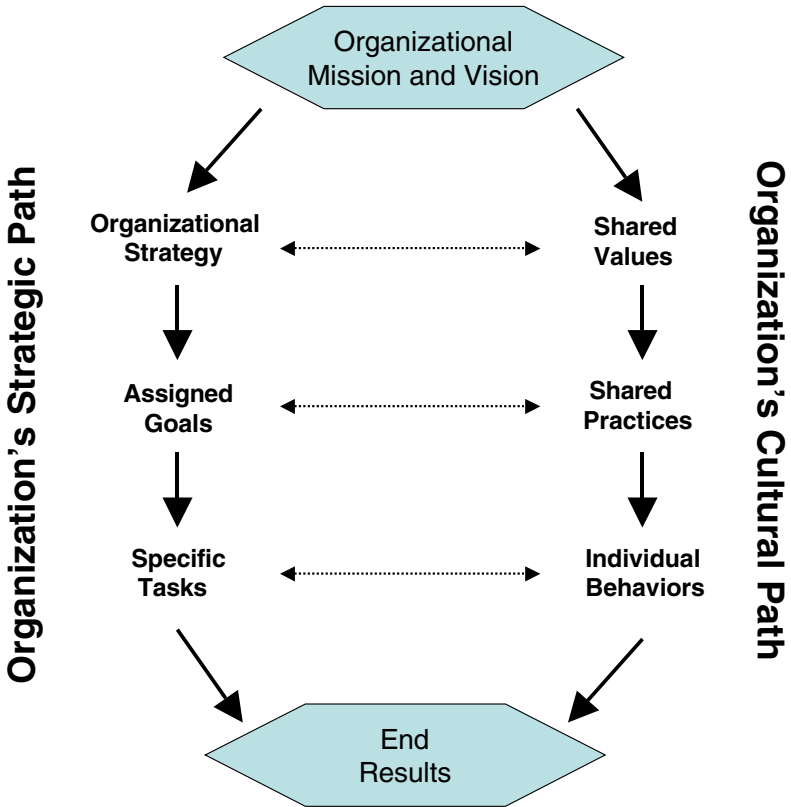
## **Aligning Culture and Business**

As you define your core objectives, keep the culture in mind. The culture will either help or hinder the accomplishment of the required objectives. Your core objectives must be aligned with the company's values and business strategies because organizations whose values are aligned with their strategies tend to achieve outstanding results, while those that lack this alignment consistently fall short. The best strategic planning in the world will not lead to performance enhancement if your organization's strategies and corporate culture are not in alignment.

The organizational-alignment model depicted in Figure 3-1 shows the importance of balancing your culture with your business objectives. For example, if as you develop your core objectives you focus only on the left (strategic) side of the model and if there is little congruence between the left and right sides, your initiative will stagnate. In contrast, if you focus only on the right (cultural) side, you'll be liked by all but will have little impact on business objectives or long-term results.

This model helps organizations understand many of the complex elements that interact as they undergo significant change. It clearly suggests that paying attention to both the strategic (left side) and the cultural (right side) will determine the relative success of any organization. Congruence between a company's strategy and its intrinsic values, and between its goals and the work practices of its managers, will be the greatest determinant of your success.

**Figure 3-1. Organizational alignment model.**



Alignment between corporate strategy and values is critical to organizational success.

Mission and vision are an expression of an organization's fundamental intent. Mission statements define what an organization is in business to do. A vision statement is a statement of some—usually unattainable—future state. It is a statement of the impact an organization would have on its environment (customers, shareholders, regulators, and so on) if it successfully completed its mission.

Strategy is a blueprint for the deployment of the organization's resources, including capital, people, time, and energy. It is a clear statement about how the organization intends to proceed.

Goals are at the heart of that strategy. They are the signposts that tell members of an organization when they are achieving strategic imperatives. They are the *what*, not the *how*, of organizational performance. Practices, on the other hand, are the typical manner in which employees of the organization interact with one another, customers, regulators, and any other vested group.

Tasks and behaviors are the day-to-day things that truly determine success or failure within a company. Often, tasks are self-directed, and if individuals choose to spend their time on effective activities, the company will prosper. This is where the axiom that leaders do the right things and managers do things right can be observed on a daily basis. Research has shown that in today's environment, an organization that has too many managers and not enough leaders will also have mediocre financial performance.

Finally, the influencers shown at the bottom of the model are important but often-uncontrollable elements that affect *how* a company ultimately performs. Only internal support systems are controlled by the organization. Outside support systems can play a significant role, as can the business environment, stakeholders or shareholders, and regulators.

Aligning an organization's strategy with its values and its objectives with management practices will determine how well employees perform. This in turn will determine an organization's ultimate success.

## Targeting Your Core Objectives

The alignment model should help you pinpoint the key issues that will affect the cultural balance of the organization. Use it to measure whether the objectives you've chosen will affect the strategic and cultural sides of the business equally.

If you can't figure out which of the objectives you've identified are the ones to focus on for a balanced strategy, look at your five-year plan. Ask business-unit managers what the top three to five strategic imperatives are for their units and match their needs to your list of issues. Compare the issues you find in your research of the current cultural environment with the present and future business objectives

of the company. Make further connections between those issues and the values of the organization. Look for the alignments and gaps that help or hinder the organization's ability to achieve its goals.

An example of companies that have problems with their organizational versus cultural alignment are high-tech companies that lured high-powered talent with stock options. They were able to keep profits up by offering lower-than-competitive salaries while providing generous stock options. When stock values declined, most employees were "under water" with their options. Stock options were no longer a viable way to attract talented employees. The resulting chaos had a dramatic affect on these firms as the new reality set in.

If you've done your research correctly and identified the right objectives, you'll see that employees throughout the organization have the same concerns regardless of their station. If that's not the case, if you find that your objectives target only unique needs of specific groups, then you are focused too low in the system. An enterprise-level approach will afford you a commanding view across the company. Later in the process you can drill back down through the plan to customize your solutions to individual groups, but for now you must consider the big picture.

The list of core objectives you come up with will be your starting point for developing your enterprise strategy. This list will become the road map that guides you through your transformation process, and if you find yourself lost during this massive change initiative, your core objectives will lead you back to the right path. As long as everything you do is linked to achieving your core objectives, the project will succeed. Without these core objectives, you'd be blind to the ultimate needs of your people.

## **Getting Perspective on Your Culture**

When it comes to culture, an organizational-development expert can give you much-needed guidance and advice. If you've been with the company for more than six months, it will be difficult for you to view your data objectively because you will have become part of the cul-

ture. If weaknesses or problems exist within the organization, chances are you are contributing to them. Bringing in someone you trust who can take a brutally honest look at your environment will help you see the reality of your surroundings and may save you from missing the big issue that you'd rather not see.

This other person will help you with your methodology to make sure you haven't omitted anything important in the development of your analytical tools and look over your shoulder to ensure you don't ignore important environmental information because of your built-in and unavoidable cultural biases. That objective third-party viewpoint will provide you with the perspective you need.

For example, The Performance Engineering Group (PEG), which was brought in early on in the process to analyze the cultural makeup of Rockwell Collins, performed a similar analysis regarding e-learning readiness for a well-established company directly supporting the commercial and general aviation market. The culture of this company was so engrained that its leaders couldn't see the frustration of its core customers regarding their products.

This company produced flight charts that are used in commercial, military, and civil aviation. Pilots are required to carry large sample cases filled with all of the charts they might need for any of the routes they are scheduled to fly. Over the years, the company was able to garner more than 80 percent of the market share and was hugely profitable.

The company believed it needed to deliver products electronically and asked PEG to determine if that's what customers wanted. For several months, PEG met with airline pilots to find out how they felt about using the paper charts. (The company thought the sale needed to happen with the actual airline, but our research proved that the sale should be made with the pilots themselves.) Every pilot interviewed wanted to go electronic, but because the management team at this company never talked to clients about their needs, it was impossible for them to reach that conclusion on their own.

In the course of doing the assessment, the PEG team interviewed a number of the key players at the company. They were startled by the self-image senior executives had about their business. It was com-

pletely at odds with the reality of the marketplace. For example, the senior vice president of marketing believed that the only thing about the company's culture he would change would be to hire more pilots—even though the company was a publisher of third-hand public information, and most of the tasks within the company involved working as a draftsman or a printer. Their parent company was a publishing company!

And, while interviewing the vice president of production, we asked him if the company ever surveyed its customers. He replied that they didn't do anything formally, but they spoke informally to airline executives whenever they were at an industry function. He was actually stunned when we suggested that their real customers were airline pilots, not the airlines themselves.

The management team had no idea how frustrated end users were with its paper-based products because they never communicated with end users—the pilots—beyond the point of sale.

As a third-party surveyor, PEG spent a relatively small amount of time asking seemingly relevant and obvious questions that garnered a wealth of valuable data about customer opinions. On their own, because of their inability to look outside the confines of their own experiences, the company's executives might never have discovered this information because it wasn't in their process to ask those questions.

The vice president of production had been working for this company for fifteen years, and the culture hadn't allowed him to objectively look at the market forces at play. He agreed that our perception was accurate and began taking steps to find out what pilots thought of his company's products.

The bottom line is that the flight chart company had a very powerful culture and always promoted from within. Outside ideas weren't allowed into the corporate thinking, and, as a result, the management of the company suffered from an inability to objectively view how its company really worked. The management team had serious issues well beyond its readiness to adopt e-learning. As we're fond of saying, they'd been drinking their own bath water for far too long.

Regardless of your industry or cultural makeup, a third party can add perspective to the project. That doesn't mean that the third party should be sitting by your side day and night as you make your plan. Call this person in when you need guidance or to evaluate the assumptions you've arrived at. Get your third party's help on surveys or analysis if those are your weak points. Bring this person back as you implement your strategic plan to be sure you are staying on track. The important thing is to find someone you can rely on who doesn't have a personal agenda to sell you an end product of his or her own. This is why we hired The Performance Engineering Group—it didn't have any product to sell other than its experience and honest assessments.

## How We Chose Our Core Objectives

At Rockwell Collins, The Performance Engineering Group conducted cultural surveys to get a perspective on employee opinion of the company and its training initiatives. Combining that information with our extensive historical and survey data and notes from focus groups and interviews across the organization, we targeted six recurring themes that led us to the core objectives that would become the foundation of our learning-organization initiative. As we defined each objective, we created a set of learning measurements by which we would be able to later verify the effectiveness of our efforts.

### SIX CORE OBJECTIVES FOR ROCKWELL COLLINS

1. Learning needs to be tied to the business objectives.
2. Learning needs to be closer to the work environment.
3. Learning needs to be available 24/7, globally.
4. Learning needs to be of the highest quality.
5. Learning needs to cost less and do more.
6. Training needs to be focused on the front end of the learning process.



## **Learning Needs to Be Tied to the Business Objectives**

This is the most important of the six objectives we defined, because no company can be a learning organization unless all learning is tied to corporate goals. Everything we do in this process to turn Rockwell Collins into a learning organization links back to this primary goal, and each objective that follows is ultimately grounded in this first critical statement. Learning that doesn't support your business goals has no place in your company.

As you define your core objectives, keep this in mind. While each company is different, and the needs and execution style you implement will vary widely, this is undoubtedly the first and most important objective for any strategic plan to become a learning organization. Regardless of your size, your industry, or your history, tying learning to the goals of the company must be at the foundation of your intent. If you do nothing else but this, your initiative will likely succeed. If, on the other hand, you omit this critical step, if you do not make this the primary goal of your learning initiative, your initiative will certainly fail.

It became clear early on in our research that Rockwell Collins's training offerings had little to do with business needs or goals. Before meeting with the executives, we found historical data showing that none of the company's previous training offerings were tied to the core competencies of the company.

The fact that 76 percent of the 1,400-plus individually titled courses delivered in the previous seven years were delivered one time to an audience of no more than eight people each showed us that the training department had no processes in place to justify courses, costs, or design methodologies. In the existing model, a call would come to the learning and development department from a manager requesting a training course. Without exploring the learning needs, target audience, or existing skill gaps, the learning and development person would locate an outside expert who could be flown in at the company's expense to lecture for one to four days on the subject at hand, gather a fee, and disappear. No standards were applied to the experi-

ence, and the knowledge imparted was delivered one time only to those few souls who happened to be present that day.

There were no common design standards, front-end analysis, or targeted core competencies. The learning group simply fielded requests for training and provided content as quickly as possible, regardless of need. Essentially the learning-group employees were little more than order takers with no more responsibility than the person who says, “Would you like fries with your burger?” at a fast-food restaurant.

To further confound matters, more often than not training was not even the correct solution to the performance problem. For example, shortly after Cliff Purington arrived at Rockwell Collins, a business-unit director of customer service requested training for all of his people on dealing with difficult customers. He contended that his people lacked the necessary skills for dealing with such customers. When Purington asked him if all his customers were difficult, he stated they were. This type of request should set off alarm bells for anyone in training. After meeting with this director, Purington agreed to conduct a needs analysis to further understand the problem. Through this analysis, he discovered a number of problems, ranging from unclear roles and responsibilities to lack of proper work processes, inadequate tools and equipment, and informal processes that frustrated and angered customers. From the data collected, he compiled a list of solutions and actions for that director, none of which were training to deal with angry customers.

In the past, the learning and development department would have responded to his request with a course on customer service, then suffered the backlash of having provided ineffective training that didn’t solve the problem—a problem that wasn’t training related in the first place. The learning and development department didn’t link business requirements to any learning experience, and as a result a vast amount of money was wasted. Of the \$100 million spent for training in the prior seven years, \$76 million was in essence lost, because that figure represented the money spent on one-time-delivered courses. Even more disastrous was the fact that for seven years Rockwell Collins

employees had limited access to targeted training opportunities that would dramatically improve their ability to perform and produce, and no knowledge was collected through the development of courses so that everyone had access to the same information.

We resolved that from this point on, no course would ever be offered unless it linked directly to skills or knowledge that supported the goals of the business. Every learning opportunity would support our vision—to deliver superior customer value, create sustainable and profitable growth, to make Rockwell Collins a global leader in the markets it serves, and to ensure it is considered a “best place to work” by its current and future employees. We would establish standards and tracking processes to guide training developers and oversee their progress. We would redefine our department roles and responsibilities, evaluate content before it was delivered, and commit ourselves to creating a performance-based training environment.

Doing this would ensure that every training dollar from our budget would be spent directly on an effort to bring Rockwell Collins closer to its vision. We would measure our effectiveness in achieving this objective constantly against our defined goals, through students’ reactions; post-learning surveys; management feedback; analysis of tasks, competencies, and learning objectives; time to delivery; and cost per hour of training.

### **Learning Needs to Be Closer to the Work Environment**

We drew this conclusion from the fact that 60 percent of Rockwell Collins’s 17,500 employees worked outside the Cedar Rapids office, but all training was conducted at the headquarters. Frustration over the centralized training environment was brought up repeatedly by employees in interviews, survey data, and focus groups. The message was clear: They wanted their training opportunities to be closer to their workplace. Managers resented the dollar costs and lost productivity associated with sending employees to Cedar Rapids for training. Employees didn’t want to spend days away from their families and they didn’t want their own work to pile up while they spent time off site for training. Because courses had to be planned so far in advance,

everyone found it difficult to schedule their time effectively, which was one of the greatest contributors to the huge numbers of training cancellations we discovered in our research.

The data also showed us that some employees were getting hundreds of hours of training each year while others received virtually none. This data reinforced our opinion that because the training department worked in isolation, it wasn't meeting the most basic learning needs of an immense segment of the Rockwell Collins population. Some employees were taking advantage of their easy access to unnecessary training as a perk, and others struggled in their jobs because of skill gaps that could not be bridged because training was too inconvenient.

This information also underscored for us how ridiculous the often-used training metric of "average hours of training per employee" is. This metric can provide a rough order of magnitude for budgeting purposes, but it is completely irrelevant when determining whether the training department is actually doing what it is supposed to.

To change that, and to be sure that all employees had access to the training they needed when they needed it, learning opportunities had to be offered at every Rockwell site and in a more timely fashion.

Our project actions to support this objective included adding learning-resource rooms to each major geographical area. The success of this objective would be based on usage of learning centers once they were implemented and usage of computer-based learning by each business unit. We added the resource rooms to combat the attitude of management that employees who are at their desks should be working, not training. We knew that some employees would need someplace to go—away from their desks—to take online training undisturbed. To ensure accessibility, we purchased and installed caching servers in offices around the world to store and update learning modules.

### **Learning Needs to Be Flexible and Available Twenty-Four Hours a Day, Seven Days Per Week, Globally**

This objective was born largely from the existing training calendar of events. Even though the population was dispersed over several time

zones and many employees worked three shifts, training was offered from 8:00 A.M. to 5:00 P.M., Central Standard Time, Monday through Friday, in the Cedar Rapids classrooms. If that wasn't convenient to an employee's schedule or locale, tough luck. At Rockwell Collins, training was planned around the needs of trainers.

Employees voiced their frustration over the rigid scheduling, the limited times when the training they needed was offered, and the fact that they were often forced to sit through a forty-hour course when all they needed was a two-hour chunk of the training.

The classroom model Rockwell Collins had adhered to for fifty years was not meeting the needs of its dispersed workforce. It was inflexible and inadequate. We needed a model that allowed employees to receive training when they needed it, regardless of what time zone they were in.

Our learning measurements would be based on usage of courses by individual employees, business units, locations, and language.

### **Learning Needs to Be of the Highest Quality**

Data collected from the “best place to work” surveys, conducted every two years to gauge employee satisfaction at Rockwell Collins, and the training evaluations given at the ends of courses, regularly showed that the quality of the training offerings was subpar and generally unacceptable. The instructors' guides offered no learning objectives, and the training department used no standards of curriculum design to build the content in-house or buy it from learning vendors. Courses were usually unfocused data dumps that were considered by most of the Rockwell Collins population to be irrelevant to the performance needs of trainees. Most employees were more impressed by the catering than the training and often saw the experience as a justified waste of time to get a free lunch.

Quality is an issue that many companies overlook in their haste to implement e-learning. Without quality, how training is delivered doesn't matter. Training can be in a classroom or online—if it has no value, no one will use it. And unlike in a classroom, which at least forces people to stay until the end of the session, no one monitors

those who take an e-learning course. If training is going to be self-paced, quality has to be obvious and inherent in everything you deliver. It has to capture the trainees' attention instantly and define why the course will help them do their jobs better, faster, or cheaper.

Before we could even consider technology to deliver training, we needed a strict set of instructional-design standards that tied learning offerings to key skills related to job tasks and business objectives, and we needed a process to guarantee quality and uniformity in the messages we were delivering. We would do that by adhering to clearly designed standards based on instructional-systems methodology and by choosing vendors and products that met clearly stated criteria based on the needs of end users.

We planned to measure the level of training quality through the use of employee feedback, employee and management surveys, learning-council reviews, and actual production and course usage.

### **Learning Needs to Cost Less and Do More**

This objective actually came at the end of our strategic-development planning process. We did not go into the plan with the goal of saving money. We went in with the goal to transform the way Rockwell Collins's people received knowledge and required skills, and to eliminate waste from the system. But as the plan unfolded and we created a process for achieving each core objective, we were able to calculate the specific costs associated with achieving our goals. It was an honest plan with aggressive milestones that just happened to be cheaper because we built a system that made better use of training dollars.

When we put the budget back together based on our new approach to training we were astounded to discover that implementing our plan would deliver 400 percent more training—all of it of higher quality than what had been delivered in the past—and we could do it for a budget that was 40 percent less than what we had been given. That amounted to \$31 million in savings over four years—and that was a conservative estimate based on hard costs relating to travel, material, and labor. Had we factored in the anticipated performance improvements, the number would have been even larger.

Most of the savings came from a commitment to efficiency and a vigilance toward overseeing processes from the front end, before waste crept into the process, and from making cost-effective choices for worldwide distribution of training.

If we hadn't gone through the process of breaking the plan down into the specifics and pricing each element, we would not have realized this critical piece of information until it was too late to include it as part of our sales process. Even if you think you know what your initiative will cost, this is a valuable exercise and, if nothing else, it will give you hard numbers with which to validate your assumptions.

### **Training Needs to Be Focused on the Front End of the Learning Process**

The data we gathered showed us repeatedly that no set of guidelines was being applied in the selection or development of course content. Trainers were working the back end of the learning/training process, evaluating courses after the fact. They were utilizing end-of-course satisfaction surveys instead of conducting detailed needs analyses up front to determine if the training courses were necessary, were related to business goals and core competencies, and had clearly stated learning objectives in mind. Their only role within the company was to field calls for training and set up courses in response. They were demoralized and disillusioned, with no leadership to guide them.

Employees at Rockwell Collins, like those at many companies, believed, with total faith, that if there was a problem—any problem—training was the solution, and the learning department supported that belief system. This was at the heart of Rockwell Collins's culture. Training was the easiest choice to make when something went wrong. Asking for training was “what you did at Rockwell” in response to a problem.

In reality, training is the solution less than half of the time, at any company. Most often the problem isn't a lack of skill but a lack of effective processes and tool sets, poorly defined roles, or convoluted communication styles. Unfortunately, it is easier to throw training at a problem than to change the way employees do their jobs.

Without the needs analysis, the learning and development team had no way of knowing whether the training that was requested was actually needed or whether it would address a given problem. And, even if training was the right choice, without instructional-design standards or learning objectives there was no way of ensuring that the resulting course would effectively deliver a skill or knowledge that in any way affected performance. Because course guides had no learning objectives, the instructors had no way of judging the success of a course. And when training was over, there was no way to determine if the experience had affected anyone's ability to do a job. The only things that were rated was whether employees enjoyed the experience and the quality of the free lunch.

We needed to establish criteria for developing and delivering content that would guarantee that training would contribute to the success of the organization or it wouldn't be offered. We needed to refocus trainers on the front end of the learning process and create work standards for the training experience from start to finish, ensuring that every course was measurable, valuable, and performance based. The project's success would be measured by our adherence to defined processes and standards for defining learning relevance and value.

### YOU ARE READY TO MOVE ON TO STEP 4 IF YOU:

1. Have identified the recurring problems and themes in the data you collected through your organizational assessment.
2. Based on these themes, have defined the three to seven core objectives that will be the foundation of your strategic plan. Core objectives are enterprise-level solutions for the shortcomings in your learning system. They come from the data you collected in the previous step and, when chosen with care, will act as the road map to lead you toward the future vision of a training structure that will directly affect the success of the business.



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# STEP 4

## Plan Your Strategy

*“Learning is not attained by chance; it must be sought for with ardor and attended to with diligence.”*

ABIGAIL ADAMS

### GOALS FOR STEP 4

1. Write a list of action items to achieve each objective.
2. Define each element of the strategy for each objective.
3. Calculate the cost and impact of your total project.

With your core objectives defined, it is time to delve into the matter of how you will achieve them. Your strategy outlines the steps you will take to accomplish your transformation. What will you implement or change in the company that will allow you to achieve your goals? Think about action items. Make a list of events that must take place if

your organization is to move from where it is now to the future state that you have envisioned through your objectives.

There's no generic formula for defining strategies to achieve your core objectives. Even if your objectives are identical to the ones we defined for Rockwell Collins, your implementation plan will be different. You need to take what you know about the strengths and the weaknesses in your existing culture, then compare these with the benchmark data from external companies and training-industry research. Compile that information and then, working with your team, brainstorm solutions to your problems. Ask other companies that have successfully implemented e-learning if they have run into the types of problems you're dealing with or that you anticipate having to deal with. Learn from their experiences. While you are crafting your strategies, always ask yourself, "How does this support the business objectives of my company?" This simple question will keep you on track and help you avoid costly failures down the line.

As you make your plan, remember to keep in perspective that you're working in a system, and no single activity can work to the detriment of the rest. None of the objectives implemented on its own will cause significant, long-lasting change in your organization. To succeed in this transformation process, you must create a plan that addresses all of your core concerns simultaneously. You are not creating six separate plans but rather one overreaching plan that incorporates activities and changes to achieve each individual objective. If you've chosen the right objectives, this shouldn't be a problem because the ultimate intent of each objective will be to tie training to the business goals of the organization.

If your objectives conflict with one another, then you've made an error. Go back and reevaluate your choices and determine which objectives are not naturally inherent to the business process. Ask someone from outside the project to review your objectives and look for the gaps between what you've discovered about the culture and what you intend to do about it. Sometimes a fresh look from someone you trust is imperative to shine light on your missteps.

For example, before coming to Rockwell Collins, Chris Butler was

hired by a computer-aided design software company to develop a time-management course for developers. After interviewing four people, it became clear to him that their problem was not due to poor time management but to an isolated “knowledge is power” corporate culture. Only high-level people communicated with those outside their department, so anytime an employee needed something, the request had to go up through the ranks to the executive level and back down again, causing simple requests to take days to be fulfilled. Butler suggested that, instead of time management, they work on rebuilding lines of communication in the company. They declined—and a year later were bankrupt. They were too blinded by corporate opinion to see the value of an outsider’s view.

We cannot stress enough the value of having an impartial third party give you perspective on the choices you are making. These objectives are the foundation of your plan. Making the wrong choices or missing obvious problems or obstacles during this phase will damage the entire project.

Based on the goals of our core objectives and the culture and business drivers at Rockwell Collins, we made the following plan, which included a list of enterprise-level action items that would allow us to achieve the core objectives. Many of the elements of this list are tied to one specific objective, but all of them link directly back to our primary goal of linking learning to the business goals of the company.

## STRATEGY FOR ACHIEVING ROCKWELL COLLINS’S CORE OBJECTIVES

1. Transform learning and development staff into learning consultants.
2. Create learning councils.
3. Convert 70 percent of classroom-based courses to alternative technology-based training.
4. Make up-front needs analysis mandatory.

*(continues)*

5. Define and map learning-department work processes, including (a) validation of training need, (b) make-or-buy flowchart, and (c) standards for buying training.
6. Create a curriculum-standards and style guide.
7. Define roles and responsibilities of learning-team members.
8. Establish criteria and contracts for subject matter experts (SMEs).
9. Outline development process and value stream map.
10. Focus on the needs of engineering and manufacturing—80 percent of Rockwell Collins’s employee base.
11. Create training resource rooms.
12. Test training’s effectiveness in a controlled lab.
13. Reduce the budget and improve the offerings on a yearly basis.
14. Pick the low-hanging fruit first.
15. Develop an adult learning environment versus the traditional public school models.

## **Transform Learning and Development Staff into Learning Consultants**

At the root of the learning-related problems in Rockwell Collins was the dizzying gulf between the learning and development department and the rest of the organization. The learning and development department’s role was to provide training solutions upon request with no discussion of need or core business goals. There was little interaction between the learning staff and the rest of the company, and, as a result, training was happening when training was not the solution, and when it was needed it was either inconvenient, subpar, or nonexistent.

In our plan, the learning and development staff would refocus on the front end—identifying need based on ability to perform tasks and determining whether training could close the gap between the

place where a segment of the population was and the place where it needed to be.

But they couldn't accomplish this goal in the roles they held at that time. We needed to migrate their focus and presence into the business units, where they would interact with and learn about training needs directly from the employees and managers of the company.

To do that, we redefined the roles, responsibilities, and skill sets of Rockwell Collins's training and development team. We retooled them from course schedulers to learning consultants who worked directly with the business units to determine first hand what their training needs were. They would no longer spend their days planning courses, tracking registration, and scheduling events. As learning consultants, they would spend most of their time on front-end needs analysis, locating and identifying the training needs that would affect business goals. The rest of their time would be spent working with vendors to ensure that the training solutions were performance based, were of the highest quality, and adhered to established standards.

We had a lot of conversations about how this should look. We wanted to get them out of the vacuum of the training department—which was located miles from the main Cedar Rapids headquarters—and into the heart of the operation. They needed to work directly with employees and managers to identify what skills and knowledge each team needed to do their jobs.

Originally we wanted to physically move them into the individual units so that they could interact directly with managers on a daily basis regarding the needs of employees. But if that were done, the learning department would be scattered, making it difficult to oversee their efforts and retain their loyalty.

Understanding group dynamics and the difficulties that can arise when people are assigned to specific teams is important. People have a hard time being a part of multiple teams; you're either in or out and never halfway. In the end, we assigned learning consultants to a business unit or functional group and gave them responsibility for determining their assigned business training needs.

To function properly in their new role, the learning consultants

had specific training needs of their own. Chris Butler worked with the teams individually and in groups to train them on how to consult internally in organizations. They needed basic consulting skills on issues such as how to ask open-ended and powerful questions, how to handle objections, and how to present solutions. If these sound like sales skills, that's because they are. Most internal consultants must use the same skill set that outside salespeople use every day. It was Sales 101, but we didn't present it as sales training. Most non-sales professionals have a pejorative opinion of salespeople. They don't want to do sales, so you need to frame the training in terms of persuasion, communication, and facilitation, or you'll lose their commitment.

Cliff Purington gave them research assignments that contributed to the content of the strategic plan and educated them on the tools and trends in the training industry. We assigned them books to read on instructional-systems design and deployment, including *The Occasional Trainer's Handbook* (Emergency Management Laboratory, 1992); and *The Handbook for Developing Competency-Based Training Programs* (William E. Blank, Prentice-Hall, 1982). We held regular discussions about the content of the books and the impact these strategies could have on Rockwell Collins's business environment. Contrary to expectations of resentment at being reeducated and given new roles and responsibilities, the Rockwell Collins learning and development staff were thrilled. They were hungry for guidance and, agreeing they needed new leadership and a different system, gladly followed the process.

Meanwhile, however, training in its original form had to be conducted. In the case of Rockwell Collins's learning and development team, that meant setting up training, fielding requests, and managing attendance. These processes made it possible for us to ease the staff into their new responsibilities and gave them ample time to get comfortable in their new roles and develop some expertise in the technology that would soon dominate the training system at Rockwell Collins. They invested much of their time researching potential tools for new learning formats. This served the dual purpose of gathering information to support our goal of converting much of Rockwell Collins's content to e-learning and educating them about alternatives

to classroom-based training. The downside was that each learning consultant had to wear at least two hats—continuing with the traditional delivery method while representing the new strategy. This was tough on everyone, especially the learning consultants who were being asked to perform many new tasks that often conflicted with the old.

To assist them in making decisions about technology-based training tools, we added a technology expert to the staff. Steve Junion joined the team, bringing with him a wealth of technical expertise and an extensive training background. If you are going to do technology-based training, it's important to add to your team a technology expert who is not a member of the IT department. You want your expert to have an allegiance to you and to the project so that the expert makes choices and suggestions for the good of the training department. An IT person will be loyal to the IT department and will prioritize that department's needs over yours.

## **Create Learning Councils to Bridge the Gap**

Coupled with the changed roles of the learning and development staff, we created learning councils to oversee the training needs of units and functional groups. Learning councils were based on an informal model we found working very well within the engineering department and supported by a learning and development trainer. A member of the learning and development team was hosting ad hoc meetings with engineering-group leaders who were frustrated by the ineffective training opportunities at Rockwell Collins. There were no formal goals for the meetings, and much time was spent complaining about the existing situation instead of brainstorming alternatives, but the idea behind these meetings was sound. As a group they were trying to identify the needs of their members and develop solutions for meeting those needs. This is a great example of identifying in the current environment those things that support the new strategy. It also points out the importance of completing a comprehensive assessment of the current state; invariably many things in the old environment are sound, work well, and should be retained.



We took that model and formalized it, requiring elected teams to identify the core competencies that would drive business relevance into the training needs of their groups. This objective would weed out training that didn't achieve specific targeted goals and allow us to customize those courses that met critical business purposes. It would reduce the bloat of one-time course offerings, eliminate isolated training offerings, and address relevant enterprise-wide training issues. It would allow the learning and development team to focus on core competencies, improve quality, and identify learning opportunities that would create competitive advantage.

Every business unit and each major discipline—engineering, finance, human resources, sales and marketing, and customer service—would have its own learning council. They would each be expected to meet on a regular basis to address the learning needs of their particular constituencies and to define the core competencies of their members' roles.

Overseeing all of these councils would be the enterprise-wide learning council, which would evaluate all of the learning and development requests that came to it from the functional and business-unit learning councils. Its role would be to ensure that training was tied to the business goals and vision of the company and assure consistency across the Rockwell Collins enterprise. It would be co-chaired by Cliff Purington and a different Rockwell Collins vice president every six months. The decision to have the vice presidents rotate was based on our desire to maintain high visibility of the enterprise-wide learning council and regularly inject a fresh perspective.

The learning councils would be made up of employees, selected from each unit, who demonstrated a desire to develop themselves, their peers, and their subordinates. Getting members to volunteer would be a challenge. First we asked the vice president of every division to nominate a mid-level manager in the business units. The vice presidents identified six to eight candidates for the councils to sit on the board. We interviewed candidates to determine their suitability for the job. This was a delicate political process because managers at Rockwell Collins were already extremely busy with multiple enter-

prise initiatives. We went into this process knowing that Rockwell Collins was already “over initiated.” Because so many initiatives were going on, getting these mid-level managers to come on board was going to be a real challenge. Most of them were already on task forces that were not directly related to their jobs, and some clearly resented the nominations. In the interviews we wanted to convey a sense of selectivity. We wanted to choose people who showed a genuine interest in learning, but at the same time we didn’t want to give them a chance to intentionally botch their answers so they wouldn’t be chosen for the job.

To find the right people, Butler created the following set of interview questions to get a sense of the person’s experiences and attitudes relating to learning:

1. Why would you like to be a member of this learning council?
2. What special skills or attributes do you bring to the council?
3. Tell us about your personal and career development since you came to Rockwell Collins.
4. What about before coming here?
5. What do you think the biggest challenge for Rockwell Collins employees is, in terms of their professional development?
6. How would your employees describe your support for their ongoing development?
7. What are your major strengths as a manager?
8. What are your major weaknesses as a manager?
9. What has been your greatest achievement in life?
10. What has been your most significant failure?
11. If I were to ask your employees to describe you using five adjectives or short phrases, what would they say?

12. What do you hope to get personally from this experience?
13. How much time will you commit to the learning council each month?

It was important, in order to find the right person for the job, to listen not just to what the candidates' answers were but also how they delivered them. For example, it's not terribly important what educational opportunities a manager has had since coming to Rockwell Collins. What's important is how the manager talks about the experience. Someone who goes into detail about what was learned or how the experience could have been enhanced is a better choice than someone who says, "My boss made me take a finance course last year."

From these interviews we chose six members for each council with the intention of rotating those positions every eighteen months on a staggered schedule. That limited the amount of time any one manager had to commit to the process but would give each one enough time to affect the results.

Also, the answers to questions 7 through 10, regarding their strengths, weaknesses, successes, and failures, can be very revealing. The first two give you an idea of the individual's ability to self-assess. Question 9 helps you understand the applicant's values. Does the applicant talk about work-related success or personal success? There is no right or wrong answer to this question, just information that can be very useful as you work with this person.

Question 10 in some ways can be the most critical of the thirteen questions. If a respondent says that he or she has never really had a failure, be careful. We've all had failures, and a person's unwillingness to admit to failures is usually an indicator that that individual will not take correction or criticism.

A learning consultant who would act as the liaison between the group and the learning and development department chaired each learning council. They guided council members toward appropriate solutions to training needs and open lines of communication between the units or functions and the learning and development department. They also acted as public relations reps for the new

learning-organization initiative, keeping council members informed of what was happening and selling the initiative within the units.

The first two meetings of each of the individual learning councils covered a total of eight hours. Butler and another of the learning consultants designed these first meetings around the model for developing high-performing work teams. The councils established their own rules or working guidelines—the manner in which they would deal with conflict and differing opinions and get the basic work of the councils done.

To help learning consultants establish themselves as leaders of these groups, Butler attended the first three or four charter meetings of each council, calming their fears and building an atmosphere of camaraderie.

## **Convert Most Classroom Courses to Technology-Based Training**

We realized early on that the best way to achieve our goals was to implement technology-based training. Technology would allow us to deliver training not just to geographically separated offices but also right to the desktops or workspaces of all Rockwell Collins employees. It would provide the entire staff with learning opportunities twenty-four hours a day, seven days a week, regardless of their location.

Technology would enable us to make Rockwell Collins a learning organization, because for the first time the delivery of necessary training would be able to keep up with the rest of the business. As soon as there was a need for training, our team would be able to provide it. And because it would be offered 24/7, every employee at any location would have equal access to the same skills and knowledge, thus leveling the playing field for all Rockwell Collins offices.

Based on these assumptions, our team created a process for selecting the tools and vendors necessary to support our transformation. (See Chapter 5 for the vendor-selection process.) We completed all of our technology research and selection long before we pitched our business case to executives so that once we got buy-in we would be

ready to launch our new technology-based training infrastructure and immediately affect the company's ability to learn.

Based on our plan and our technology research, within weeks of our launch the transformation would begin. Classroom courses would be shut down and replaced with e-learning. Catered class lunches would stop. The learning and development department would cease to support requests for classroom training if computer-based alternatives existed. This was a bold decision that would frustrate some managers who used classroom training as perks for employees. However, we decided that cutting off the masses from their classroom fix was the quickest way for us to show them the value of alternative learning options and would set the standard for zero tolerance of old behavior. Believe it or not, just canceling lunch helped to make the classroom process less attractive.

## **Define and Map Work Processes**

The training our team delivered would have to be of the highest quality to affect attitude and the value placed on learning at Rockwell Collins. If we were going to tie learning to achieving business objectives, our offerings had to do more than target core competencies. They had to deliver specific skills and knowledge that could be directly implemented on the job. Through training, our team had to target key skills and give learners the tools to transform the way they performed their jobs, allowing them to work better, faster, and more efficiently than they ever had before.

Training at Rockwell Collins didn't have a very good reputation. The perception that training has little value is one you will find in most organizations and certainly isn't unique to any one company. The quality had been so random and subpar for so long that managers and employees were skeptical of its inherent value. Some saw it as a perk, a way to avoid work for a few days; others saw it as a waste of valuable time away from their jobs and families. Few saw Rockwell Collins's training as a critical contribution to their skill development or the business goals of the organization.

That skepticism was combined with a wariness of any training

outside the classroom. For a company that had spent its entire fifty-year history in the classroom, e-learning was a profoundly foreign way to learn. While Rockwell Collins's classroom courses were consistently bad, at least they were familiar. E-learning was a new and in some cases frightening way to learn, and employees were uneasy. So anything our team gave them had to be top notch. It had to be measurable, performance based, and consistent.

To achieve that level of excellence, every course had to adhere to formal instructional-design standards with specified learning objectives and established performance goals. But at that time at Rockwell Collins, no defined processes were established. Everyone on the learning and development staff had their own style and their own criteria for choosing and delivering content.

Without defined and documented processes and procedures, there was no way to standardize our offerings and evaluate their effectiveness. To better link training to the goals of the company, we defined and then mapped the formal workflow processes that our team would use from that point on to identify, develop, and deliver training. The processes we defined included the needs analysis form, validation of training need, learning methodology, the make-or-buy decision process, a standards guide for purchasing training, and a curriculum-design guide for building training (see Figure 4-2f).

## **Conduct Mandatory Needs Analysis**

To alter the belief that training is the solution to all woes, our team needed to educate managers on how to recognize a training issue. Few people in the company understood how to determine whether training was the right solution. In many cases the training they asked for exacerbated their problems because it wasn't supplying employees with what they really needed to do their jobs—better tools or processes.

We were educating the learning and development staff, but we didn't want to leave them in the awkward position of having to tell managers that the training they requested was not going to solve their problems.

The fastest way to determine if training is the right choice is to put

a gun to people's heads and ask them to do their jobs. If they can, they don't need training. However, it's not the most tactful approach, so to assist business unit leaders in determining their training needs, and to act as a defensive measure against unwarranted training requests, we instituted a mandatory needs analysis form (see Figure 4-1). Before any appeal for training could be processed, managers had to complete this online form outlining the specifics of their training need. It asked for the business objectives they expected to support with the training, skill gaps associated with the training, the link between training and job performance, and specific examples of problems the training was expected to address.

The form was designed to show whether a training request was a legitimate one. It also served as a mini-tutorial for managers on training-needs analysis. It gave them clearly defined parameters for training. If training is not the solution, the form will make that clear before the request ever arrives in the learning and development office. We found that this simple requirement dramatically reduced the number of requests for training.

## Validate Training

We mapped our process for identifying learning needs in a flowchart that determines whether the need is verified by a learning consultant and learning council, whether a specific course is identified, and whether it meets business needs for that particular business unit. Within that process we identified tasks within work elements associated with the training, the core competencies and gaps that the learning addresses, and the measurable learning objectives. A measurable objective has five elements:

1. A defined audience
2. The circumstances under which the objective will be met
3. The action required to meet the objective

*(Text continues on p. 95)*

**Figure 4-1. Training needs analysis form.**

Please input the following information:

Requestor:

Position:

Department:

Business/Functional Unit:

Date:  /  /

L&D Contact Person:

Training Requested:

**Questionnaire to be filled out by requestor before bringing in the selected training course.**

**1. What Rockwell Collins business goals/objectives will this training support?**

**2. How does it support the Rockwell Collins business goals/objectives?**

**3. How critical is this course for job performance?**

- Critical
- Highly Required
- Required
- Good to have

**4. What will participants be able to do differently (skills) or know that they can't do or don't know now?**

*(continues)*



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**5. Do any of your employees currently have the requested skills/knowledge?**

- Yes  
 No

*Explanation, if applicable...*

---

**6. How soon after training will employees make use of the knowledge/skills gained through this course?**

- Immediately  
 1 month  
 2 to 3 months  
 More than 3 months

---

**7. Approximate what percentage of working time will be spent on tasks that require the skills/knowledge from the training course?**  %

---

**8. How soon is this training required? Please indicate timeframe.**

- ASAP  
 1st quarter fiscal year  
 2nd quarter fiscal year  
 3rd quarter fiscal year  
 4th quarter fiscal year

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**9. Can alternatives be used in place of a training course?**

- Yes  
 No

*Explanation, if applicable...*

---

**10. What alternative methods can be used in lieu of training?**

11. Who needs this course? (e.g., Engineers, Administrators, Technicians, etc.)

\_\_\_\_\_

12. What other business units or functional areas could benefit from this type of training? (ATS, BRS, GOV, SYS, etc.)

\_\_\_\_\_

13. How many people will require this training

immediately?

over the next 12 months?

over the next 2 years?

over the next 3 years?

\_\_\_\_\_

14. What vendors (internal/external) will be providing the training (if known)?

\_\_\_\_\_

15. Is your department willing to incur the full cost of the training if no other departments are able to be involved in the course?

- Yes
- No

\_\_\_\_\_

16. What is the expectation for the cost of the course (if known)? \$

\_\_\_\_\_

17. Who is the technical-liaison/subject-matter expert for the training course?

\_\_\_\_\_

18. What classroom setup is required (if known)?

- PC / Workstations

(continues)

*If you checked PC / Workstations...*

A. What operating system is required?

B. If PCs are required, what are the minimum standards?

C. Will software have to be loaded?

Lecture Style

Other

*If you checked Other, please explain:*

---

*Please ensure that all information is correct before submitting.*

---

Before any course is offered at Rockwell Collins, this form must be completed.

4. The behavior that must be met
5. The level of mastery required

For example: The participant, when given a text editor, will create a circuit netlist with 80 percent accuracy. By defining and adhering to this formula, we guaranteed that the learning offered by the learning and development team was measurable and performance based.

## Define Learning Methods

If, after applying this formula, training is deemed an appropriate response, the right learning platform and methodology must be chosen. Whether learning should be self-paced, group based, event driven, or an on-the-job continuous process determines what structure the course should take. For example, we determined that self-paced formats—Internet- and intranet-based courses, video, CD-ROM—are best used if learning objectives are well defined, content has a clear beginning and end point, learning can be accomplished independently, minimal collaboration is required, and learning objectives are primarily knowledge based instead of skill based. Group-based methodologies—traditional and virtual classrooms, satellite and chat—are best used if collaboration is essential, content area is complex or vague, and the learning objectives are focused on skill development.

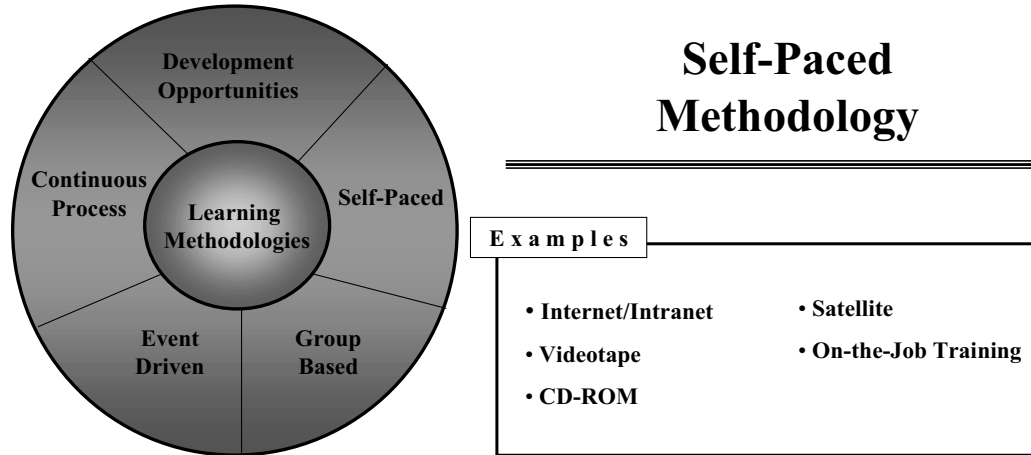
By defining these methodologies, we made it easy to break down the needs of the learner and craft an appropriate environment in which the learner could best absorb new content. See Figures 4-2a through 4-2e for examples of graphics that can aid in making these determinations.

## Conduct a Make-or-Buy Analysis

The make-or-buy analysis determines whether a course should be made in house or outsourced and how much to spend (see Figure 4-3 on page 103). Our criteria were the size and location of the audience, availability of subject-matter experts, whether the content was proprietary to Rockwell Collins, and value to the organization.

*(Text continues on p. 102)*

**Figure 4-2a. Learning methods.**



### When to Use:

- Learning objectives are well defined.
- Content has a clear beginning and an end point.
- Learning can be accomplished independently.
- Need for collaboration with other students/subject-matter expert is minimal.
- Learning objectives are primarily knowledge based as opposed to skill based.

---

These graphics helped learning consultants quickly determine which learning method was most suited to their needs.

**Figure 4-2b. Learning methods.**



## **Group-Based Methodology**

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### **Examples**

- **Traditional Classroom**
- **Satellite**
- **Virtual Classroom**
- **Chat Rooms**

### **When to Use:**

- Collaboration with another learner or instructor is essential.
- Content area is complex or vague; transfer of learning requires direct intervention.
- Learning objectives focus on the development of skills.

**Figure 4-2c. Learning methods.**



## **Event-Driven Methodology**

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### **Examples**

- Forums
- Brown-Bag Lunches
- Online Chat Rooms
- Conference Calls
- Television
- Educational Clubs

### **When to Use:**

- Reinforce existing skills.
- Stay current with new developments.
- Revise skills and knowledge.
- Access experienced-based knowledge.
- Provide general knowledge/information to large groups of people.

Figure 4-2d. Learning methods.



## Continuous-Process Methodology

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### Examples

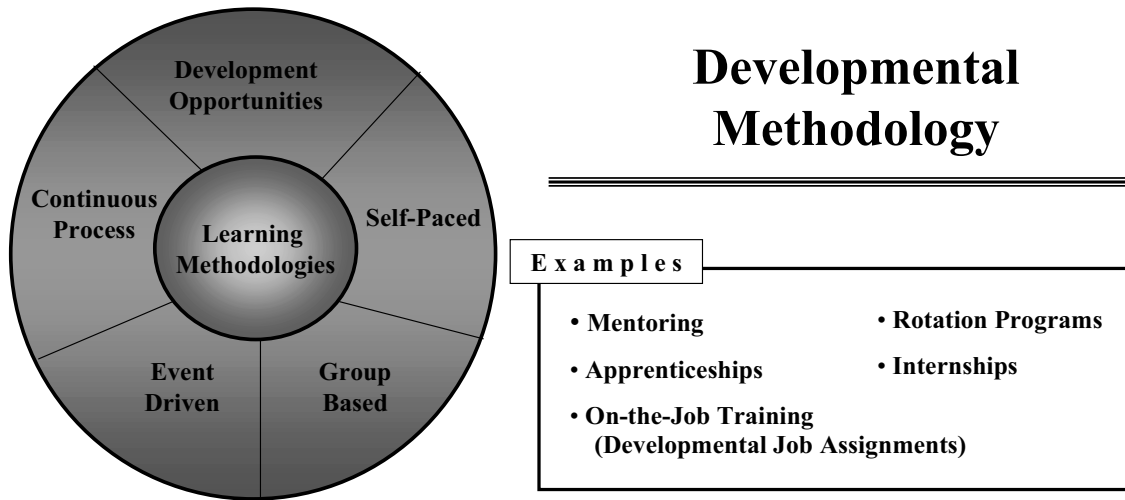
- Face-to-Face
- Voicemail
- Search-Capable Databases
- Job Aids
- Reports
- E-Mail
- Internet/Intranet
- Checklists
- Newsletters
- White Papers

### When to Use:

- No time to schedule an event.
- Can take place at any time.
- Use existing infrastructure.
- Continuously changing work environment.
- Information and knowledge are experience based and do not exist in conventional format.
- Knowledge requires interpretation and analysis.



Figure 4-2e. Learning methods.



### When to Use:

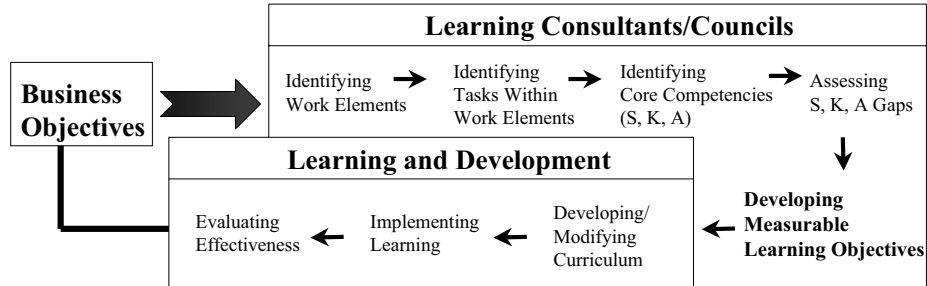
- Collaboration with another learner or instructor is essential.
- Content area is complex or vague; transfer of learning requires direct intervention.
- Learning objectives focus on the development of skills.

Figure 4-2f. Learning methods.



## Focused and Relevant to Business Needs

**Objective: Learning Opportunities Relevant to Business Needs**



### Learning Measurements

- ◆ Anecdotal feedback
- ◆ Overall monthly usage, access, hours reports
- ◆ Learning Council feedback/survey
- ◆ Competency improvement within competency database
- ◆ Time to delivery against needed date
- ◆ Cost per hour of training against defined goals

For example, 2,500 employees needed training on electromagnetic interference (EMI)—a problem that was costing Rockwell Collins more than a million dollars per year because of inadequate application of EMI fundamentals in the design phase. This easily justified the \$400,000 the learning and development department spent on a custom course that helped to eliminate the problem in a matter of months.

On the other hand, if a core group of plant workers need to capture the knowledge of one retiring expert, it makes far more economic sense to use a methodology other than an expensive CBT. A key aspect of selecting the appropriate design methodology is obviously the cost per student hour of the training. Other factors are the location of the learning population and flexibility of the delivery method.

If our team decides to buy a course, we go to one of our existing vendors and make a choice. If our team makes a course in house, we use further steps to validate methodologies, style, core competencies, and effectiveness.

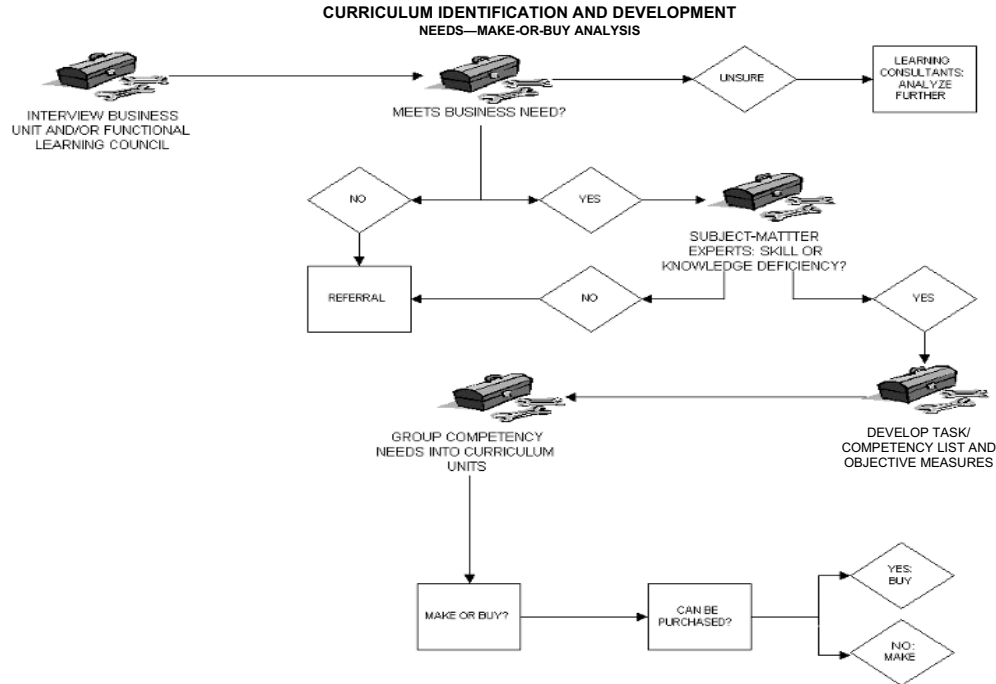
We contracted with an instructional-systems-design expert to craft a comprehensive curriculum-design and development standards guide that would provide focus, direction, and required “rules of engagement” for Rockwell Collins. The goal of the guide is to facilitate development of effective education and training programs.

It establishes the roles, responsibilities, and requirements for all those involved in curriculum development, management, and implementation at Rockwell Collins, including course managers, coordinators, instructors, subject-matter experts, support personnel, and others involved with instructional development and execution. It identifies the primary sources of instructional media used at Rockwell Collins, including detailed style guidance for use of type, font, style, color, and formats for media-specific presentations, along with design requirements, design templates, lesson file organization, and delivery methods and techniques.

For content that is developed in house, developers and SMEs are expected to adhere to these standards. Every vendor our team worked with from that point on was required to use our standards guide as a model for our content and to work with the Rockwell

Figure 4-3. Make-or-buy flowchart.

## L&D Process (Make-or-Buy Analysis)



The make-or-buy flowchart maps the decision-making process that determines how each course will be developed.

Collins team to ensure that the highest-quality design standards were applied.

Flowcharting these processes and defining standards are simple activities that clearly define for the entire organization how and why the learning and development department chooses particular content and delivery methods. They give our team guidance and verification that the choices we make have sound instructional principles behind them. These processes were also very important to the development of our learning consultants.

## **Define Roles and Responsibilities of Learning-Team Members**

Each work flow was a piece of a formal process we were creating to ensure that the training our team offered was consistent, had defined goals, used sound instructional-design theory, was of the highest quality, and tied training to the goals of the company. Many of the processes had subsets that were also mapped out. For example, whether we built training in house or worked with an outside vendor, a team of Rockwell Collins people would be involved. We weren't just going to assign training development to a vendor and see what the vendor came up with six months later; we were going to manage the process from the front end. That meant that every custom course required a subject-matter expert and a learning consultant to work on the vendor's team, and each member had a defined set of roles and responsibilities (see Figure 4-4).

Further, we discovered that previous development delays had often been caused by SMEs who were not the sole expert on a subject. Their missing knowledge resulted in significant gaps in the final version of the course, or the SMEs dropped out or were pulled off of projects prior to their completion. In both scenarios, developers were left with partially completed courses, which required them to return to the design phases, which in turn added time and costs to the project.

To reduce this waste, we developed a set of criteria to choose SMEs that helped the development staff identify the true subject-matter

**Figure 4-4. Roles and responsibilities chart.**

**Custom Courseware Development  
Roles and Responsibilities**

<b>Role</b>	<b>Responsibility</b>
<b>Rockwell Collins</b>	
Learning Director	Approves project funding, direction, and scope changes.
Project Manager	Oversees the project; directs flow of tasks; coordinates development schedule; keeps team informed of changes; stays focused on the “big picture”; ensures application of company standards and style guidelines; ensures vendor-proposed architecture is consistent with internal technical infrastructure; tests final product to meet functional, technical, and instructional requirements of the project; interacts with all team members.
Subject-Matter Expert	Intellectual resource for project content; responsible for providing the tasks and performance steps to the instructional designer (ID); the final authority on what something means or how it is to be performed; concerned with content accuracy, not instructional design; primarily interacts with ID and Project Manager; provides content capture for instructional designers; reviews scripts and lesson betas, specifically to read script, make edits, organize and send comments to developer, and participate in conference calls to clarify comments; must confirm commitment to and availability on the dates indicated on the schedule; understands and agrees to communication format and frequency during project.
Content Approval Authority	Approves the conversion of subject matter to electronic form; delegates content authority to subject-matter expert; interacts with SME, Learning Director, Project Manager.
Learning Technologies Manager	Provides Pinnacle Learning Manager software and infrastructure support as needed.
e-Business Project Manager	Coordinates required e-business services to advise, approve, and provide support for the project.

*(continues)*

Role	Responsibility
<b>Course Developer/Vendor</b>	
Account Manager	Initiates project with Project Manager; writes sales proposal based on customer requirements; interacts with Project Manager and Course Manager.
Course Manager	Acts as the “voice” of the customer to the vendor-development team, ensuring that the course meets the customer’s requirements; manages course-development team for vendor; interacts with Project Manager to keep project on schedule; all communication to Project Manager directed through Course Manager.
Instructional Designer	Ensures instructional integrity of learning system through application of instructional design and clear writing; responsible for how material will be presented; acts as primary contributor to scripts and storyboards by writing with CBT learner, audio narrator, content accuracy, and sound instructional design in mind; does not interpret content; ensures that implementation of graphics and programming is consistent with the intended instructional design; interacts with Course Manager, SME, Project Manager.
Lead Developer	Uses the agreed-upon authoring language or package to implement the ID’s storyboards; writes the code to create the final product; incorporates visual recommendations of the graphic designer; designs overall architecture and functionality of product; manages additional programmers if needed; interacts with Course Manager.
Graphic Designer	Designs attractive and intuitive interface; creates the visual content, graphics, and animation of the course; assesses what style will best fit needs of customer; interacts with Course Manager.
Multimedia Developer	Responsible for audio, video, and animation elements of the course; interacts with Course Manager.
Quality Assurance	Responsible for testing applications to ensure that product execution matches design; interacts with Course Manager.

Clearly defined roles and responsibilities add clarity and consistency to the course-development process.

expert and whether more than one SME was required to round out the necessary knowledge. The criteria look at tangibles and intangibles, such as:

- Their mastery of the content
- Whether they are obvious representatives of the targeted audience
- Whether they have clear knowledge of the audience's roles, responsibilities, and learning needs
- Whether they understand the project context
- Whether they are enthusiastic about the project and content
- Their availability for the span of the project
- Their credibility
- Whether they empathize with the end users

This simple checklist gives developers a road map for choosing SMEs and improves the completion rate for courses.

To be sure that the SMEs they chose would be committed to and free to work on the project, we created a contract for SMEs and their supervisors to sign (see Figure 4-5). The contract defines the number of hours the SME will be expected to work on the project over a set period of time so that everyone's expectations are set—on the front end. If necessary, the learning and development staff also agreed to pay part of the SMEs' salaries to compensate for their lost productivity on the job.

By retooling the roles of trainers and linking them to the business units, then supporting them with a structure of standards, guidelines, and process maps to follow, we made it possible for Rockwell Collins's learning and development team to consistently link training solutions to the business goals. We established defined criteria that led to consistently high-quality courses and reduced the costs necessary for



**Figure 4-5. SME contract.**

**Custom Courseware Development Project**  
Subject-Matter Content and Resource Approval

<b>Project Name</b>		
<b>Business Purpose</b>		
<b>Project Manager</b>	<b>Extension</b>	<b>Mail Stop</b>
<b>Project Start Date</b>	<b>Project Delivery Date</b>	
<b>Resource Requirements</b>		
1. Subject-Matter Expert Name		
Total Hours Required	Mail Stop	Completion Date
Weekly Hours Required	Extension	Start Date
Charge Number		
Description of Work Required		
Authorized Signature (Delegation of Content Authority)		
2. Subject-Matter Expert Name		
Total Hours Required	Mail Stop	Complete Date
Weekly Hours Required	Extension	Start Date
Charge Number		
Description of Work Required		
Authorized Signature (Delegation of Content Authority)		
3. Subject-Matter Expert Name		
Total Hours Required	Mail Stop	Complete Date
Weekly Hours Required	Extension	Start Date
Charge Number		
Description of Work Required		
Authorized Signature (Delegation of Content Authority)		
<b>Prepared By</b>		

This contract ensures that experts and their managers agree on the time commitment required to complete a project.

development and creation of measurable performance changes within the organization.

Without these tools and relationships, trainers had no idea how to make the connection between courses and competencies. We created a strategy that bridged the gap between supporting the back end to creating an environment in which training achieved specific, well-defined objectives.

## **Map Work-Flow Processes**

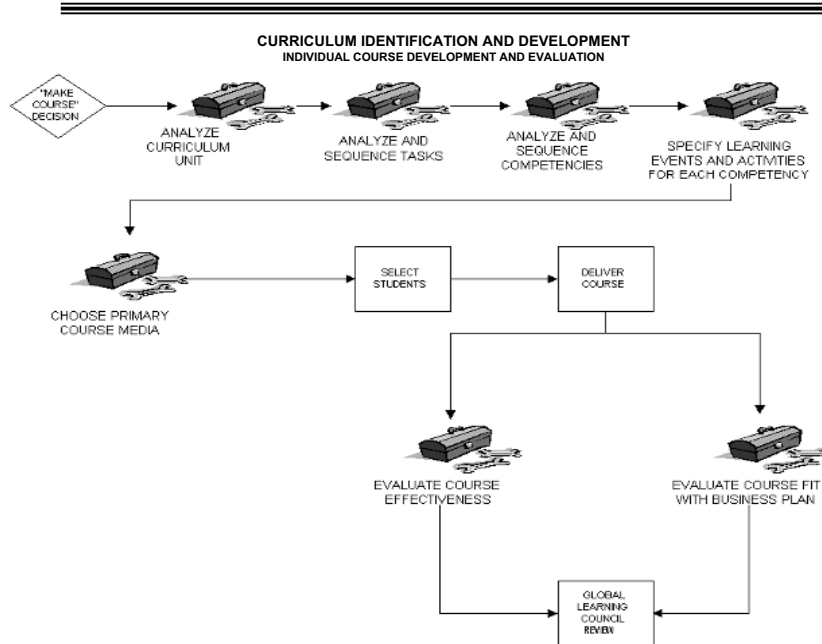
With the work processes and roles defined, we can flow the curriculum design and development value stream maps, which chart in detail the method our team will follow to create or purchase content (see Figure 4-6). The work-flow process should include roles and responsibilities, action items, time to complete each task, and metrics by which the success of each step will be measured. It is an overarching map of the entire course-development process, from the kick-off meeting to delivery of the product.

## **Focus on Manufacturing and Engineering**

We also decided at this point that while our initiative addressed the needs of the entire organization, our team had to focus particularly on providing viable courses and learning opportunities for two specific groups. Early on, the learning and development team defined success as a function of priorities. Because 80 percent of our population consisted of manufacturing and engineering, we consciously decided to direct the bulk of our efforts to these two populations. This didn't mean that the other 20 percent wouldn't get trained—they certainly did. It meant that whenever there were conflicting needs, engineering and manufacturing always received priority. All of our initial training efforts would be directed at their training needs to guarantee that the efforts our team made were tied to the most critical functions of the organization.

Figure 4-6. Curriculum identification work-flow process.

## L&D Process (Course Development and Evaluation)



Mapping the curriculum-identification process guides learning consultants through the development cycle.

## **Create Training Resource Rooms**

Even with the appropriate technology in place, there was a cultural issue that threatened to stand in the way of a successful transformation. Because of our research, we were aware of an overriding cynicism on the part of managers toward non–job-specific tasks. Managers expected employees to be working on billable projects when they were at their desks. Because for more than fifty years all training at Rockwell Collins had always been done in a classroom, any attempt to implement learning at the desktop was sure to run into this cultural barrier in a big way. Employees who were online, even if it was for training, would be thought of as slacking off. This told us that many employees would never be given the time or support to take e-learning at their desktops.

To combat this attitude, we budgeted to build nineteen training resource rooms in key Rockwell Collins locations. They would act as safe havens for employees to get training close to their work sites but far enough away from managers to be free from scrutiny.

Several training rooms already existed, but no one ever used them. They had computers but no training software, few soundcards, and no courses for employees to take. Our team would expand the technology, update the software, and add a library of off-the-shelf self-paced training courses that would be housed on the company intranet for use by employees.

## **Test Training in a Controlled Lab**

Before rolling out any hardware or software, our team tested it in a controlled testing facility. We planned to build a computer room with several computers that would act as a model for the Rockwell Collins environment. It would replicate our technology, browsers, and computer configurations so that our team could troubleshoot any course or software before end users had access to it.

We also planned to test our training in a controlled lab to verify its effectiveness, without involving the confusion of outside influences.

While it's challenging to isolate training's impact, clear, unpolluted success statistics are a powerful tool for winning the hearts and minds of leadership. We've found approaching measurement from the front end makes it possible to isolate a single successful program as an example of your overall efforts. One set of measurements can be all you need.

Early on in Butler's career, he discovered the power of a single batch of unadulterated training statistics. While developing training for the sales team at a mortgage loan company that was struggling with the efficacy of its training program, he suggested conducting a year-long comparison study. The company divided the 400 salespeople in half, making sure each group included all levels of performers. Half of the team went through the old training program and half went through Butler's new program. Then they tracked their productivity. Butler found substantial increases in the second team's performance, increases that continued over the five years the team was measured. He also found that the middle performers showed the most significant improvements after completing the training. Based on those statistics, senior management agreed to overhaul the entire training program for the company.

At most companies, the value of training has never been substantiated to this degree because measurement is approached after the fact, when outside influences make it impossible to verify training's impact. Approaching measurement in the beginning, however, makes it possible to compile the level of compelling results that Butler found at the mortgage company.

Using that model, we planned to do measurement from the front end of a single set of courses and we were able to create a scenario that directly compared the old way with the new and produced hard results.

We planned to produce a new computer-based version of a classroom course, put test groups through both formats, then test and compare each group's ability to perform the related tasks.

The question was which courses to measure. Initially it seemed prudent to measure the high-end custom courses. They require the

most investment, so they should produce the most value. However, proof that your high-end custom courses work shows only that your best stuff is valid. We measured our lowest common denominators, the courses that follow the loosest standards and take the least amount of money and time to produce. If you prove that your cheapest, least complex courses have value, it becomes reasonable to assume that every course you invest in that follows your established set of guidelines and development processes will be even more effective.

## **Reduce the Budget and Improve the Offerings**

We had seen the numbers reflecting the potential cost savings associated with e-learning versus learning in the classroom. The hard numbers were obvious. The savings on travel costs alone from satellite offices to Cedar Rapids would be significant enough to cover the cost of our initial investment in self-paced training software. Here is where you take action and begin calculating your costs from the bottom up. Applying all the research and assumptions you have made to each action, you begin to develop the overall cost of the strategy. It is helpful to have project-management skills in developing the resources, cost, time, and estimates to the plan. This could be another place where you may want to call in an outside resource.

We also knew there would be intangible cost benefits related to the improvement in performance and time to train. Saving money wasn't a primary goal of the plan, but it was a happy result.

We further added to the savings by categorically eliminating waste from the process. For example, our research showed that in the curriculum-development process, the first-time yield on courses in the beta phase was only 70 percent. Lost SMEs, incomplete content knowledge, and inefficient development procedures added lag and gaps to the development cycle, requiring developers to spend significant time on the back end updating or correcting content—adding days and dollars to the process. By implementing the SME criteria checklist and contracts along with defined processes, we would improve the first-time yield and reduce the cost and the time to market.

Another way our team saved money was by managing our custom vendors by establishing the “standards for buying training” guide. Most vendors make their money on templates—building a format for the look and feel of every page. To control costs, we limited the number of templates developers were allowed to make for each course we outsourced. For example, a vendor would be allowed to build thirty templates for the first custom course, fifteen more for the second, and fifteen more for the third. By the third course we had sixty templates to work with, and the cost goes down with each course. We estimated that the cost per hour of custom courses, using this template model, would be reduced from \$38,000 per course hour to \$23,000, which is atypical for a custom-designed e-learning course. Our ultimate goal is to get costs below \$20,000 per course hour on high-end content, and we were actually able to reduce development costs to a fraction of that for some low-end custom development. The courses, called Quick-Learns, use a truncated instructional-system-design approach and have an established process driven by predefined requirements. No course is greater than twenty minutes in length; the total time to design, develop, and deliver a module is not to exceed three weeks; and the total cost is not to exceed \$2,500 per unit.

These are just a few examples of the cost savings we were able to realize within the existing process. In any company you should be able to eliminate 30 to 40 percent of the budget without much effort.

We ultimately reduced Rockwell Collins’s training budget by 40 percent—\$23 million—while increasing the amount of training offered by 400 percent over three years. We mapped those savings through 40 separate ROI formulas, which gave us detailed hard data to support our proposals. For example: If training time utilizing CBT is 50 to 70 percent less than traditional classroom time, that metric should be factored into the overall equation related to specific conversion costs.

While we were crafting the strategic plan, we decided to include dramatic savings to ensure that the project would be an undeniable success in the eyes of executive management, but in retrospect, we would have done it differently. Corporate memory is very short. Management was thrilled to take the money back when we offered it, but

within months they forgot it was ever there. Later, when many business units were asked to cut back their budgets as the economy changed, we were on the list, even though we'd already "cut back" millions just a few short months before.

Our advice is to sell the plan for what it is: a profound change-management initiative that will cause your company to work better, faster, and smarter in a world in which knowledge is the only true commodity. But keep the savings to yourself. Redirect it into other efforts that will further benefit the company's learning priorities.

### **Pick Low-Hanging Fruit**

We wanted an instant, highly visible indicator of success right out of the gate once the project was accepted in order to prove our commitment to the initiative and our ability to achieve our goals. To do this, our team bought a library of 300 off-the-shelf training courses from Smart Force, because the company met all of our criteria for a self-paced e-learning solution provider. The courses covered primarily soft skills and IT training because that was what was available at the time in an off-the-shelf format, and the company needed that training.

We bought the entire package *before* we secured commitment for the project. The courses were loaded and ready to go on the server when we presented our business case to executive management. It was a risky step, but it had the potential for enormous reward. If the project was accepted, we had the capability to flip a switch the moment we received buy-in, and within minutes we could achieve our Year One goal of converting 30 percent of the curriculum to computer-based formats. It would be the home-run success we needed to launch the program. And it gave us two years to work on our Year Two goal of converting another 20 percent of the curriculum to computer-based formats. We knew this goal would be harder to achieve because those courses required custom content unique to Rockwell Collins and couldn't be bought off the shelf. The extra time would allow us to continue to meet established goals successfully and well ahead of schedule. We also needed the savings achieved through this simple step in order to fund our next steps.



There was a downside to this plan, however. If the project hadn't been accepted, we would have had a tough time explaining what we'd done with the annual training budget that was spent on these courses and the hardware to support them. As a team, we acknowledged the risks and value associated with the decisions and had our resumé's updated and ready in case the whole thing fell through.

### **YOU ARE READY TO MOVE ON TO STEP 5 IF YOU:**

- 1.** Have defined each element of your strategic plan. For every core objective, you must make the case for why it's important and how you intend to achieve it.
- 2.** Have written an action-item list that breaks down the details of your core objectives. Each objective requires a set of actions you intend to take in order to achieve that goal. The more detailed you can be, the more accurate your budget and timelines will be.
- 3.** Have calculated the cost and impact of the project. No matter how much anecdotal evidence you have, the strongest selling point of the strategic plan will be your numbers. Break down the time and costs associated with each element of the plan and what you expect to spend or save as a result of your changes. This data will be critical when you attempt to sell the project.

# STEP 5

## Select Your Vendors

*“The wisest mind has something yet to learn.”*

GEORGE SANTAYANA

### GOALS FOR STEP 5

1. Establish criteria.
2. Rank vendors.
3. Choose your tools.

We knew that employees throughout Rockwell Collins were frustrated by the constraints surrounding the classroom-based offerings. Not only were employees outside Cedar Rapids concerned about their limited access to training, but even those groups based in Cedar Rapids struggled to find the time and flexibility to leave their worksites to attend training courses that conflicted with their daily work schedules. Employees wanted and needed training at their worksite that was easy

to access when time became available. They also wanted a wider range of topics and learning formats—in their primary language—and they wanted the ability to take only training that was relevant. They wanted to get out of the classroom and they wanted the ability to start and stop training when doing so was most convenient for them.

Along with the need for training closer to their home offices, was employees' and managers' desire to have access to training twenty-four hours a day, seven days a week, on an as-needed basis. The learning strategy we applied was designed to meet these requirements and to meet the needs of dispersed employee populations, providing easy access to the same training as employees within the Cedar Rapids locale. The culture and structure of the company were ready to experience something new in learning.

The decision to implement technology as a tool for delivering training at this point in the process was simple and clearly the right choice. It was obvious from our data and the resulting six core objectives we defined that Rockwell Collins employees needed to get out of the classroom, so the overall solution we built was based on implementing alternative technology-based training solutions. Eighty-five percent of the training in place at Rockwell Collins today—training that resulted from our comprehensive strategic initiative—is computer based, which contributes largely to the learning and development department's ability to do so much more with less.

But, once again it is important to reiterate that the transformation to a learning organization *is not synonymous with implementing e-learning*. If your objective is to install e-learning in your organization regardless of the indicators, you will be unsuccessful. Building the correct delivery system is driven entirely from the required business objectives and supported through an accurate assessment of your culture and its perceived readiness for something new and targeted to the culture's needs. Unfortunately, we've seen dozens of companies that embarked on this mission, and all of them are wondering today why nobody uses their wonderful e-learning Web site. It's because they had the wrong objective.

This learning organization transformation process is about becom-

ing a learning organization. It's about the fundamental change that is needed when a company decides to become a learning organization. It requires a cultural transformation that gives employees the tools and empowerment to actively pursue the knowledge and skills they need to do their jobs as effectively as possible. Management makes a new contract with its employees. No longer is it the company's responsibility to "fill the empty cup" when an employee attends a learning event. It is now the employee's responsibility to do the work necessary to gain the skills and knowledge to do his or her job. At the same time, the company must make the infrastructure available to that employee so that he or she can go out and get relevant knowledge in an easy-to-access format.

As you approach this process, your objective must be centered on a goal, and a mission to improve some aspect of the business. If technology supports that mission, that's terrific, but don't put the cart before the horse.

Technology is a valuable part of the learning-organization transformation because it enables you to deliver knowledge at the speed of a changing economy. Without technology, you can't deliver training fast enough to meet the needs of the learning organization, but you must keep it in its place in the process. E-learning technology is simply a tool, a vehicle that we chose to deliver training because it was appropriate for the needs, values, and corporate structure of this company. When you approach e-learning from this vantage point, you are far more likely to create a system that will support the business and the needs of your employees.

We did not think e-learning would be a magic bullet to solve all of our training needs. We did not assume that suddenly training would be used only when it was necessary and that because it was Web based the quality would be first rate. We simply determined that, based on our research and in conjunction with our efforts to change the learning culture, e-learning would be the best, fastest, and most economical way for us to achieve our core objectives.

It is only at this point in the process that you can even consider whether e-learning is the right choice for your company based on the core objectives you built using the data that defines your training his-

tory and needs. If you understand that e-learning is a tool, not a solution, you can make it work for you. It worked for us.

While we researched the technological needs of the organization, we also built a strategy to support this implementation (see Chapter 4). These efforts are obviously concurrent, because each supports the other. Choosing and implementing technology is but one piece of your overall strategy. It's a huge process that cannot be completed successfully without a robust cultural strategy surrounding it.

If we had taken this step without dealing with all of the issues—the lack of standards and processes, the gap between training and the business-unit objectives, and the disorganized approach to learning and its general ineffectiveness—it would have resulted in an enormous waste of money and a certain failure. We would have purchased the wrong technology and delivered it to a frustrated workforce that would be no better served online than they had been in the classroom because we still would not have understood their needs. Because we knew where the gaps were and created solutions to bridge them through our workflow processes, our team would be able to make this radical transformation to e-learning smoothly and with the support of the Rockwell Collins community. Make no mistake about it: Implementing an initiative of this proportion, even with the best planning we could provide, is still extremely difficult.

Once we decided that technology would be at the core of our strategy, we turned our attention to the software and hardware we would need to select. Because every Rockwell Collins employee had access to a computer at work and 56 percent had computers and Internet access at home—information we gleaned from our organizational assessment—we knew the transformation would not be extreme. The company already had a foundation of technology to support e-learning; the learning and development department just needed to take advantage of it.

We learned at this point a valuable lesson that is pretty universal—the current technology environment will have much more capability than you and your IT department realize. Don't underestimate the flexibility of your system or the intelligence of your population.

Bringing training to the workplace through computer-based learning would allow trainees to control their use of and access to learning, twenty-four hours a day, seven days a week, regardless of their location. They would be able to take self-paced courses over the intranet, join in live courses using virtual-classroom software, and use CD-ROM-based content anywhere they had access to a computer. Technology-based solutions would allow us to deliver training to every employee without the astronomical costs associated with basing trainers and building classrooms at all of Rockwell Collins's sites.

Technology would allow us to achieve the core goal of the learning-organization process: to allow individuals to take responsibility for their development by actively pursuing learning opportunities. Rockwell Collins's leaders would do their part by supporting our initiative to provide employees with self-paced, easy-to-access content that supported their learning needs.

## **Researching Technology**

We wanted to convert Rockwell Collins's classroom-based approach to a largely technology-based model, with goals to convert 30 percent of courses to alternative forms the first year, 50 percent the second year, and 70 percent the third year. This would allow us to achieve our goal to provide 400 percent more learning with 24/7 global accessibility at 40 percent less cost to the company.

With those goals set, we explored the hardware and software required to update the existing system so that it could deliver robust technology-based training. We evaluated the existing infrastructure with the help of Steve Junion, our training-technology expert, and made a plan to update technology where gaps existed. For instance, in our research we discovered that half of the end-user computers at Rockwell Collins didn't have sound cards—not because they didn't come with sound cards but because management had them removed. They didn't want certain employee groups to have access to computer-based sound because it would be easier for them to waste time playing games—another telling element of the Rockwell Collins culture.

Along with installing sound cards in every computer, we planned to buy hundreds of headsets, complete with microphones. The employees would need the headsets if they were going to take online courses at work, and they would need the microphones if they were going to participate in any of the virtual-classroom technology that we knew we'd be acquiring.

Once we had dealt with the infrastructure, we were ready to examine the technology-based training tools available on the market. The existing learning and development staff had spent the previous months researching the latest technology trends in the training industry. So, by the time we reached this phase of the process, not only was our team educated on the vendors and tools available, but they had compiled materials about the most effective hardware and software on the market.

Using the information and knowledge they collected, we made a list of the types of tools that our team would need to deliver and maintain computer-based training, including virtual-classroom software, self-paced e-learning courses, tracking tools, learning-management software, authoring tools, and Webcasting materials.

## **Evaluating Learning Management Systems: A Three-Phase Process**

We didn't as a team just go out and watch product demos; we developed a multi-tiered, criteria-based process for reviewing and testing tools. The team did front-end needs analyses to determine the features and tasks expected from each tool. Then the team established sets of features for each type of technology by brainstorming with the training and development team, our technology expert, and representatives of the business units. No tool would be purchased without a system of qualifications. Each vendor and product would be compared with the others and against a mapped set of requirements. Everything in our vendor-selection process was criteria based.

You can't choose the right vendor or a product until you know what you need and what's important to you. Establishing criteria gives

you a quantifiable list of functions that allow you to easily rate the validity of a product's features.

### **Phase One: Set Your Criteria**

To simplify the process and ensure we made the right hardware and software choices the first time around, the team created features checklists for each tool. As the first step in the tool-selection process, team members were given a list of generic options that each tool was capable of and asked to rate them as “required,” “optional,” or “not required.” This process made it easier for team members to understand what the tools were capable of and to rank the value of each feature. It also supplied us with organized, quantifiable data.

For example, in the first phase of the needs analysis for a learning-management system, seven Rockwell Collins managers, including people from the learning and development staff and units across the company, reviewed a common set of tool characteristics and functions to define and prioritize their own business requirements. They compiled a list of 168 tool functions across nine categories, including items such as tracking computer-based training, multimedia station set-up, HTML report generation, and cost tracking.

### **Phase Two: Prioritize**

We asked our team to evaluate the tool functions and prioritize the overall categories according to importance. For the learning-management system, the categories were rated in the following order:

1. Employee access, which includes functions such as online evaluation, password change, and supervisor access
2. Self-paced instruction, including electronic-signature capabilities, CBT scheduling, and time tracking
3. Reporting capabilities, including attendance history, report generation, and reporting of quality certification
4. Library and materials management, including material-ordering options, waiting list, and check-out features



5. Skills and performance management, including certification options, gap analysis, and individual development plans
6. Equipment, including inventory management
7. Classroom-instruction tools, including walk-up attendance options
8. Facilities, including classrooms and computer-room management
9. Miscellaneous, including event notification and certificate generation

This process was critical because our intention was not to choose the tool that offered the most features but to determine which tool could deliver the functionality that was important to us for the best price.

Most companies don't use half of the features they pay for in these tools. We had no intention of paying for things the company didn't need. Extra features just make a complicated tool even more difficult to use. Our goal was to build a simple, cost-effective system that served our needs without a lot of extras.

### **Phase Three: Rank Your Vendors**

Using the information we'd obtained, we sent an initial checklist to five vendors with the 168 tool functions asking them to indicate whether they offered these features now or planned to offer them in the near future. Each answer received a numeric rating, which allowed us to rank the top five vendors based on the percentage of our required tool functions they offered. Only those who offered the feature at that time received a positive rating.

Our team found that the top two vendors offered 90 percent or more of the features on our list, but they were also the most expensive; the lowest-ranking vendor offered only 33 percent of the features but was the most affordable.

This simple front-end evaluation process made it possible for us

to zero in on the vendors who were most likely to deliver what the company needed within our budget, and we did it in a relatively short amount of time. Without this ranking, we would have approached every vendor on equal ground. We would have wasted valuable time reviewing products that wouldn't meet our needs or that fell outside of our budget constraints, or, worse, we might have bought one of them without being aware of its shortcomings.

## Comparing Products

Once we established what the vendors could provide, our team was able to further narrow the search through criteria comparisons. We did side-by-side comparisons of products to see which ones offered the most valuable features. For example, our criteria for virtual-classroom software included forty-three features, such as raising of hands, Yes/No responses, step out and return options, instructor and student “do not disturb” buttons, text chat, and whiteboard.

We used these criteria to create requests for proposals from virtual-conference software vendors, then rated the products in side-by-side comparisons. When one product's capabilities outweighed the other's, that product received a point. When both products could do the task equally well, they received an “equal” rating. The product with the most points won that round.

Figure 5-1 shows a segment of the criteria sheet comparing LearnLinc and Centra virtual-classroom software features. Along with end-user features shown in the figure, the criteria covered issues such as architecture, bandwidth, support offerings, licensing, and standards compliance. When all forty-six categories were totaled, Centra was favored twenty-three to three. The rest of the categories were rated “equal.”

Using a point system takes the emotion out of the process of choosing a vendor. It allows us to quickly research and organize the top products in the market so we know what we want and who can give it to us. By creating criteria for every piece of technology, our team was able to narrow the field and communicate to vendors exactly

*(Text continues on p. 129)*

**Figure 5-1. Virtual classroom comparison chart.**

	LearnLinc 3.0	Centra 99	Lotus	Favors LearnLinc	Favors Centra	Favors Lotus	Equal
<b>Raising of Hands</b>	Hands can be sorted by the order in which they were raised, according to feedback response, and alphabetically.	Hands are sorted automatically in the order in which they are raised.	Don't know.				1
<b>Yes/No Responses</b>	A Yes or No response can be given by participants.	A Yes or No response can be given by participants.	Did not see a Yes or No except through Q&A.	1	1		
<b>Step Out and Return</b>	No	Students can step out and return at their leisure.	Did not see this functionality.		1		
<b>Instructor: Do Not Disturb</b>	Instructor can privately control content, open and use applications without affecting the students.	Instructor can privately control content only when the session has not yet been started.		1			
<b>Students: Do Not Disturb</b>	Students can modify content without being controlled by the floor holder (at instructor's discretion).	Students can modify content when given the floor by the instructor.					1
<b>Course Content Freedom</b>	Class can be set to allow students to individually control their own content, to look at something, while the instructor (current floor holder) can automatically resynchronize the class with next action.	Students have the ability to view all content prior to beginning a session and the instructor (current floor holder) can automatically resynchronize the class with the next action.					1
<b>Feedback</b>	Feedback is customizable. A response meter shows the results. Standard options include: pace of class, yes/no, true/false, agreement, ABCD, and assignment completion.	Feedback is fully customizable in the form of "on-the-fly" evaluations.					1
<b>Text Chat</b>	Public and private chat.	Public and private chat.					1
<b>Whiteboard</b>	Ability to print, save, and retrieve image, can import bitmaps, and can paste screen captures on the fly. Each image is an object allowing the class to move, reorder, change, delete, and add to whiteboard without starting over. Each breakout room can have its own whiteboard.	Fully functional whiteboard abilities, including within individual break-out rooms.					1
<b>Check Participant Progress</b>	Glimpse allows the leader to capture the participant's screen to check progress. Once in breakout rooms, the leader can visit each room to check on participants' progress.	<i>I believe (but not quite sure) that you can capture a participant's screen. Need to check on this...</i> However, once in breakout rooms, the leader can visit each room to check on the participants' progress.					1
<b>Web Browsing Feature</b>	Full browser functionality, allows individuals and the group to go forward and back, save sites to Favorites and search the Web spontaneously.	Full browser functionality, allows individuals and the group to go forward and back, save sites to Favorites and search the Web.					1
<b>Application Sharing</b>	Ability to share 16 and 32 bit applications. Can access mainframe applications and share them as well. Instructor can have students view the application without ability to modify it, share the application with ability to modify it upon being given the floor, and share the student's local applications with the class. Relies on loose integration with Microsoft NetMeeting for application sharing. Not scalable past 10 users due to peer-to-peer architecture.	Ability to share 16 and 32 bit applications. Can access mainframe applications and share them as well. Instructor can have students view the application without ability to modify it, share the application with ability to modify it upon being given the floor, and share the student's local applications (via remote hosting) with the class. Fully integrated client/server application sharing scalable to 250 users. Supports 16 and 32 bit app sharing. Supports sharing apps running on remote PCs.			1		
<b>Multiple Application</b>	Content area can be split to allow students to watch the instructor as they teach a software skill while also having a local version of the application open beside it to practice individually as they learn. Instructor can have multimedia content, browser (Powerpoint), whiteboard, and one or more applications open simultaneously in whatever combination necessary.	Centra has the ability to open multiple applications, but share one at a time.					1
<b>Breakout Rooms</b>	When server is installed, separate sessions are created as designated breakout rooms. Instructor can visit each room at any time.	Breakout rooms can be created within a session and the instructor can visit each room at any time.					1
<b>Presentation Feature</b>	ILINC's "Powerpoint to Toolbook Converter" and Net-Scene's PointPlus provide two ways of presenting PowerPoint slides. LearnLinc allows spontaneous Web searching with full browser support, without requiring advanced preparation.	Centra uses "Agenda Builder" to port Powerpoint slides DIRECTLY into a subject content for a virtual classroom presentation, without having to use a secondary authoring tool (Toolbook).			1		

<b>Record and Playback</b>	No	Centra 99 has the ability to record a session and can be played back in its entirety. Symposium events can be recorded and played back in full fidelity, including all audio, app sharing, Web surfing, etc.			1	
<b>Quiz Reporting Feature</b>	Assessment (quizzes) can be developed in Authorware, Toolbook, or HTML and results can easily be captured, recorded, and reported on. Not built into the database itself.	Assessment (quizzes) can be developed within the Agenda Builder.			1	
<b>Multimedia Support</b>	Synchronizes Authorware CBT with imbedded Director files, Toolbook CBT, PowerPoint, HTML, audio, and streaming video.	Supports Powerpoint, HTML, audio, and streaming video.				1
<b>Audio Support</b>	Supports Full and Half-Duplex audio.	Compatible with all the latest streaming video and audio technologies, including G2 from Real Networks and NetShow from Microsoft. Additionally, it offers fully integrated, multi-way audio conferencing accessible to all users on a LAN, Internet/Intranet, or low bandwidth dial-up connection.				1
<b>Streaming Video Support</b>	LearnLinc streams video from a live instructor or captured video from a server in unicast or multicast environments. Instructor can automatically turn on and off streaming video and automatically return to audio and video conferencing communication.	Compatible with all the latest streaming video and audio technologies, including G2 from Real Networks and NetShow from Microsoft.				1
<b>Conferencing Feature</b>	The number of concurrent participants is dependent upon the bandwidth of the audio server in a unicast network. Users can range from 1-150 per class. Multiple sessions can run on a server at the same time.	See Conference Web feature below				1
<b>Live, Structured Sessions</b>	Can conduct live, structured sessions.	Can conduct live, structured sessions.				1
<b>Unstructured Sessions</b>	Sessions can be created as team meetings without the use of a leader or facilitator. Hand raising is not used and participants can obtain the floor without a request.	Sessions can be created as team meetings without the use of a leader or facilitator. Hand raising can still be used and participants can obtain the floor without a request.				1
<b>Multicast Support</b>	LearnLinc Supports multicasting protocol on a corporate network to limit the bandwidth necessary to conduct a class. All high bandwidth functions including Audio, Application Viewing, Streaming Video, and Video Conferencing can be in a single multicasted stream; the bandwidth is not affected by the class size. For class sizes over 8, multicasting is more effective than the unicast product.	Unicast and Multicast protocols are available.				1
<b>Licensing Model</b>	Concurrent User Server Model: The server supports a certain number of simultaneous or concurrent users in a single or multiple sessions.	Concurrent User Server Model: The server supports a certain number of simultaneous or concurrent users in a single or multiple sessions.		1		
<b>ODBC Compliant</b>	LearnLinc server supports ODBC so it can be managed by any ODBC data base software such as MS Access and can easily exchange data and be integrated with other ODBC standards compliant systems.	Centra 99 is ODBC compliant.				1
<b>Software Development Kit</b>	Under development and available under Alpha/Beta program. The first products being integrated with the LearnLinc Development Kit are Macromedia Attain (Pathware) and Asymetrix Librarian.	Seamless intergration of third-party knowledge management systems, including CBT systems.			1	
<b>Firewall Friendly/Ports Required</b>	Not currently firewall friendly	Firewall friendly, supports proprietary port 1709, or port 80.			1	
<b>LDAP Compatible</b>	Not currently LDAP compatible.	LDAP compatible.			1	1
<b>Integration of Tools</b>	Seemed to be "loosely" connected. Tools seemed to "hang off" of the core app.	Tightly integrated amongst the different tools.			1	
<b>Conference Web (capability to do large number of people w/out audio)</b>		Live applications viewing, streaming slide presentations, real-time polling, interactive body language capabilities test chat, Web surfing, tracking functions.			1	

(continues)

	LearnLinc 3.0	Centra 99	Lotus	Favors LearnLinc	Favors Centra	Favors Lotus	Equal
<b>Uses Own Product—Customer Training</b>	Not yet.	Yes, via the Internet. Fifteen different online courses.			1		
<b>Number of Corporate Customers</b>	Less than 50	Over 150			1		
<b>Client Size</b>	20MB (somewhat difficult to install)	Approximately 9MB			1		
<b>Bandwidth</b>	LearnLinc's audio code is 7.9 kbps vs. Symposium's 2.9 kbps. In addition, LL's full-Duplex audio uses twice the bandwidth as Symposium's half-duplex. NetMeeting, which LL relies on for app sharing, was not designed for network efficiency. LL's IP multicasting solution ONLY multicasts audio, not data such as app sharing, which is the most network intensive feature.	Users can speak and share applications at the same time over a 28.8 dialup connection. Symposium's IP multicast solution multicasts audio AND data, requiring significantly less bandwidth than other solutions. Low bandwidth requirements allows mobile sales forces to participate in online events. Content can be easily pre-downloaded on participants' desktops and run local to each user rather than across the network.			1		
<b>Tracking and Reporting</b>	No way to know who or how many users are enrolled in a particular class—this makes server load and event planning difficult. Quiz results are not stored in the database—no way to know how well users are comprehending the material and no way to get course evaluations.	From any Web browser, event managers can view the enrollment status of any class, in addition to who attended and who was absent. All quiz and evaluation results are stored in Centra's ODBC database and can be viewed in a summary format from any Web browser.			1		
<b>Architecture</b>	Although multiple servers can be connected together, they do not share a common database or log-in. Each server's database is independent from the others, and requires manual replication of database onto each server. Client-server communication occurs over a range of thirty non-registered network ports.	Multiple servers can be managed by a single, common server, sharing a common database and user log-in. Client-server communication occurs over a single registered network port (1709 or 80).			1		
<b>Breakout Groups</b>	Not available.	Leaders can dynamically place participants into breakout groups within the same session, visit and work with each group, and speak to all the groups at the same time.					???
<b>Quizzing and Evaluations</b>	Multiple choice only. Results not stored in database.	Supports multiple choice, fill-in-the-blanks, and essay-type questions. Results stored in database with "canned" summary report.			1		
<b>Meetings</b>	Users must download, install, and learn how to use a "course" creation and scheduling tool before they can create their own meetings.	If given permission, users can quickly and easily schedule their own meeting from any Web browser without installing any additional tools.			1		
<b>Just-in-Time Content</b>	Presenters or subject-matter experts send their presentations to the event manager before the event, who then converts them and puts them on the server.	Presenters or subject-matter experts can add their own PowerPoint slides at any time during the live event with two mouse clicks.			1		
<b>E-Mail Notification</b>	N/A	Can be easily configured to automatically send e-mail notifications to users.			1		
<b>Offline Course Building</b>	Must be connected to the server when building courses.	Course building can be done entirely offline, reducing the overall load on the server.			1		
<b>Floor Control</b>	Only one participant can have the "floor" at any given time.	Leader can give the "floor" to an unlimited number of participants for roll playing or other types of interactivity.			1		
<b>Security</b>	Any user can view full user directory, can enroll in any course. AppShare is not secure as any generic NetMeeting user can attach to a live LearnLinc session to view content. This person is not visible to ILINC users.	User directory only available to privileged users. Events can be optionally password protected.			1		
			<b>TOTALS</b>	<b>3</b>	<b>24</b>	<b>1</b>	

The criterion-based selection process judges similar products in side-by-side comparisons.

what we wanted and how we expected it to be delivered, which vastly reduced our chance of failure.

Before our team made any decisions about purchasing tools, we wanted outside opinions of the products being considered. It's our experience that vendors vastly oversell their products, which is why this phase of the review process is important. You cannot just assume that what the vendor says is accurate. You need proof.

We contacted customers of the tool vendors to ask how satisfied they were with the tool, the service, and the support. In some cases, vendors could not provide us with any satisfied customers to contact, which of course made us extremely skeptical. If your vendor doesn't have a success story to share, assume that yours won't be the first. And even among those who did provide contacts, we were still somewhat suspicious. Vendors frequently offer deals to customers in exchange for their willingness to gush about a product's capabilities, so any offered contacts were met with hesitation.

To build more honesty and integrity into this review process, we turned to our own business networks to find peers using these tools who had not been recommended by the vendors. With this back-door approach, we found as many dissatisfied customers as satisfied ones, although admittedly not every product failure was the fault of the vendor. Many users had no business rationale, beyond a desire to do e-learning, for purchasing the tools they were using.

To weed out those without a relevant business case for the purchase, we asked one simple question: "What strategic business goal lay behind your choosing this technology?" If they couldn't answer the question, then it was likely they had no idea what they were doing and any tool failure was undoubtedly the result of their own inefficient processes.

## **Vendor Teams: A Radical Approach**

In most cases, our team narrowed the field of potential products to two or three candidates, but there was still much to be done before a decision could be made. We were not just interested in the technol-

ogy; our group had specific criteria for the people and the corporate culture that supported the products we purchased.

In the past we had felt the burden of having to manage multiple vendors, each of whom was vying for a larger piece of the business and few of whom would work together as a team. We knew about the endless flow of problems that would inevitably arise from working with competing vendors, all of whom had “proprietary” products that were incompatible with other solutions. We knew that a single vendor could not provide us with a complete technology-based training solution—despite what they swore their products could do—and we were unwilling to deal with the petty bickering and constant micromanagement that came with overseeing a lot of competing vendors. We had neither the time nor the patience to deal with that level of chaos.

So we put another plan into motion. We decided to build a team of vendors who would work together toward a common goal of solving our learning needs as efficiently and effectively as possible. This was a radical concept for many vendors in the training industry, and it continues to be one, but it had a profound impact on our ability to provide a cost-effective, successful solution at Rockwell Collins.

Rather than interview dozens of companies individually, listen to fifty proposals, then hand down our decisions, we held one big meeting. Our team determined which fifty vendors were most likely to meet our needs based on our criteria-ranking process, and we invited them to a roundtable session. The vendors invited covered the spectrum of tools and services that we needed to implement our system. There were providers of virtual-conference software, self-paced off-the-shelf training for hard and soft skills, Webcasting, learning-management systems, custom course developers, hardware providers, and specialized learning consultants.

At the meeting we told them we weren’t interested in hearing their sales pitches. We brought them together to tell them what we expected from our vendors and products. We outlined our plan in detail to the group, and then we told them that if they were going to get our business they had to be prepared to work together with one another as a team. That meant they would have to share proprietary information if

the project required it. We also expected them to team up on course development that we considered too big for any individual vendor, and we insisted that everything they provided to us be compatible with everything else.

It was an uncommon approach because, in this model, there would not be one primary contractor and a lot of subcontractors. There would be no leader, except for Rockwell Collins's learning and development team. They would have to work together, to share information, to break down the walls of communication among competitors.

Many of the vendors balked at the idea. Several walked out, and after the initial meeting, a few told us that it wouldn't work. But it did.

This natural selection process helped us to further narrow our search for the ideal vendors. In many cases, the competition eliminated itself because vendors were unwilling to participate in our project structure. Among those tool categories for which more than one vendor was in the running, we brought the products in for test runs and ultimately made a choice based on which company could offer us the best deal.

Based on that meeting and the following negotiations, our team chose fifteen vendors who agreed to share secrets and modify their products to work with their competitors'. Among the vendors selected were Allen Communications and Strategic Interactive to customize specialty courses such as training on the damaging effect of static electricity. Pinnacle Multimedia was selected to provide the learning-management system that would manage all of our training online. Smart Force, NETg, and The Belgard Group would supply off-the-shelf IT and soft-skills courses. Centra provided the virtual-classroom software, and several others provided hardware and software. The Performance Engineering Group continued to be our sounding board and headed up organizational-development issues involved with our transformation, including change-management initiatives and staff development.

After their initial hesitation, the vendors we chose immediately began developing the required working relationships and forged ahead. There was some infighting and a few vendors were dismissed



early on for refusing to share necessary information, but the rest overwhelmingly endorsed the team format.

“I like this approach because the vendor company has the knowledge and can judge the ability of the people helping them,” says Steve Allen, technology chair at Allen Communication in Salt Lake City, Utah.

“It’s the most innovative approach we’ve seen,” says Bill Belgard of The Belgard Group, a leadership-training consultant based in Portland, Oregon. “All of the vendors are working together like a symphony instead of a bunch of solo acts.”

Still, putting a group of vendors in a room and telling them to work together isn’t enough to make it happen. It worked for us because we had a detailed plan that mapped out exactly what was expected from whom. “The strategic plan is key to the process,” says Jim Kosse, regional account manager for Smart Force. “We can see where we fill a role.” For example, the plan lays out the criteria and contributions required to meet its return-on-investment goals for the Web-based training rollout in the first year. “It gives us a target,” he says.

“Without the plan it would be chaos,” added Allen. “A comprehensive strategic plan helps vendors to be less competitive because they see their place in the overall strategy and how they will profit from it. This is what’s missing from most organizations.”

Even now, three years later, the vendors our team selected are integral members of our team and continue to provide us with outstanding courses and systems.

The vendors you choose will determine the ease and success of your e-learning implementation, so don’t sell this phase short. Do your required work and invest the time to educate yourself on the tools available and to evaluate the background and reliability of the companies you are considering. When you launch with these tools, they have to be easy to use, have reliable customer support offerings, and appeal to the needs of end users. Making the wrong decision at this point will set your project back not only financially and timewise, but it will also damage your credibility in the eyes of the organization and will give ammunition to those who will push back most strongly against your change initiative.

**YOU ARE READY TO MOVE ON TO STEP 6 IF YOU:**

- 1.** Have researched the learning technology available and determined what tools you need to implement your strategic plan. While this is not an e-learning plan, technology will almost surely play a major role in your transition process. Don't skimp on your research efforts in this area.
- 2.** Have established criteria for choosing tools and ranking vendors. Don't make choices based on demos or recommendations alone. Figure out what exactly you need each tool to do, what you can afford, and who will offer you the most service and support for your dollars.
- 3.** Have chosen your tools. Even if you don't have the budget in place, figure out what you want and let the vendors know of your intentions to purchase the technology based on your timeframe.

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## STEP 6

# Build the Business Case

*“Aim for success, not perfection. Never give up your right to be wrong, because then you will lose the ability to learn new things and move forward with your life.”*

DR. DAVID M. BURNS

### GOALS FOR STEP 6:

1. Build a work-breakdown structure of tasks and timelines.
2. Create the cost-savings formulas and required budget.
3. Name the initiative and develop a marketing plan.
4. Build a tailorable business case.

The strategic plan is a detailed document that defines your research, goals, and the execution plans necessary to transform your company into a learning organization. It's likely to be hundreds of pages long

and filled with difficult-to-follow training jargon, statistics, and budgetary formulas. It's an invaluable record of your efforts and intentions, but it's not the document that will win the understanding and support of your executive team.

The business case, on the other hand, is the tactical sales presentation that you build around your strategic plan. It is a living, breathing showcase of your goals, and it determines whether you get the go-ahead for your initiative. It's the strategic plan reinvented as an appealing, easy-to-digest presentation focusing on the "what's in it for me" factor for any audience.

Taking what you know and what you've recorded in your strategic plan, you will create a business-case document that provides an overview of what your initiative will do for the company if management supports it. At its foundation is an overview of your written strategy revamped to highlight key points that will be appealing to specific groups and will demonstrate the value of your project. Blended within your goals is the story of the transformation process that must occur if you are to revolutionize your corporate culture and transform the company into a learning organization.

All of your research and hard work will have been a waste of time if you ignore this step or approach it with minimal effort, because your success hinges on your ability to sell the project to a broad variety of vested interests within your organization.

## **Before You Build: Define Tasks, Actions, and Budgets**

Before you write the final business case, define the tasks required to implement each element of your strategy and then break each one down into minute detail. For each action item, record what it will take to achieve that action, including time, materials, training, roles, and any cultural issues that will affect your ability to complete the task.

Cultural issues can be a significant impediment to the successful completion of a task, so look closely at the potential obstacles that lie in your way. Even if you have the necessary budget, time, and resources, an unidentified cultural problem can plague even the most well-put-

together training plan. For example, through our cultural assessment at Rockwell Collins we discovered that most managers believed that employees at their desks should be working—not training. This was a major cultural roadblock founded in a history of working with military contracts that required workers to account for their hours. Because we identified this issue early on, we had a plan to work around it by building training resource rooms where employees could get self-paced e-learning outside the office. We circumvented a potential cultural impediment that could have dealt us a major blow even though all of the other elements of our plan were top notch.

Within your task definitions, include a separate budget for each element of the plan. If you are doing e-learning, include vendors, software and hardware costs, licenses, and infrastructure. Set roles and responsibilities for your team, adding a budget for new members if necessary. Include time and costs for maintaining the legacy system while you implement the new system. In our industry we are required to keep training records for all employees until five years after they leave, so we factored record keeping in. Marketing is also a relevant budgetary factor. It won't be enough just to launch your project; you need to sell it throughout the company with giveaways, posters, mailings, and events. Make sure you have the people and dollars set aside to support that need.

Using this information, build an overarching work-breakdown structure—a comprehensive list of the tasks you need to complete in order to achieve *each* goal, and how those tasks will affect the others, moving from today to your vision of the future state of training. Using a project-management software program, such as Microsoft Project, you can flow these activities into a map that clearly shows which tasks will be performed when and by whom, the scope of the tasks, projected time and resources required, and how the tasks will impact each other. The more detail you can provide, the more accurate your work-breakdown structure will be, which will give your final budget request legitimacy.

The work-breakdown structure will give you a road map that delineates how and when you can achieve each goal. You'll refer to it endlessly

throughout the life cycle of your project, to verify that you are on track or to rethink your original plan. But remember that committing something to paper doesn't mean it can't be changed. As you craft this document, realize that as technology and the industry advance, your goals and tasks will be affected. This is the rough draft, but you need it to be defined if you are going to improve on it.

At Rockwell Collins, we created several individual work-breakdown structures, mapping the tasks required for each phase of the project, including choosing vendors for each of our tools, charting our work processes, building learning labs, and launching the learning councils. Because we had researched the industry while we were investigating our cultural issues, we had already compiled lists of the tools, vendors, and infrastructure we intended to purchase, so it was easy to break those details down into budgets, times, and schedules. We then combined all the documents into a consolidated eighty-seven-page work-breakdown structure outlining more than 750 tasks and timelines covering thirty-six months.

## Calculate ROI

Too often we've seen training professionals drone on about competency models and instructional-design theories while boring their nontraining audiences to death. Keep the focus of your content on business terms—not training jargon—and you'll hit a home run.

Much of our business case was dedicated to financials. Financials are a critical component of this step. The financial business case is the most important part of your sales pitch. It's the easiest part of the process to understand and the most attractive selling feature for executives. In our business-case document we included details about the necessary up-front investments, long-range expectations, savings to be realized, and comparisons with present costs. For example, in our "As Is versus Project Oasis" chart, we compared the costs of conducting business as usual for four more years—roughly \$73,000,000—with the cost of supporting our initiative—roughly \$41,000,000. These figures captured management's attention in a way that an explanation of instructional-design theory never could.

To craft your own budget comparison, begin with your assumptions about the state of learning and your strategy. Assumptions come from industry trends, benchmark studies, and observations of the current environment. They are at the base of your objectives and are your starting point for proving savings. For example, based on what you've read about the cost savings associated with e-learning, you may *assume* that if you replace classroom training with Web-based training your cost of delivery will drop by 50 percent. That assumption of savings is where you begin to build your ROI projections.

Be sure that your assumptions are useful, enticing, and provable.

If your assumptions are wrong, if your audience disagrees with them, or if your assumptions hold no appeal, you won't be able to sell your plan. For example, if you build your strategy around the idea that Web-based training can reduce the time to train by 50 percent but executives don't care how long employees spend in training, the proposal will be of little interest to them. Most important is that the strategies you choose have already been validated by the assessment and identification of the required learning objectives. If you make that connection, it's hard to go wrong.

Before you delve too deeply into the building of your financial presentation, get an outsider's opinion of your assumptions. This is a critical point in the transformation process where the expertise of an outside consultant is necessary. A financial specialist without ties to the company can give you a fresh perspective on your numbers, evaluating whether they are legitimate, provably valid, and tied to the needs of the organization. This person can also tell you if you have overlooked anything and affirm whether or not your project is on track.

If you are accurate, use your assumptions to create verifiable ROI formulas. For example, at Rockwell Collins our research of the training industry suggested that e-learning takes 20 to 80 percent less time than classroom courses. Taking a conservative approach, we estimated that the learning and development department would save 50 percent of classroom time, which translates to a reduction in hours of lost productivity. Based on that assumption, we built a simple ROI formula that showed what 50 percent less time spent learning was worth



to the organization. For example: If an employee had to learn project-management skills, our classroom version took twenty-four hours of work time to complete. That meant the online custom course would take twelve hours and would also contain more content and skill building through simulation. To demonstrate the ROI, we used the average number of students who completed the instructor-led course in the benchmarked year.

This is another reason to gather accurate and complete baseline data. We realized that there would be more completions with the online course than with the instructor-led course, but we chose these comparisons to eliminate controversy over numbers and savings. That twelve hours of time savings is worth a fixed burdened rate multiplied by the baseline average classroom population minus the cost of development and continuous updating. Notice that we took credit only for the hours saved.

After calculating the saved hours, we factored in the elimination of travel time, which in this case was one hour per day times three days, again applying the burdened cost. The burdened cost is a figure you can get from your finance group. Burdened cost is an employee's salary plus benefits, vacation, facilities (brick and mortar), and a hodgepodge of other fixed business expenses. We had identified a number of high-cost core competency courses our team was going to convert to CBT. We used this same calculation for each one over the length of the three-year program. There were more than a hundred of them. For example, our first year the learning and development team converted more than fifty classroom courses to alternative delivery, and each one was factored into the plan. An important point to mention is that after calculating the budget required to accomplish this project, we gave 40 percent back to the organization up front, which meant the only money available for funding the initiative was contained in the execution. Simply put, if our team didn't execute the plan, we would not have the needed savings to funnel back into the project and would come to a grinding halt. Based on that proposition, the learning and development team began the first year of the project

with a 40 percent smaller budget, so we never had the money to make mistakes. We promised to deliver significantly more with significantly less, and management took us up on the offer. It was a risky proposition and may not be a strategy you want to use; however, it did motivate us to execute the plan.

## Set Yearly Goals

When you have your budget broken down into details and your savings calculated, you can set overall and yearly goals for your project, including what you intend to do and what impact your efforts will have on the company. These are the high-level details you will share with executives when you present your business case. Stick to big-picture numbers to give them a sense of the vast impact your project will have on the company. For example, at Rockwell Collins our overall goal was to provide 400 percent more learning with 24/7 global accessibility for 40 percent less cost to the company within three years. Then we broke that down into yearly goals.

Our goals for Year One were to:

- Establish an online learning infrastructure
- Establish the learning and development technology center
- Deliver 30 percent of the curriculum using alternative methods
- Establish curriculum-authoring tools and development stations
- Establish learning councils
- Establish resource rooms
- Implement virtual classrooms
- Standardize curriculum design
- Establish internal learning and development processes
- Implement the learning-consultant concept

Our goals for Years Two and Three were to:

- Deliver 50 percent of curriculum using alternative methods by end of Year Two and 70 percent by the end of Year Three
- Offer 24/7 global accessibility to training opportunities
- Meet learning-environment cost, quality, and schedule goals
- Increase curriculum opportunities by 400 percent as compared with the previous year's training opportunities

## **Implement Marketing and Communication**

The last step before you build the business-case document is to create a catchy or sexy name for your project. Naming your project is critical. A name gives it life and creates a picture in the minds of end users about what it is and what you are trying to do with it. The name should represent the transformation you are trying to effect at your company. Once your project is named, you can build images and campaigns around that theme. Create a marketing and communication plan outlining how you intend to promote the new system, involve learners, and keep the company abreast of the changes and impact your efforts have had at the company.

Our team named our initiative Project Oasis, because it would give employees “relief from the routine . . . an oasis of learning.” We crafted an island logo with palm trees against a blue ocean. Because Rockwell Collins is in the midwest and thus landlocked, we thought that theme was different enough to catch the eye of employees. That became the theme for our project, and we used the imagery liberally throughout the strategic plan and business case. That island would come to represent the changing face of learning at Rockwell Collins.

Using Microsoft Project, we built a marketing plan that laid out every step our team would take to promote Project Oasis. It began with defining the look and included campaigns targeted at business leaders to buy their support, introduction programs, feedback collection, CBT

launch parties, virtual-classroom introductions, global awareness programs, and ongoing learning fairs. The marketing plan, which would be included in the business case, showed our audience not only that we had defined Project Oasis but that we knew how to implement it with excitement and fanfare to maximize its acceptance and ultimately its results.

## HOW TO BUILD A BUSINESS CASE

1. Define the current state of training.
2. Define the future state of training: your strategic plan at a high level.
3. Make the connection between training and business success.
4. Close the deal: Define your decision and support requirements.

With the details of the strategy thus broken down, you have all the information you need to create a dynamic, sellable business case that will amaze and impress your executives.

Using your strategic plan, budget, and work-breakdown structures, create a document that walks executives through your process, assumptions, and results. This document will be the structure from which you will build your presentation. It should highlight themes and issues from the strategic plan that you want to have jump out at your listeners, such as projected savings, effect on the business, and cultural-change issues that need to be addressed.

Your audience won't read a lengthy written document on the reasons why training is valid. They want to skim a presentation that instantly offers exciting sound bites of information. Avoid using excessive training terms and educational theory. Focus on the business and the language of the company. Put everything in a context they will understand. The most important thing you can do is appeal to your audience. As in an engaging training seminar, you want to capture the audience members' interest as quickly as possible by showing them the personal value of what you offer and how you intend to accomplish it.

## Define the Current State of Training

Begin your business-case document by defining the current state of training. Start with your research. What did you learn about the needs of the business units through your interviews, retrieval of historical data, and use of surveys and focus groups? The themes that drew you to your objectives are repurposed in your business case. They are the salient points that will capture the attention of your audience. Paint a picture of where you are today and where you need to be.

At a high level, share your research findings, highlighting facts that underscore the waste or failure of the present situation. Talk about the money being spent on training now and the performance results, if any, received for those dollars. Dissect the budget—show your audience where the money goes, focusing on the limited or lost return on the investment.

Set the baseline. A baseline is how much money the company is spending now and what they are getting for it. The cost of lost productivity resulting from time spent in training is a metric that typically isn't shown to executives, and it should be identified as the primary cost of training.

The presentation should stick to enterprise-level data, but it's important that you provide budget details somewhere in the document and that you be able to discuss them easily if your audience asks for specifics. All of your budget formulas should be included at the end of the document for the audience's optional perusal. Also remember to have all your figures validated by your finance department before you present to executive management. This provides additional credibility to your plan.

In the front of the business case we crafted for Project Oasis, we included several pages of images highlighting the statistics we had uncovered in our research of the learning culture at Rockwell Collins. Our section on the current learning environment included, for example:

- Graphics showing that only 40 percent of the population was located in Cedar Rapids while 100 percent of the training occurred there

- Vital focus-group findings, such as that 65 percent of the cost of training is employees' time; that on average, 28 percent of registered trainees are no-shows; and that Rockwell Collins's training department has no common design standards
- Bar graphs showing the number of hours of training that various employee groups received per year, comparing job types, locations, and years of employment
- Pie graphs showing employees' readiness (gleaned from our surveys) for alternative learning
- Training expenditures for the previous two years broken down into labor and material costs
- Pie graphs showing existing computer accessibility for employees
- Graphs showing the environmental factors influencing learning, including 38 percent cancellation rates and the fact that 92 percent of employees were unable to attend scheduled training three times because of work demands
- The five reasons why we expect Rockwell Collins's employees to embrace and use e-learning: availability, convenience, flexibility, diversity, and demand

These graphics gave our audience a quick, high-level view of what was wrong with the existing environment and what changes the employees were ready and willing to make in order to improve those conditions. It didn't delve into minute detail, but it gave executives the information they needed to understand the problems they were facing.

Remember to talk in the business language of the executive or audience to which you are pitching. Recall your interviews with these executives and tie their needs into your delivery. Show them how your plan will meet their specific needs as well as the enterprise needs.

We ended this section with a spreadsheet outlining the baseline costs associated with training projected out four years. We compared

those costs to the costs associated with our proposed change and included the total savings expected post-implementation. It was the grand finale of graphics, delivering the dollar value payoff to the company if management supported our plan. This baseline chart was easy to understand and showed, in just enough detail, how our team could save the company more than \$20 million over four years. If we were challenged to prove our \$20 million figure—and we were, several times—we had the details to back up our claim.

## **Define the Future State of Training**

With the present state defined, tell management how you are going to change it. Share your vision, the model of your plan at a high level, so they can visualize what you plan to do. Make the connection between your strategic plan and the corporate vision early on and with emphasis. This connection is the foundation of a successful plan.

This portion of your business case needs to be more than a pitch for a new budget or an e-learning investment. Sell your audience on the transformation that is, in reality, the basis for your initiative. You are offering executives an opportunity to become a learning organization that will make their people smarter, more efficient, and more aggressive pursuers of skills and knowledge and thus ultimately make the company more profitable. You are giving them the chance to become what is the single most important determinant of success in today's workplace—a company whose knowledge and skills improve fast enough to keep up with a rapidly evolving economy. In exchange, you are asking them to support a vast cultural-change initiative that will pull people out of their comfort zones and require them to take on greater responsibilities in their daily work lives. That promise of support is critical now, because when the change occurs and people fight it, you need to know that management will back you up. Describe your objectives, the implementation process, the technology, and the change that will be required to convert the company into a learning organization. Don't just cover what you want to buy; discuss how the overall strategic plan will directly affect the business. Show

them, through statistics and graphics, what effect your proposal will have on productivity, travel costs, and improved job performance.

Weave into your case anecdotes and statistics that give life to your results. For example, a sales course offered in a classroom may require salespeople to spend three days offsite, whereas a computer-based course can be taken on the plane as they travel from point to point, which means that the sales staff remains productive for those three days. Tie a dollar value to salespeople's productivity to show your audience a real-life example of the impact e-learning can have on business.

In our plan we began with a high-level definition of our objectives and yearly goals, and then we visually represented the future state of learning through the use of diagrams profiling our six core objectives. Every element of the strategic plan, from the learning councils to the virtual-classroom software, was represented in a chart or diagram, showing what we intended to do and the impact it would have on the business.

Each visual included an objective, along with how it would be achieved and how we planned to measure the results. For example: To make training available to all employees, our objective was to provide learning worldwide, twenty-four hours a day, seven days a week. Our initiative would achieve this objective through the establishment of self-paced Web and CD-ROM courses and virtual-classroom technology. We planned to measure the success of this element of the initiative by tracking usage of the technology by employees, business units, and locations. This simple approach allowed us to share the plan and its impact easily without going into too much detail.

To elaborate on our objectives, we used flowchart diagrams of the new instructional-systems-design model surrounded by images representing the various alternative learning formats. At a high level we defined the hardware, software, and vendor support necessary to implement the model and how the associated investment would create a worldwide system of competency-based learning that was available on the fly in multiple formats to anyone anywhere. We mapped the learning system, the content-delivery model, and all of our proposed



work processes, including when and where our team would implement each learning methodology based on measurable needs and projected results. We compared the existing curriculum-development system with our future model, highlighting the weaknesses of the narrowly focused classroom model and the strengths of the competency-based, flexible, future system.

To flesh out our high-level descriptions and projections, we included, at the end of this section, the details of our planned architecture, budget, infrastructure, hardware and software, licenses, vendors, and so on. We included a reduced version of our work-breakdown structure, a high-level implementation schedule, charts breaking down the cost and value of chosen vendors, present budget information, projected expenses for labor and materials, cost comparison charts between the present and future state and the projected savings, and the forty-plus cost formulas we used to calculate our savings. We also included abbreviated versions of the communication and marketing plan, outlining how we planned to let the employees know learning opportunities had changed, what they could do to take advantage of them, and what the benefits and incentives would be.

Any information you have about how you intend to implement your plan should be included in the hard copy of your business case, even though you won't necessarily go over it in your presentation. This is information some audiences will want to review and may have questions about, but it's not a critical component to your sales presentation. Including it shows that you've done your homework and verifies to your audience that this information exists. There are always super-analytical types in any organization who want to drill down to the most finite level of detail. Be prepared for them—if you're not, they can derail your presentation.

## **Make the Connection Between Training and Business Success**

Don't assume that your audience will automatically see the connection between a very different way of delivering knowledge and skills and

their own business goals. Training is the ugly stepchild of the corporate world because its impact on a company's business goals is rarely proven. If you are going to win management's support, you need to make this connection. In this section of your business case, lay out the business goals of your company and then explain how your plan supports those objectives and affects management's ability to achieve them.

Include the vision statement, the five-year plan, and quotes from individual business-unit leaders stating their goals and the obstacles they face. You'll find many of these quotes in your notes from the original executive interviews you conducted at the beginning of the research phase. Then tie your plan directly to their goals. Talk about why the current state of training is failing to meet their employees' needs and how it is affecting the company's ability to achieve its stated vision and business projections. Talk about the education employees will need in order to meet the five-year business objectives and why the training being offered today won't deliver it.

In our business plan we included quotes from Rockwell Collins's Government Systems 1996 Learning and Development strategic plan in the context of discussing the connection between competitiveness and our ability to create a learning environment. We discussed the importance of workplace learning as a business strategy and the implications our initiative would have on the company's success.

To be sure our audience understood the relevance of what we were selling, we put every element of the plan in the context of value to the company. Every chart linked back to the underlying objective, to tie training to the business goals of the company. We hammered home that theme by making unmistakable connections between training and its impact on the company's ability to succeed. For example, the concept of learning councils would hold little interest for executives unfamiliar with the training process, so we included a list defining exactly what value they would bring to the organization—they would drive business relevance to the training needs; as a result of their input, courses would be custom tailored to meet business objectives; they would reduce learning delivery time; they would improve knowledge transfer; and they would create consistency across the organization.

Rockwell Collins's vision statement includes providing superior customer value, creating sustainable profitable growth, becoming a global leader in the aerospace industry, and being considered the best place to work by employees. We compared that vision with the learning implications of our project. We showed management how easier access to new-product and business-skills training would increase our ability to provide customer service; how learning to work to commercial standards versus Department of Defense standards would improve the quality of our products, which affects our profitability and employee satisfaction; and we discussed the long-term learning requirements associated with future projects. Every biannual "best place to work" survey showed that Rockwell Collins's employees didn't think much of the training that was being offered. We intended to change that, permanently! The baseline comparison chart we included in our plan helped our audience see that connection.

We also showed our audience the gaps in the existing training structure and how those gaps affected the ability of the employees outside Cedar Rapids to get critical skills and knowledge. We illustrated how e-learning would eliminate that problem and allow employees to receive needed education faster and better than ever before. We included statistics from the training industry discussing the benefits of alternative learning formats. For example, the fact that potential savings of technology-based learning range from 30 to 70 percent with an average savings of 50 percent, according to the Government Alliance for Training and Education; retention rates are 25 to 50 percent higher, according to the *Multimedia Monitor*; and the fact that it takes 20 to 80 percent less time for the learner to complete computer-based training than instructor-led training, according to *Training and Development*. Many of the assumptions we made about cost savings were tied to these facts, so including them prominently in the business-case document was vital.

When you create this section of your business case, make distinct connections between the present training program and the impact its shortcomings have already had and will continue to have on business. This is the most important message you can deliver in this presentation, so be specific. Show your audience where the business will suffer

if they don't support your plan and how it will succeed if they do. Figure out what issue is most important to your audience and then show them why your initiative will contribute to its success or failure.

One very popular sales-training program teaches salespeople to ask prospective customers about the *consequences* of not solving a problem. It then teaches them how to ask questions about the *payoffs* of solving a problem. We used the same process when presenting our plan.

Remember that the basic definition of a need, in sales terms, is the difference between what someone has and what that person wants. It is your job to explain clearly what your organization currently has and what you can deliver in the future—and make the organization *want* it.

We customized our business case for individual audiences in order to maximize the impact of this section. Depending on whom we were meeting with, we created versions of the presentation to highlight the specific needs of business units, executives, and management. Always focusing on the “what's in it for me” factor guarantees that your audience will stay interested in what you have to say.

For example, at Rockwell Collins, the manufacturing department was concerned about its aging workforce and the inevitable loss of knowledge when its experts retired, so our presentation for that department's leaders focused on how we could capture and disseminate that knowledge at a reasonable cost. We highlighted the QuickLearns business model, sharing our five-to-one return-on-investment cost projections and the impact the QuickLearns modules were having on the organization as they were implemented.

Every time a QuickLearns module was delivered, we captured data showcasing the impact that training was having on the company's ability to ramp up team skills faster and more efficiently. We added this data to our presentation. Constant updates keep the business case fresh and appealing even to those who've already witnessed it.

## Close the Deal

The last section of the document outlines what you need from your audience in order to make your project happen. If you are going to put

the effort into building and delivering this presentation, be prepared to close the deal. That means actively asking for support, not just assuming that it will be forthcoming. Don't limit your request to your budget requirements; ask your audience for a verbal commitment of support to making the project happen.

We closed our presentation with a list of the five decision and support requirements we expected from our audience:

1. Validation of the business drivers. We wanted the audience to agree that training is a critical contributor to the success of the organization and that our assumptions about the ROI of alternative learning were accurate.
2. Agreement with our strategic plan. We asked our audience if they believed that our proposal made solid business sense.
3. Approval of the budget. Assuming management believed in our plan, we expected them to agree to our budget request.
4. Agreement to charter the global learning council. Because the audience for this business case would assign the appropriate representative membership of the global council, we wanted their verbal commitment to participate in and/or elect members to the board.
5. Support the implementation. We asked our audience to commit to being supportive of the program by promoting roll-outs and participating in learning pilots. Their active role in the project was critical to its success because it would show employees that management supported the transformation.

By laying out what we wanted, we left nothing to speculation. We wanted our audience, after hearing our proposal, to give us their support—before they walked out of the room.

Our final business-case document was more than one hundred pages long. It was filled with easy-to-understand charts, graphics, and facts, all of which tied back to the single critical issue: By implementing this initiative, our team would tie training to the business goals of

the company, which would make Rockwell Collins more successful. We never got lost in training jargon or the “learning for learning’s sake” mentality. The only way to connect with business leaders is to show them the quantifiable value to the organization. After we delivered this business case to several executives, they told us that ours was one of the best business cases they’d ever seen.

But remember, while this is a great model for *building* a business case, it’s not a business-case template. Every business case comes from individual research. The key is to explore your needs and craft a proposal that directly affects your company’s ability to turn itself into a learning organization. If your research is accurate, your assumptions are valid, and your objectives are targeted at the cultural needs and business goals of the company, winning the support of your executive team should be easy to do.

### YOU ARE READY TO MOVE ON TO STEP 7 IF YOU:

1. Have built a work-breakdown structure of tasks and timelines. You will need this information to map your plan, adhere to budgets, and stick to your timeframe.
2. Have defined your cost-savings formulas and budget. It’s not enough to project your costs; you need to have proof that what you are suggesting will have demonstrable impact on the company’s bottom line.
3. Have named your initiative and developed a marketing plan. Your marketing efforts may be the most important thing you do to ensure that your project doesn’t just fly but flourishes. Plan to invest much of your time in the coming years to selling your plan to every business unit, executive, and employee until every one of them is on board.
4. Have built a tailorable business case. You can’t launch the project without buy-in, and every executive will want something slightly different from you. Build a business case with a solid foundation of information that can be altered to address the needs of varying audiences.

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## PART II

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# Work Your Plan

At this stage of the game, your research should be done. You should have a defined plan with a detailed implementation strategy in place and ready to go. You should know what your project will cost, how long it will take, and whose help you will need to get it done. Now it's time to go out and prove to the rest of the company, one executive at a time, that you deserve their support by selling them on the dream and then delivering what you have promised.



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## STEP 7

# Take the Show on the Road

*“One pound of learning requires ten pounds of common sense to apply it.”*

PERSIAN PROVERB

### GOALS FOR STEP 7:

1. Craft an elegant story around the business case.
2. Test it on some friendly nontrainers.
3. Deliver custom versions to executives, managers, and employee focus groups.

The next step in the process of becoming a learning organization is to secure buy-in from senior management. Without their emotional commitment, your chances of success, or even getting the budget to give your project a shot, are slim. The business case must hold up as a

prudent and financial proposition of your project if you expect to get their support.

The business-case document alone is meaningless without a vivid tale wrapped around it. Delivering the presentation as a story makes it genuine and personal. It's your job to tell that story. Weave a narrative around your plan that lets your audience imagine what you are going to do with their company. Show them what's wrong with the system today and tell them how you can make it better. Make them see why learning is significant to the business process.

This is the one chance you will have to sell executives on the idea, so create a presentation that will impress and intrigue them. The show you put on through your business case should be delivered in such a way as to capture the hearts, minds, and emotions of the executives and other stakeholders. They need to see a compelling, enticing business case presented in a context that is important to them.

And while savings alone are an enticing selling point, you also have to make a case for expanded learning opportunities and the impact that learning will have on their business or function. It has to be about *better* and cheaper learning, not just cheaper. Don't waste that chance by talking about seat time and training technology. Be sure the presentation you give uses language and data that they will understand.

You, your presentation skills, and your ability to connect with your audience will determine whether management buys into your plan. That means each time you deliver the business case, it must be customized to the audience's specific interests and desires. Have several variations of the case at your disposal and be prepared to tweak whichever one you choose for the group that will be receiving it. Show them what's in it for them. If you are meeting with sales managers, show them how your program will affect their teams' ability to sell. If it's manufacturing, describe how you will improve productivity by cutting training time in the plants.

Before you go into any meeting with an executive you've met with before, remind yourself what's most important to that person. Whenever we conducted meetings or delivered our presentation, we always

had someone with us who took notes and comments during the presentation so we could focus on the message. We referred to those comments in later meetings to show that we were paying attention and that we were genuine in our commitment to tying training to their business goals. This is a significant point, because these notes became important as we progressed through the various presentations. We can't emphasize enough how important it is to personalize your message. If executives can't see what's in it for them and their team in the first five to ten minutes, you will lose them. Everyone wants to know how any major change is going to affect them personally.

How you tell your story is up to your personality and delivery style. We presented ours as a chronology. We defined the present state, and we related the process that we went through to gather our data, how the plan was developed, and what our project would accomplish specifically for the audience.

When we talked to manufacturing, we presented the cost and impact of the current training process on that department's operation. We explained how this new system would eliminate the requirement for large segments of their employees having to leave the production line for extended periods of time. We illustrated how their needs could be met through customized and targeted learning delivered in chunks that would eliminate the workforce's having to be in a classroom during critical production phases. We explained how this system would make training available at a time that was convenient to production schedules. When we presented to other functions, we highlighted the global aspect of the system and emphasized the fact that Rockwell Collins's geographically dispersed workforce would have easy access to required training. When we met with the CEO, we showed him our overarching goals and how every area of the implementation would affect the company's flexibility, productivity, cost efficiency, and, most important, the training department's contribution to the organization's vision.

We didn't just deliver the facts; we put them into context, which is the key to capturing the audiences' imaginations. Statistics are almost meaningless without some explanation, and it's especially unlikely

that your audience will understand the significance of training statistics, such as seat time or cancellation rates, without your help.

Context is critical. A plan that is exciting to you because it delves into the importance of learning theory will hold little intrigue for an audience grounded in business philosophy and financial impact. Most executives don't know anything about training and they don't care to know about it. They cannot make the connection between software features and the business goals if you don't present your business case in a framework they can relate to. You have to tell your story using details that are important to them—dollar savings, performance improvement, increased productivity. These are the issues that attract the attention of management. Features alone won't sell the case. They hold no value if your audience doesn't appreciate their benefit.

For example, telling executives that you are going to put servers in forty-five locations across the country holds no value for them and may come across as an exorbitant investment. But, tell them that because you are putting servers in forty-five locations every employee will have instant access to training, which means *the cost of delivering training will go down 45 percent*, and suddenly they will pay attention. It's a subtle distinction but one that is lost in many presentations. Benefits will sell your case. Don't assume that your audience will see the benefit of any feature until you've made that connection. If you're unclear about the differences between features and benefits, have one of your sales-training experts give you a crash course. You'll be amazed at the power you can put into your presentations by using this time-tested sales-presentation technique.

Keep in mind this important notion: If you present your business case as we are suggesting, your audience will be impressed. Every time one of us has delivered a business case to a client using this model, the client walks away not only impressed but also sold on our idea—even if it's not what the client originally set out to do. For example, The Performance Engineering Group was hired by a family-owned beverage company to train its distributors. But a detailed cultural assessment showed that what the company really needed was a new approach to choosing distributors. Managers tended to select family members or

high-profile sports figures without evaluating their merit as company representatives. The business case Chris Butler made was so compelling that even though this company was founded on a commitment to family, management agreed to rebuild its distributor-selection process.

If you paint a vivid picture of what's going wrong in the existing culture and what you can do to make it right, you will win over even the most skeptical managers. In all likelihood your executive team will never have had the head of training make a presentation that was as focused or as on target as yours will be. Typically, training departments present what they think is good for the training function, not what the organization has asked them to produce.

Our business-case approach will be refreshing in and of itself, and if you've done your research properly, you will already have begun building new levels of credibility for your training organization.

## **Take It for a Test Ride**

When you've created a presentation that you think tells your story with impact and imagination, deliver it to several people who will give you a brutally honest opinion. Again, this is a point at which an outside consultant can add valuable insight to your process. If you don't use a consultant, at least go outside the training department. Find someone you trust, a leader who doesn't instantly understand the benefits of training, and test the soundness of your case. Ask this person to stop you when you use training jargon, or when you make assumptions that don't connect with the needs of your intended audience. Ask this person to rate the presentation and point out where you can improve, where you could make clearer connections to the business goals of the company, and what points you should sell harder or with different emphasis.

Based on the feedback we got when we delivered our initial presentation to inside supporters and our consultants, we changed our approach slightly. We added more Rockwell Collins vernacular and put the plan in a context that would be familiar to people in the business of aeronautics. For example, Rockwell Collins's people refer to a budget as

the Annual Operating Plan and budgeting as the AOP Process. Using this sort of jargon incorporated familiarity into our pitch. This can be especially difficult if you are new to the organization.

## Hit the Road

When your pitch has been honed and your business case is complete, it's time to take the show on the road. Begin by pitching to senior management, because they control the budget. This is not a one-time event to be delivered in front of a group of executives. You need to meet with each executive one on one to sell your case directly to them, asking for their verbal support before your presentation is over. By meeting each leader individually, you can focus on that person and his or her needs and get an accurate feel for that person's support for and reaction to your plan. If you stand up in front of a group of executives, you won't know who truly supports you and who's nodding along while quietly disagreeing with everything you say.

This is not a place to cut costs either. Even if your managers are all over the world and you have budget constraints, don't skip the road show. You can't sell this project on a conference call; you need face time. Spend the time and money to meet with every senior person, even if it means you have to delay implementation. Their support is critical for success of the project. You will not be able to implement at all without their backing.

Set aside at least one hour to meet with each of them, and expect to spend twice that much time. If they support you, they will want details and will take the time to hear what you've got to say. Also, don't be intimidated by people raising objections during your presentation. Objections are a sure sign that someone is engaged. Their sitting silently and staring at you with poker faces is far more deadly than their raising objections.

At that time at Rockwell Collins, the training budget was a line item on the budgets of each business unit, so securing support from every unit manager was critical. They made the decision as to whether or not their training dollars would be contributed to the

support of Project Oasis, so we had to be sure we won everyone's approval.

We began with the vice president of human resources; HR was our business unit, so we needed his backing to take our presentation out to the rest of the company. Then we met with fourteen other senior executives before meeting with the CEO of the company. These meetings were scheduled over four months beginning in March 1999.

While every executive was interested in the overall success of the company, each one had a different perspective and a unique set of priorities. To address those interests, every presentation had two distinct parts: the value of our plan to the enterprise and to the individual business units or functions. We didn't talk about tactics or technology or the alignment model, although those things were represented in our business case. We stuck to our primary agenda—to communicate at a high level the impact that becoming a learning organization would have on the success of the business. We stayed focused on the front end of the process, tying our strategic plan to the business goals of the company.

To be sure we made the greatest impact on each individual's personal interests, before each one-on-one meeting we went back over the notes taken in the original interviews with these executives. This is why it's important to take notes when you meet with key people, so you can replay their exact words back to them, discussing in detail their concerns and your plans to address them. This will have a profound impact on their respect for you and your project.

We were able to go back and review what each executive's concerns were and work them into our presentation. On the fly, we incorporated key issues that had come up, rephrasing actual quotes back to their speakers. We were also able to take their needs and tie them into the larger vision of becoming a learning organization in a way that they might not have been able to articulate originally.

For example, when we met with the vice president of operations, we addressed how we planned to capture the knowledge of retiring baby boomers. We outlined the QuickLearns process and the importance of capturing and disseminating these competencies. We showed



an example of what QuickLearns would look and feel like. We talked in terms of speed and usability, along with the costs associated with capturing and not capturing these competencies.

This not only tied the presentation to the individual needs of the audience but also showed them that we had been listening to their problems and that this plan had been crafted as a direct result of requests they had made. It created a sense of responsibility for the project, adding to their willingness to support us.

It also encouraged them to brainstorm new needs. In our initial executive interviews, many managers were too skeptical of our abilities or unable to articulate their needs in a way that allowed us to create solutions for their problems. But, once they heard our strategic plan, ideas started popping into their heads. During many of these initial presentations, managers brought up other problems, asking for our help. For example, during one of our presentations the vice president of engineering brought up a new problem that was affecting his product-design success rate. An unacceptable percentage of products were failing post-design tests because, he believed, the engineering designers were missing a fundamental knowledge. It hadn't occurred to him that this was a training issue until we showed him the connection between training and the business. It was as a result of this conversation that our team uncovered the knowledge gap of engineers surrounding electromagnetic interference and later created a custom course that eliminated the problem.

Issues like this one came up in almost every presentation, which showed us that our audience was beginning to understand how training could affect their performance rates. It was a good indicator that our team was on the right track and that the presentation and plan would get us the results Rockwell Collins needed.

## **Close the Deal**

At the end of each executive presentation—many of which lasted more than three hours because our audience was so intrigued by the details of our plan—we asked our audience for their support. We went over our

decision and support requirements page and addressed each request one by one—“Do you think our business drivers are valid?” “Do you agree to support our strategic plan?” “Will you approve our budget request and time commitment?” “Will you participate in the global learning council?” “Will you support the implementation of our plan by being a visible part of the rollouts and learning pilots?”

Don't make the mistake of skipping this step. Asking for management's support is how you close the deal. It gives you the power to move forward, and later, if management rescinds its support in the face of cultural backlash or budget fluctuations, you can remind them of their promise and exactly what they agreed to. That can be a powerful motivator.

We asked for their support and they gave it to us willingly. Every single member of the executive team was supportive, and many complimented us afterward. Several told us that ours was the most comprehensive strategic plan they'd ever seen, not just from a training department but from anywhere.

In the unlikely event you don't win the support of your audience, even if you've followed all of our advice, then you haven't crafted the right business case. Your assumptions were wrong or your sales pitch was ineffectual.

## **Move Through the Ranks**

After the initial executive meetings, we proceeded to the next step. The executives are only the first stop. You need their financial support and leadership at the top, but it is also important to pitch your presentation down through the organization. Once you have support of these executive leaders, you can begin to build support for your project with middle management.

You need to win the backing of the bulk of middle managers before you can proceed. In most organizations, middle management is the key to successful cultural change; without middle management's support and commitment, very little will change.

Executive support is important because the top managers control

the money and have the power of leadership. Without their support, no one will listen to you. But executives have little contact with the people of the organization. And beyond giving their corporate support, they will have little impact on the behavior of employees. Mid-level managers carry and define the culture of the company because they are the corporate conduit of information, attitude, and style. They talk to staffers and one another every day, they orient new employees, and they set the standards for acceptable behavior. They decide how things will be done and who gets to do them. If there is going to be a cultural change in an organization, it will be led by middle management.

Once you have executive support, target those middle managers. In a company of more than 1,000 employees, strive to get at least 40 percent to adopt your values; if you do, the rest will follow. We use the terms *values* and *culture* interchangeably, because corporate culture is really just a set of shared values that manifest themselves in organizational behavior.

Further customize your presentation to define the individual payoff of the strategic plan to each business unit. The “what’s in it for me” factor should tie all of what you’re doing back to the individual business units’ strategic goals. If you can show middle managers that you understand their business goals *and* show them how your initiative directly addresses their needs, you will have their backing.

We asked all the executives to invite us to their staff meetings so that we could present our case to their people. Every week we promoted our plan to another group of managers, and later to their employees. We pushed our program down through the organization, to win the support of as much of the population as possible.

We showed the middle managers how our plan would affect the ability of their people to learn faster and more conveniently than ever before. We showed them the cost and time savings associated with our plan, and its anticipated impact on their performance and bottom line. We told them what would be expected of them as well. The new system required managers to communicate to employees where their deficiencies were and support their ability to improve by providing the time

and tools necessary to learn when and where learning was required. In response, employees would no longer be the passive “vessels” waiting to be filled with knowledge. They would be expected to actively pursue the training they needed in order to do the best jobs possible.

Of course, there will always be naysayers. In any change effort, one-third of the people will come willingly, one-third will straddle the fence until they can predict the final outcome, and one-third will never change, even to the detriment of their careers. Some people just hate any idea whose time has come. Do not direct your efforts to them. Causing cultural change is similar to molding the behavior of a child. If you reinforce negative behavior, that’s exactly the behavior you will get. Many managers make this mistake. They invest all of their time trying to convert the obstinate, all the while ignoring their supporters. This sends the message that those who object will be rewarded, which guarantees that the fence straddlers will reject your ideas immediately and even your supporters will give you up.

The protesters will remain in the minority if you don’t give them power. They may be the loudest or most obnoxious, but there are usually fewer of them than you’d suspect. Quash their strength by ignoring them and making it clear to the population that you have the backing of management. Ask the executives to actively voice their support to staffers so that those who object are made aware of their standing, and then celebrate the converts. Give recognition to people who join the cause early, distribute trinkets and marketing gifts, and promote your project.

After completing the first few meetings with middle management, we were confident that we would garner their support, so with the help of the communications department, the learning and development team began a promotional campaign to push excitement up from the bottom of the corporate ladder. While we held these meetings, our team simultaneously launched a vast marketing campaign to introduce the entire company to Project Oasis. They posted articles in the company newsletter discussing the plan and put marquee posters at the entrance of every office that read, “Project Oasis, Coming Soon.”

Whenever we met with managers and their staffs, we brought cof-

fee mugs, hats, T-shirts, and mouse pads bearing the Project Oasis logo. We got employees excited about the changes in store and launched promotions to capture their interest. We held brown-bag lunches to discuss the new opportunities and what they would mean to employees, and soon the company was littered with promotional materials and the population was curious. We hadn't even gotten the go-ahead for the project, and the people were already excited about it.

Our last stop on the road show was with the CEO in June 1999. We had won the support of executives, met with every manager, and gotten the employees excited about the program, but we needed the CEO's backing to make the project happen. By this time even the CEO had heard about Project Oasis and the excitement within the organization.

Because we were so confident in our strategic plan and the inevitability of management's support, we took a calculated risk. Long before actually getting the CEO's support, which would determine whether we would have the budget to launch the program, Cliff Purington bought the technology and a bulk of content and our team pre-loaded the system, anticipating a green light. We invested in servers, infrastructure, and 300 off-the-shelf courses that were installed and ready to go by the end of March—three months before we met with the CEO. The first phase of our online-learning transformation sat on the servers waiting for us to flip the switch. It was a risky decision, but by doing it our team achieved the primary Year One goals—to establish an online-learning infrastructure and to move 30 percent of the curriculum to alternative methods.

When Purington walked out of that last meeting with the support of the CEO in hand, he made the call from the parking lot to flip the switch, and within minutes Project Oasis went live.

## **A Never-Ending Process**

The CEO meeting ended the first phase of our business-case road show, but the show was far from over. Even though we'd gotten the approval of management, we had to continue communicating our

efforts. We've delivered that presentation hundreds of times in the past four years, because, as we've said before, corporate memory can be very short.

Your job is to sell this project while your staff implements it. This ensures that the corporation never forgets what you are doing and why and is constantly made aware of how far you've come.

The first phase of the business-case delivery was the enterprise version. After we met with all of the leaders, got the buy-in, and launched the initial implementation of the project, we went back to them to talk about tactics. We customized the business case to address the specific problems that many executives had brought up in the initial business-case presentations. We also spent time with individual managers within the business units to focus on their specific needs, which lay outside of the overall enterprise solution, and to craft custom approaches to their specific training needs.

Later, when our team made significant strides in the project, such as achieving a yearly goal, we brought the business case back to our core supporters to tell them again what our team was doing and what it had accomplished. We wanted to be sure they knew that our team was still on track and saving them money.

We also pull the business case out whenever we find a group of Rockwell Collins employees who aren't using the system to its fullest capacity. When the usability numbers gleaned from the learning-management system reports show that a unit isn't taking advantage of our system, we go to them. Typically, we spend two days pitching the project and the potential impact it could have on the group. First we meet with every mid-level manager in that unit and one after another we show them what we've done. We present statistics from our cultural research and show direct comparisons between the old system, which they obstinately cling to, and the successes we've had in other units that are taking advantage of the new learning process. We take them online and walk them through courses, give them promotional materials, and target learning goals that can easily be accomplished if they avail themselves of our tools. We point out to them that the system is live, they along with the enterprise have already paid for it, and

by sending employees to outside classroom training they are basically paying twice for the same solution.

Every time we deliver this case, the activity level in that unit jumps the following month. It's an endless process, but by taking the show on the road we ensure that the company is taking the fullest advantage possible of our training. We are making sure that Rockwell Collins maintains its status as a learning organization.

### **YOU ARE READY TO MOVE ON TO STEP 8 IF YOU:**

1. Have crafted an elegant presentation around your written business case. This presentation is the main thing executives will use in deciding whether or not to support your project. Captivate them with your compelling stories and powerful statistics.
2. Have tested your business case out on some friendly non-trainers. As always, impartial feedback from someone outside the training department will give you valuable insight into your delivery, vocabulary, and tone. This feedback will help you tweak the final production before you turn it loose on the executive team.
3. Have delivered your customizable presentation to executives, managers, and employee focus groups. Every group will have different interests and varying attention spans. Pay attention to the "what's in it for me" factor to make the most of their time and yours.

# STEP 8

## Implement

*“If it’s a good idea, go ahead and do it. It is much easier to apologize than it is to get permission.”*

ADMIRAL GRACE HOPPER

### GOALS FOR STEP 8:

1. Make sure your pre-work is done.
2. Go live quietly.
3. Market constantly.
4. Attack your goals.
5. Stand up to the naysayers.
6. Start working on the next phase.

The time has come to see if you can deliver what you’ve promised. You’ve spent the past few months quietly researching, writing, and



selling your project. It may have required effort, but there was likely little interference from the outside world. You were free to go about your work and craft your strategic plan while the company and your training staff continued with business as usual.

That freedom from scrutiny is officially over. With buy-in and a budget secured, you had better be ready to prove yourself. Now is your opportunity to come out of the shadows, to show management that the training department has reinvented itself as a contributing, business-focused member of the corporate community. You need to demonstrate that you can take your strategic plan off the page and make it happen; offering training that has a profound impact on the company's power to succeed.

You need big home runs right away. You need your courses to be scintillating, exciting, and easy to use. Don't make the mistake of assuming that things will fall into place or that people will cut you some slack in the beginning while you get your bearings. They will have their own preconceived notions about your capabilities. If you flop now, you will lose the backing and respect that you spent the past months fighting so hard to attain, and you will prove to those who doubted you that they were right.

Technology fails you only when you really need it, so be prepared for glitches. You'll encounter them, but have a plan in place to solve them and solve them quickly. The support of a great technology person on staff is most critical at this phase of the project. During our initial rollout, things went wrong at Rockwell Collins. Not everything, of course, but enough problems occurred for us to need Steve Junion's help. He managed technical glitches speedily so that those problems were minimized.

## **Five Things You Need to Go Live**

Once you launch the first phase of your project, things will start to move quickly and you'll have little time for planning or research, so be ready. Have your processes and procedures in place so that you can show impressive results while the company is still excited about what you've promised.

Before you reach this stage, before you get the budget and are free to implement, you should have already completed several front-end tasks:

1. *Know who your vendors will be.* Once you have the support of management, it's too late to begin shopping around. A well-done vendor-selection process can take months to complete and should be finished by the time you present your business case. It's not something you want to rush, and it's critical that you research your options and evaluate your needs before you buy. If you intend to use e-learning as part of your strategy, make sure you do your homework up front.

At Rockwell Collins, our team spent weeks reviewing vendors and tools before we completed our strategy because we knew how important it would be to have those relationships in place when we were ready to go live. Before securing buy-in, we conducted the vendor group meeting, letting the potential vendors know that if they wanted to work for us they had to be ready to share proprietary knowledge and work together as a team. We established the rules for teamwork and accountability among vendors, and then Cliff Purington made the bold choice of purchasing the technology before he secured management support. The risk was obvious but the reward was impressive. By choosing vendors, securing those relationships, and installing the technology before we implemented, our team met its first-year goals the moment we launched. The executive team was thrilled with our ability to deliver on our promises so quickly and completely, and we then had two years to meet our next set of goals.

You may not have the bravado or budget to make such a bold move, but you need to be ready. Before you make your final presentations to management, meet with and make decisions about which vendors you intend to use. Even if you can't buy the tools and technology for six months because of fiscal issues, establish a verbal contract with these companies. Tell them what you will want and set some timelines so that they will be ready to support you the moment you have the money to close those deals.

2. *Define your “make-or-buy” decision process.* This fundamental decision-making process will determine the direction of your entire strategic implementation. You need to know, going into the launch, where your content is coming from, how it will be developed, who’s in charge of creating it, what process that person will follow, and how you will evaluate the results. The make-or-buy process takes into consideration several issues, including time to develop, in-house expertise, budget, performance goals, and availability of content.

The decision to develop courses in house should be made only because doing so adds the most value to the project. If you do it because you feel guilty or incapable of reassigning instructional designers, you will do a disservice to your strategic plan and to your people, and ultimately this decision will cause your project to show insufficient results.

In companies that have existing instructional-design staffs, the right decision may be to build everything in house. For others, such as Rockwell Collins, the best choice is to outsource the bulk of the content development. Most companies will fall somewhere in between. The point is that you need to know how you will decide which courses are developed internally and which ones are outsourced.

This is not a decision that can be made simply to keep a staff of designers busy. It’s a strategic process that should be defined based on the needs of the company—not the needs of people in the training department. What to do with your existing team is a separate decision from whether you make or buy content.

When you approach this decision, consider your team’s level of expertise compared with your strategic needs, the financial implications of your choice, and the political repercussions of keeping your staff versus reassigning them. If you decide that the best decision for your plan is to outsource content development at the expense of losing staff, you may want to hire an outside firm to “verify” your decision, and let them take the heat for it.

At Rockwell Collins we were adamant about outsourcing content development because doing so made sound business sense, but we were fortunate enough not to have a team of instructional designers

on staff who would be affected by that decision. Our people were used to working with outside experts to provide training, so the decision to buy content from vendors was a natural transition that required no immediate layoffs.

It's important to recognize that in today's economy, having a "standing army" of designers waiting to design and develop curriculum is a luxury most companies cannot afford. Numerous vendors have the expertise to provide quality development utilizing both internal and external subject-matter experts.

If you do have a training department with a number of instructional designers already on staff and you decide to retain them to build programs in house, you probably can't continue with "business as usual." The single biggest complaint The Performance Engineering Group (PEG) hears from client firms is how disconnected the developers are from the business itself. If your instructional designers are accustomed to going off and designing a program with little or no input from the intended audience, you will need to create new rules for these employees. Don't let a "We've always done it this way" culture kill your e-learning initiative.

3. *Define high-level roles and responsibilities.* People cannot operate in a new environment if they don't know what they are supposed to do. Left on their own in a changing environment, they will revert to what they know, which will frustrate your efforts to cause the required change. In large organizations it's especially important that everyone know their new roles and the specific tasks for which they will be accountable. Give them jobs, define their responsibilities to the best of your abilities, communicate with them early on about what is expected of them, and reinforce that information through frequent contact and discussions about their progress. Making this information clear helps to eliminate uncertainty and floundering. Realize, however, that even with taking these actions, the change is significant enough that there will still be some confusion and ambiguity.

At Rockwell Collins, we began retooling our people into learning consultants before the rollout. They knew that their jobs were chang-

ing and they knew at a high level what was expected of them. Everyone was given the new title and trained as to what it meant to be a learning consultant. They were assigned learning councils to chair, given constant feedback and coaching about their direction, and given task assignments to ease them through this transition.

4. *Define your timelines.* Your work-breakdown structure has to be complete at this point. Before you go live, you should have a detailed schedule of events that map out your goals and how you intend to achieve them, from the first day of the launch through at least the succeeding twelve months. Ours laid out every task and event we intended to accomplish over thirty-six months. You may change your timeline or add to it during the implementation process, but you need an initial structure in place with which to go forward. Without a timeline you will falter, losing track of events, forgetting critical details, and causing unnecessary delays that will increase your chance of failure. With this project, the devil is in the details and you cannot afford negative publicity at this juncture.

5. *Map all of your work processes.* We can't overemphasize the importance of early successes. Everything you do has to work well in order for you to hit those high-profile home runs. Mapping your work processes is an integral part of the front-end approach that will structure your curriculum offerings and guarantee that the learning opportunities you do offer are targeted and tied to the bottom line. The work processes are at the heart of a learning organization because they define what learning will be offered, what it will look like, what impact it will have, and how you will make the connection between training and the business. They will be your road map to success. It is impossible to create a learning organization without defining your tools. If you built a comprehensive strategic plan that ties learning to the business goals of the company, then your work processes should already be mapped.

At Rockwell Collins, we mapped everything, from the mandatory needs analysis to the make-or-buy decision process, before investing in any technology. When Project Oasis went live, all of the processes were clearly defined and available to our learning consultants and the rest of

the company so that there was complete clarity about when, where, and how training would happen. Every training choice our team made was grounded in these processes, and this grounding guaranteed that every decision was justified, logical, and linked to the business.

## **Go Live Quietly and Fix the Bugs**

When Purington secured final buy-in from the CEO of the company, our team had all of our front-end pieces in place. Because we were in control of the training budget, our team was able to buy and install the technology, purchase the courses, and load them on the server. When we flipped the switch, giving every Rockwell Collins employee access to 300 off-the-shelf training courses from SmartForce and NETg, our primary Year One goal to transform 30 percent of our training content to alternative delivery methods was achieved. But, as a team, we didn't draw attention to ourselves, at first.

It was June 1999 when Project Oasis was launched, quietly and without fanfare. Our team marketed it within the organization as a "coming soon" event even though it was live and accessible through the company's intranet. Embedded in the Rockwell Collins home page was a hyperlink to the courses, but other than that we didn't mention the launch to anyone. For two months the e-learning library sat, slowly being discovered by employees who happened upon it while browsing the intranet. They started taking courses and telling their peers about the system.

By going live quietly, our team was able to iron out the remaining few kinks in the system while it was still relatively invisible. The programs had already been put through rigorous testing in the lab, which houses several computers modeled on the Rockwell Collins PC-user environment. That testing process allowed our techs to pinpoint and fix all of the major end-user problems before the rollout, but you never know what's going to happen when you really go live. The first Rockwell Collins end users encountered an expected number of glitches and errors, usually attributed to hiccups with various interfaces or software

incompatibility. There will always be employees who load illegal software on their computers or ignore directions and take unexpected paths through your content. Until you see what they are going to do and how the system will react, there is no way to know what errors will result. As the problems were reported, our technology expert fixed them, without the publicity that might have accompanied a highly public launch.

If it's not possible to go live quietly and wait for your users to test drive the system, at least do a pre-launch beta test with real live users in your corporate environment. Approach a division or workgroup and ask if its members would discreetly test drive your courses before you make them public to the whole company. Choose a political ally who supports your cause and will not use any errors against you later on. Let those employees work through your training offerings for a few weeks and offer them incentives for their time and honest feedback. No e-learning implementation will be flawless, but the more time you spend refining your system before the launch, the fewer glitches you'll run into when success matters the most.

For two months we monitored the first quiet wave of end users, and then on August 7, 1999, the learning and development team publicly announced the launch of Project Oasis. This grand opening was a huge success. Most of the bugs were gone, so end users were able to focus on the content and not on system problems. Because we had done so much up-front work during the research phase and had rolled out the courses so quickly, the two months our team spent quietly testing them seemed like no time to executives, who assumed we had started the e-learning installment process from the point of final approval. They were amazed that Project Oasis was up and running so soon.

## **What Next? Go Back to the Road Show**

You planned the work, and now you've got to work the plan. After the official launch, which was your primary job, the mission you will engage in for many months to come is to boldly and stridently market the project to every member of the organization. You may have sold the company on the dream, but now it's time to deliver the results.

During the early months, you may spend some of your time monitoring end users or ramping up for tool rollouts, but a huge part of your schedule should be dedicated to selling the project. Your principal purpose in life will be to get people interested in what you are doing by explaining the value—the “what’s in it for me”—and getting them excited about what is yet to come.

This is counterintuitive for many training professionals who have little experience as marketing wizards and have fallen prey to the belief that employees will automatically migrate to quality training. That’s pure fantasy. Unless you promote the system constantly, you won’t capture and retain employees’ attention, and all your efforts will not pay off to the full extent possible.

If you don’t know how to market yourself, ask for assistance. We made use of the Rockwell Collins marketing department to help us run an ad campaign promoting Project Oasis. With their guidance, our team members designed and mailed out postcards directly to people’s homes with our logo and directions on using the systems. They sent global e-mail announcements to employees’ workplaces, inviting them to try the courses and offering tutorials and incentives to early adopters. They wrote articles for the company newsletters and put up marquee posters that announced, “Oasis Is Live.” Early supporters were rewarded with gifts and praise, and employees who took advantage of the system were publicly celebrated.

But the most important piece of our marketing campaign was the two of us. In the first year after Project Oasis’s rollout, we sold the system over and over again. We held brown-bag lunches to introduce the courses to employees and managers, walked them through the system, and shared with them other users’ success stories. We distributed mugs, hats, and mouse pads to flood the environment with Project Oasis logos and materials. We traveled to every office to deliver our presentation, again pitching the strategic plan and demonstrating our content.

We revamped the business case for our executive supporters, adding details about the new courses, results we’d already gathered about usage rates and cost savings, and information about how to use the new programs. One of the most intriguing financial goals our



team achieved early on was that in one day the learning department saved Rockwell Collins \$660,000!

In the past, the company spent \$1 million a year on IT and end-user training. When our team replaced all of that with the initial 300 Web-based courses from SmartForce and NETg, the annual cost dropped to less than \$300,000. So, on day one Project Oasis saved the company money and was able to offer substantially more training to the employees. As per our original promise, 40 percent of that savings went back to the company in profits, and our team was able to put the remaining 60 percent toward our Year Two goals.

Our loud presence and intriguing financial successes won us the attention we needed from management and end users alike. Several times during those early months, we were invited to staff meetings by key executives who wanted to share our story with their people and further discuss their own strategic needs.

Once they saw what our team was doing and that we were committed to the process, many leaders found new ways for the learning department to help them achieve their objectives. It was during one of these meetings that the vice president of manufacturing asked for our help in dealing with his rapidly retiring workforce. From that conversation was ultimately born the QuickLearns methodology—a rapid-development process for creating CD-ROM-based training modules that portray subject-matter experts performing key skills coupled with text-based procedures and tests. QuickLearns became one of Project Oasis's biggest success stories, capturing the knowledge of seasoned professionals and sharing it across teams. It's an extremely fast and low-cost solution that had a huge impact on the manufacturing team's ability to ramp up new employees. (See Chapter 10 for more on QuickLearns.)

Whenever people approached or walked by the training and development department, Purington pulled them in to hear about the latest course rollout, success story, or usage statistic. To this day, we continue to monitor which Rockwell Collins sites are using the system and which ones are slacking off. If we see that we are losing a group, we go back on the road to deliver the presentation again, meeting with managers and end users to show them the benefits of Project Oasis.

Every time we make that presentation, usage rates in that group jump immediately.

Our irritating commitment to marketing has for the past three years kept the employees buzzing about Project Oasis and thinking about how it could affect their lives.

## **Hitting the Rest of Our Goals**

While you are selling yourself through constant campaigning, you must also be looking ahead. Launching our initial 300 courses before the project had official approval bought our team time, but we still had much to do. We had to achieve the rest of our Year One goals, which included launching the learning councils and establishing the rest of our curriculum-design process. We also had to get to work on our Year Two goals, which promised to be far more challenging because they involved a great deal of custom content development.

Team members continued to tweak the learning-management system until it produced the style of reports needed to accurately track usage throughout the company. The final configuration of our learning-management system now produces reports that give us telling overviews of who is using which courses and with what degree of success. It allows us to pinpoint offices or departments that aren't taking full advantage of our system so that we know who needs extra prodding or a refresher course on how to use e-learning.

Our team built and populated nineteen resource rooms where employees could go to take training away from their desks. Before the rooms could be outfitted, we needed management support, so we went to the targeted offices and asked those managers to dedicate space that our team would fill with computers and software utilizing our own budget. We didn't ask them to invest any money to get the room equipped, so it was an easy sell. Most offices had vacant or dedicated training space that just needed to be updated with new technology.

Team members also spent much of that time educating employees about the value of the resource rooms. Many of them wouldn't have the freedom to take training at their desks because of the culture and

attitude in the workplace. Managers had inflexible attitudes toward what they perceived as nonwork activities, so the employees had to get training away from their desks if they were to get it at all. The resource rooms provided people a safe haven, but at the same time we started chipping away at the stringent work-ethic mentality. The goal was to demonstrate to management the value of employees learning at their desks. The most powerful impact to that belief system came through some of the compliance training requirements that were rolled out. Being able to meet compliance requirements without having to leave the office was an attractive lure and has since become culturally acceptable—actually preferred—by many managers who used to denigrate the idea of training at the desktop. They are beginning to see the benefits of the employees taking these required courses in the work environment, and this change in attitude can lead to other forms of training being viewed as acceptable.

During this time, the initial learning councils were chartered. Managers were nominated by division vice presidents, and day-long charter meetings were scheduled. These kick-off sessions were designed to draw council members together into high-performing work teams. A PEG consultant facilitated the initial meetings, along with a dedicated learning consultant who also was co-chair of that particular council.

Each team came together for two half-day sessions in which they defined the vision and structure of the learning council, laid out the goals, and established rules for communication. For team development, Chris Butler also conducted an organizational reflection exercise called On the Table, Under the Table, and Above the Table. He presented each team with a picture of a table. On the table were things like a clock, phone, and books; under it were spiders and cobwebs; and above it were the sky and sun. He asked them each to draw their own picture. The items on the table represented the pressing issues they faced at Rockwell Collins in the current environment; the items under the table represented the issues from the past that were very important but that no one ever talked about; and the items above the table represented their vision for the future.

This simple exercise produced insightful results and led to revealing conversations about the cultural and environmental problems that weren't being addressed at Rockwell Collins. Once Butler and his team knew what the issues were, they had a clearer understanding of what they needed to deal with in order to achieve their future goals.

The managers took on their roles—sometimes grudgingly, and with the guidance of their learning consultants—and began meeting monthly to define the core competencies of their units or functions and the skill gaps that required training solutions. Soon they began to coalesce as teams, and even the few obstinate groups became just as enthusiastic as the other teams.

## **Stand Up to Cultural Bulldogs**

The managers' grudging acceptance of their roles on the learning councils was just the first taste of the cultural pushback our team experienced that first year—and still do battle with today. As we've said before, becoming a learning organization is not about technology, it's about changing your culture. Up until the implementation, our team members were working in isolation. We had been planning to make vast changes, but nothing had actually been done yet.

Once Project Oasis was launched, all of that changed, as we expected it to. The project wouldn't have been effective if people willingly went along, because no population goes gently into change. Corporate culture is like a living, breathing entity. It has a certain way of doing things, a balance in its system. When you throw off that balance, you upset the beast.

Within a few weeks of your own implementation, people will begin to feel the pressure of your changes. If you are having any impact on the culture, it will show itself through the loud protests of those most unwilling to change. If you aren't feeling pressure from the culturally rigid, then you aren't pushing the right buttons. Change requires fierce upheaval. It takes control away from people who are comfortable with what's familiar, and it potentially exposes them to failure and embarrassment. For some, this level of change will reduce

their sense of authority and mastery over the system. It eliminates their power base and forces them to learn new skills. Many people will fight you rather than risk trying something unfamiliar. If they try the new system at all, it will be with the goal of looking for errors. As soon as they encounter even the smallest complication, they will quit triumphantly and spend the remainder of that hour writing you a nasty complaint about your faulty programs.

In every organization that PEG has consulted in, the mantra “knowledge is power” has been part of the culture. Losing control over one’s knowledge can be very threatening.

Assuming you are seeing the first wave of the backlash, stand firm. Even if you have done everything right so far, followed all the steps, and know your plan inside and out, it’s easy to falter in the face of loud opposition. There will be complaints, accusations, and hostile exchanges between you and the naysayers. They will write letters and e-mails complaining about the system, find fault with your content, and look for ways to sabotage the courses. They will be nasty, and even though they are a very small minority, they will seem like a huge power structure because they are so adamant in their refusal to change. Those who support you will quietly conform, but those who oppose you will make a ruckus because that’s how they get attention. There will be enormous pressure not to implement programs that force these people outside of their comfort zones. They will try to crush you rather than conform. Don’t give in to the pressure.

If you invest time and energy coddling the naysayers, you will send the message that those who are against you get the greatest attention and that there are no benefits to change, even if virtually everyone is aware that change is needed. The best way to fight them—and you do need to fight them—is to be able to answer their retorts with cold, hard facts. Go back to your organizational research and gather new data that highlights internal success rates and training-industry figures. You will find strength in facts and you will be able to respond to any complaint the naysayers have when you present documented proof that your system works. With the right arsenal of information, you can use logic and truth to combat even the most long-winded complainer.

For example, at Rockwell Collins recently, our team rolled out three new custom courses. Within three weeks, the learning and development team received forty e-mails complaining that the courses were confusing and didn't work. The whole learning and development team was upset and frustrated by the accusations. They considered pulling the courses because they appeared to be failing. But the reality was that in those same three weeks, 8,500 people had successfully completed the new training. The complainers represented only .005 percent of all people who took the course!

The inclination for most people is to bow to the complaints of the boisterous forty instead of recognizing the success of the quiet majority. In most companies, those forty complaints carry more weight than the 8,500 successful completions because they come from the trouble-makers. Don't fall into that trap.

We stood strong against the naysayers. For weeks, team members fielded calls from managers suggesting we scrap the courses we'd rolled out because these forty people couldn't use them. We declined, pointed out our immense success rate, and suggested that the problem was not with the courses but with the users' unwillingness to read the directions or part with their pirated software. We didn't lecture them on the academic relevance of Web-based training; we simply showed them why and how it worked. They couldn't compete with that.

When you are well steeped in your statistics, you will be able to respond to any accusation. Whenever the naysayers spout rhetoric, quote facts. You have to stand up to them or they will triumph. If you give them any ground, such as removing courses they don't like or allowing them to take classroom training in place of an e-learning course, they gain power and change doesn't occur.

After officially launching Project Oasis, we cancelled every classroom course if an e-learning alternative was implemented, and we put a stop to catered lunches for all classroom attendees. That caused outrage throughout the organization. Free lunch with training had been an institution at Rockwell Collins for fifty-five years. It was at the foundation of the "training as a perk" cultural mentality. Again, team members fielded dozens of calls from irate managers demanding to know

what was going on—which is exactly what we wanted. The goal was to shake things up so that everyone was aware that change was afoot.

Managers who demanded that the learning and development group let their people take classroom training were told the only way it would happen is if they paid for it out of their own operating budgets. A few of them did that for a while, but as soon as they had to justify those expenditures to their superiors, they grudgingly fell in line. The year Project Oasis was launched, the amount of money Rockwell Collins spent at New Horizons computer-training facilities dropped from \$880,000 to \$8,000. New Horizons did a great job for Rockwell Collins, but we had a better and far cheaper alternative. Now even that \$8,000 expenditure is nonexistent.

At times you will feel lonely and frustrated, but don't forget that the naysayers are in the minority and they have only the power you give them. Hang on to your facts and sell your successes. Turn back to your supporters and reinforce with them that you are on the right track. If someone compliments you, tell that person to give you the praise in writing, then save those quotes for use when someone attacks you with complaints.

The naysayers will never completely go away. To date, 4 percent of the Rockwell Collins population still has problems with the system, typically because of their reluctance to reconfigure their PC software or an unwillingness to read directions. Even today, every time our team rolls out a new course or cancels a classroom opportunity, someone complains. But we don't give in to the complainers. We may help them learn the new system, point out their errors, or suggest a tutorial to teach them the ropes, but we do not bow to their demands. This is the only way to change the culture of the organization.

## **Training Our Team**

We couldn't have battled those cultural issues and achieved all that we did if we hadn't had a top-notch team supporting us. When we began researching this project together, we knew that success hinged on the readiness of the learning consultants, so we devoted a lot of

thought and effort to their training. Throughout the first year we were constantly building the skills of our team, and we still coach them and give them training opportunities whenever the need arises.

If your team members aren't prepared, or they are confused about their roles or assignments, the project will flounder. It's important to give them the support and training they need not only to do their jobs but also to promote the program within the company. They will be the face of your project, the conduit between your department and the rest of the company, so make sure they are capable before turning them loose.

In the beginning, the learning consultants were overwhelmed by the amount of work and education we required of them. There was a constant process of training, and there were many frustrating moments. Our team members were ready for change, but they were not prepared for the intense effort and juggling that would be required of them. Not only were they expected to revamp their skill sets and present themselves as experts for the project, but they also had to continue to deliver 70 percent of Rockwell Collins's old courses in the classroom.

We redefined their roles early on in the research phase and assigned tasks to get them educated on the latest technology available, but their full training as ambassadors of Project Oasis was far from over. Along with formal training sessions on sales and facilitation skills, there were constant opportunities for mentoring and informal training during teachable moments to help the team make the transition. In the beginning we monitored their ability to deal with employees and to facilitate learning councils. They learned leadership skills during the initial charter sessions and showed their personal strengths and weaknesses as we progressed through those early meetings.

Their skills ran the gamut from those who had highly developed process skills that needed minimal polishing to those who had no idea what they were doing. As we assessed their needs, Butler established individual mentoring programs. Because the team was small, it



made sense to work with the team members individually and informally to focus on their unique strengths. Had ours been a larger group with similar skill sets, we would have opted for more formal training sessions.

Beyond mentoring, we sent them to workshops and seminars for the various tools we'd selected, such as Centra's virtual-classroom curriculum-development course. Purington gave them books to read, including *The Occasional Trainers Handbook* by the Emergency Management Laboratory, *The Handbook for Developing Competency-Based Training Programs* by William E. Blank, and *Teaching Online* by William A. Draves. For each book he held brown-bag lunches to discuss its content and how it could be applied at Rockwell Collins.

The team members were also expected to find their niche within the overall project. Even though we had defined their general roles as learning consultants, they were given some flexibility regarding their ultimate tasks. They were told to choose a major project—curriculum design, virtual classroom, self-paced training—as a primary part of their daily responsibilities.

Because we gave them this flexibility, there was a constant need for clarity among team members. They attended vendor seminars, worked with outside experts, and practiced using the tools. Some found their place early on while others struggled to find a comfort zone in this unfamiliar environment. Even with our guidance there were setbacks, but we felt it was important for them to find their way and figure out where their expertise and interest fit. We gave them our support and made it clear that the company wouldn't fall apart if they made mistakes. There were some setbacks, but they were so excited to be a part of this process that they hung in there, and, in the end, only two of the original team left the company and one of those was hired away by one of our prime vendors.

Whatever area they chose, we provided them with the tools to guide them through their first decision-making situations. Before the launch, as a team we had already mapped many of the work processes that the consultants would use to choose and implement training

opportunities. The various learning platforms were defined and the reasons for choosing each methodology were established, giving the consultants tools to assist them as they made training decisions. They used the course development flowcharts and make-or-buy evaluations to help them build their vendor relationships.

Even with these tools defined, however, they still needed training and experience in using them, so before we turned them loose on the Rockwell Collins population we gave them time to play around with the various tools and training scenarios. For example, they practiced filling out the training needs analysis form. Then we showed them how to coach the managers, who would be expected to fill these out before making training requests.

There were other procedures that still needed to be defined, and part of the learning consultants' training was to be involved with that development process. We took a team approach to curriculum development, which required a consultant and SME to work with vendors on course design. Together with the learning consultants, we laid out the responsibilities of each team member, including how the SME would be chosen and how the learning consultant would oversee the work.

Along with an outside instructional-design expert, all of the learning consultants worked as a team to write the instructional-design standards guide, which has since been used for every course developed for Rockwell Collins. Involving learning consultants in this project established a process for development that the entire team had ownership in and educated them on how to create an instructionally sound course.

Finally, one of the most important aspects of their training as learning consultants came from shadowing us. Every time we made a presentation or hosted a focus group in Cedar Rapids, we brought as many learning consultants as were available. We introduced them to our audiences by name so employees would become familiar with our team. At first they sat quietly in the background, and slowly, as their confidence grew, we gave them segments of the presentation to handle themselves. Over and over they watched us talk about the system and

our strategy. They memorized the statistics we used frequently to emphasize our impact—such as the fact that of the 1,400 individually titled courses delivered in the past seven years, 76 percent were delivered one time to an audience of no more than eight people. We also mentioned the fact that 53 percent of employees reported having to cancel their attendance at a scheduled training event because of work demands. Even now, more than three years later, they still watch and learn as we sell this project to Rockwell Collins's people. However, now every member of the team can present and discuss the strategic plan as well as we can.

Within a year, many of them surpassed us in their areas of expertise. Our manager of curriculum—who knew little about instructional-systems design when the project launched—now uses technical jargon we've never heard before. Not only has he become our expert in the field, he's found a career niche that he loves.

## **A Head Start on Year Two**

Once the Year One goals were met, our team got started on Year Two. While our primary goal for the second year was only to convert 20 percent of the remaining content to technology-based training, many of the courses being addressed would require time-consuming custom development. By starting in the early months of Year One, we gave ourselves room to fail and learn lessons before the team was expected to produce results.

For Year Two, our team targeted courses that were either of high priority to the engineering and manufacturing groups, which made up 80 percent of the population, or those courses that were in constant demand, such as project-management training.

This was the first time our newly developed front-end work processes were put into action. For every course, we had to decide what tool to use, how to deliver the content, which vendor or vendors would be in charge of developing it, how much we were willing to spend, and when we expected the content to be completed. During

this time we discovered that each vendor had a unique process for creating content, some of which were more appealing than others.

There was a distinct learning curve for all of us as the team got used to new systems of course development and determined which vendors had the best approach. For example, the team discovered early on that we preferred the vendors who delivered streams of modules throughout the development process to the vendors who delivered large chunks after weeks of work. The streamed process let us see where the project was going before it was too late to make changes, and it familiarized everyone on the team with the content. After a few courses, Purington told all vendors that we expected content to be delivered in this style.

One of the first custom courses our team developed was training on electromagnetic interference (EMI). Because few of the engineers fully understood the problems associated with EMI, new-product designs regularly failed their final tests because they caused EMI with associated avionics equipment. In an airplane cockpit EMI can be disastrous, and the product redesigns as a result of this problem cost the company millions of dollars annually. Up to that point, few engineers were getting training on this critical problem, which was directly affecting the company's success rates, because management didn't recognize the problem as being one that involved training—in the old model, the only way training happened was if a manager requested it.

To remedy this problem, one of our SMEs and a learning consultant worked with a vendor called Strategic Interactive, and in three months they created a twelve-hour CD-ROM-based EMI course. Within six months of our rolling out the course, more than 1,300 engineers were trained and the EMI problem disappeared. It would have taken thirteen years to train that many engineers on this subject in the classroom. The development teams have improved their productivity and reduced their failure rates, and Rockwell Collins now accepts RFPs with EMI restrictions.

Project-management training was also targeted as a high-demand course that our team prioritized for conversion to technology-based

training. Historically, Rockwell Collins delivered the course in the classroom ten times a year, spending \$300,000 per year on instructor fees, and the learning and development group was still never able to meet demand for the training. This was an obvious candidate for self-paced e-learning.

For approximately \$240,000, a vendor called Mentergy created an online version of the course with the help of the instructor who had developed the classroom model. In exchange for his expertise, Rockwell Collins gave him full rights to the computer-based version to market as he saw fit. The new course is now accessible 24/7, takes ten hours to learn even more skills and knowledge, and has been completed by more than 750 employees. The real power of this course and others is the ability to revisit the material as often as needed. Neither of us can think of a training event we have attended in twenty-five years where participants had the opportunity to apply all the skills and knowledge learned as soon as they were back on the job. The beauty of e-learning, if designed correctly in self-contained objects, is the ability to relearn.

## **Managing Costs for Custom Courses**

It was during this time that our team also implemented a custom development process to manage our budget. Most vendors make their money on templates—building a format for the look and feel of every page of a custom course. To control costs and maintain quality, our team developed a required template-management system that limited the number of templates developers were able to make for each course. For the first course, they were allowed to build thirty templates, fifteen more for the second, and fifteen more for the third. Ultimately they have sixty templates to work with, and the cost goes down with each course. We initially paid \$38,000 per course hour, and we reduced that price to \$23,000, which is extremely atypical for a custom-designed course.

By starting early, our team was able to more than meet the Year Two goals before our established deadlines, and the department stayed within budget. In the first year we were expected to submit our budget on a quarterly basis to prove that the training department was on

track, but by Year Two we were so successful that doing so was no longer required.

Last year, when the vice president of HR stood up at the annual meeting to justify the work being done by our department, the CEO cut him off. He said he'd already heard enough about the great things the learning and development team had done for the company from the rest of the executive staff, so he didn't need it recapped for him. We haven't had to prove our budget since then.

### YOU ARE READY FOR STEP 9 IF YOU:

1. Have gone live. The safest and most effective way to launch technology-based learning is to do it quietly so that you can clean up the bugs before too many people have sampled your wares.
2. Have marketed the project at every level of the company, from management meetings to lunchroom chats. Marketing is your primary job now. Take it seriously. Every time you sell your project, you establish buy-in and interest from the masses.
3. Have begun to attack your goals. The sooner you achieve them, the more respect you will earn from organizational leaders.
4. Have stood up to the naysayers. Don't be beaten down by those who don't support you. Face them, show them that you will not back down, and celebrate those who support you.
5. Have started working on phase two of your project. There will be no rest for a while. Even as you achieve your primary goals, you must always look ahead to what else needs to be accomplished.

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## STEP 9

# Assess and Modify

*“Life without failure cannot be considered life for nothing has been learned.”*

BEN SCHOENBAUER

### GOALS FOR STEP 9

1. Recognize and eliminate failures.
2. Monitor usage rates.
3. Tweak the system.
4. Remarket to non-users.
5. Evaluate effectiveness of content.
6. Sell successes.

If you followed the strategic plan process as we laid it out, you will have big successes in the beginning. Management will be amazed at your ingenuity, your planning skills, and your attention to detail. By targeting easy-



to-implement critical courses in the first phase, you will draw attention to the project, making the most of your big wins early on.

But not every element of the project will go smoothly. No launch is perfect the first time around, because inevitably there will be things you didn't consider. Up to the launch, all of your planning was done in isolation. The transition from theory to practice is a bumpy road filled with obscure obstacles that can bring your transformation to a crashing halt. Expect to encounter these problems and expect to make mistakes—it's part of the process.

The only fatal mistake you can make at this juncture is to be too rigid about change. Ironically, even though this is a change process, your unwillingness to compromise on planned elements is a common trap that the very people who are promoting change often fall into. We learned this early on with countless clients who became so committed to an idea that even when it was a mistake, they had a terrible time letting go of it. For example, a pharmaceutical company that sells veterinary products hired The Performance Engineering Group (PEG) to determine how it could get the customer population to cross-sell products. The reality, the company discovered, was that many of their clients are introverted, passive, analytical people who abhorred sales of any kind. No matter how strong the company's efforts in this area, it was unlikely to increase its sales through a massive campaign targeting every customer. Instead, PEG helped the company to craft a program that would identify and target the small number of clients with the best cross-sales potential.

By recognizing the failure of its primary objective, the pharmaceutical company was able to avoid spending a large amount of money on a program that was unlikely to produce positive results. The company's willingness to acknowledge the error of the plan was key to turning it around.

That willingness is atypical of most organizations, including Rockwell Collins. Prior to Cliff Purington's arrival at the company, one of the training managers was given the task of creating a course for all nonmanagement employees. Two important ground rules were given along with the task: The first was that the new course had to use

the preexisting behavior model and supporting tool; the second was that the model and the tool couldn't be modified or changed for the audience. Evidently several years before, when this model and tool were being sold across the company, the individual who gave this training manager the task had assured executive management that this model and tool were completely appropriate for the entire population. The manager had promised his boss that he'd be able to reuse the same assessment tool and model in the new version of the course. The assessment tool, developed by Personnel Decisions International (PDI), included a series of questions asking participants how they would react in different leadership scenarios. It was the first thing users saw when they began the course, and it required them to imagine themselves in difficult or potentially career-threatening situations.

It became clear to us early on that segments of the assessment were inappropriate for the new audience. The questions put this group of users into scenarios that weren't relevant to nonmanagers and made it obvious that this tool had not been developed with them in mind.

We wanted to take those questions out. PDI agreed that it would be best to take them out, but the original project manager wouldn't allow it. He preferred to have employees use inappropriate assessments that would make them doubt the validity of a course than admit to his boss that he was wrong. Even though the mistake could be easily remedied and would have no lasting consequences, the manager's inflexibility and fear of appearing wrong prevented him from changing his approach.

Ultimately the course was turned over to our team, and the change was made. Had the original assessment tool remained a part of the course, it was our opinion that the course would have failed, because some questions demanded that the participants exhibit a high level of courage and outspokenness—not a common commodity in most organizations. We knew that the participants would look for any reason to discredit the course because of the risks we were asking them to take. It would have been very easy for the participants to reject the entire course on the basis of this flawed assessment instrument.

This is just one example of how an inability to admit mistakes and

an unwillingness to reassess your decisions can fatally damage a project. Many managers would rather run a program into the ground than admit to a personal or professional failing. This is dangerous and threatening behavior in a change-management process.

It's best to plan for mistakes and brainstorm up front how you will deal with them. For example, a client PEG worked with spent two full days with its entire staff brainstorming possible glitches in an e-learning initiative. After developing an extensive list of possible problems with the implementation, they then broke into teams and came up with ways to solve the possible problems. The list of problems ran the gamut from mundane to quite esoteric. But they took the time to develop solutions so that when they did go live they would have action plans in place. Only a small percentage of the problems they listed actually occurred, but because they were ready for every scenario, they reacted quickly to the few that arose and there was never a sense of panic or confusion on the part of any of the employees involved in this massive implementation.

## **Learn with Learning Councils**

Every project will have its setbacks, and even the greatest change leaders will make mistakes. Don't force an element of the program that doesn't work simply because you are too inflexible to admit your failings. It's a waste of effort and it will ultimately hurt an otherwise successful implementation of the effort.

For example, within the first few months we realized one of the vendors wasn't working out, and Purington fired that individual. Purington had hired this individual to manage the vendor team—an effort that he was not particularly interested in undertaking. The individual who was eventually fired claimed to have a great deal of project management experience and claimed to be able to oversee all of the vendors, uniting them into a single efficient team. This wasn't the case. The individual didn't have the skills or depth of program-management experience to lead the team.

Instead of looking for someone else, Purington brought the func-

tion in house. Each learning consultant was given the responsibility to manage his or her target areas, and we took over as program managers, overseeing all of the projects as they progressed. This added a lot of work for us and for the learning consultants, but in the end we realized that authority needed to come from inside our walls. We had to be the ones to lead the group and determine what would be accomplished. We needed to hold that authority, and so we put on another hat and took responsibility for that aspect of the project. It wasn't what we planned, but we learned that in order to achieve our vision we had to be directly involved in the project management, and we made the necessary changes.

Assuming we could outsource project management wasn't the only misjudgment we made in our strategic plan. We found that there was a big problem with one of our primary initiatives—the learning councils. Launching the learning councils was one of the first things our team did after our initial implementation. In our effort to refocus the training process on the front end and to tie all learning to the business objectives of the company, we planned to rely on these councils to define the core competencies of the company and alert us to relevant training needs throughout the business units and across functions.

The councils were at the heart of our plan, which was why it was difficult to see them flounder. The learning councils were modeled on the unsanctioned factions we'd found within the functional units during the research phase. In the past, these groups of subject-matter experts met randomly to discuss their training issues and complain about the way training programs were being run. While their output was somewhat ineffective—focused mostly on griping instead of on accomplishing change—the idea of targeted groups of employees overseeing the training needs of their people made a great deal of sense.

We had planned to do three versions of the councils—functional, business unit, and enterprise wide. The functional council would evaluate the needs of all employees performing certain functions—HR, various engineering groups, and so on. The business units would do the same for their divisions, and the enterprise-wide group, which would have a “global” view of the organization and be able to predict

skill and knowledge needs based on products or projects. The enterprise council was going to recommend the kinds of training that would put Rockwell Collins in the forefront of the industry.

We began with the functional and business councils. The vice presidents from across the company nominated members. Chris Butler oversaw charter meetings, put members through training, and helped them to establish their goals—to define the core competencies of their factions, make training recommendations, and market Project Oasis within their targeted employee populations.

To begin with, a number of the council members were less than thrilled to be nominated. There were at least three other initiatives in action, all of which required a piece of their time; this was just one more commitment that would pull them away from their primary responsibilities. But they agreed. They gamely attended training and were excited about the prospects that Project Oasis offered. The functional councils got off to a smooth start, but the business-unit councils gave us a lot of pushback.

Each learning consultant was assigned to head a learning council, and those leading the business-unit councils were soon frustrated by the lack of response and results within their groups. In several cases, they were getting yelled at by council members. For a while we pushed them harder, assuming that their unwillingness to fulfill their roles was based in skepticism or lack of motivation.

After a while, however, we saw the real problem. The business-unit councils were made up of managers from those units. Unlike the functional-council representatives, who were defining the core competencies of their small niche of expertise, we were asking these managers to define in detail the components of every job title within their group. They couldn't do it. Nobody could! They didn't know the primary components of many of the job tasks in their units, and they didn't have the skills or training to break those jobs down into core competencies. Their roles as leaders did not go deep enough to provide them with intimate knowledge of the daily workings of each role, and the learning consultants saw that it would be unrealistic to try to teach them how to do it.

After several months we realized that it was naïve of us to expect these managers to be able to perform a skill that even people trained in organizational development struggled with. They were in over their heads and were annoyed at being repeatedly pushed to do a task they felt incapable of doing.

The learning consultants asked to redefine the groups' goals, and we, recognizing the error in our plan, agreed. Part of achieving our goals was a willingness to be flexible and change our own plan when necessary. We gave it our best shot and it didn't work out the way we planned, so we changed our view and looked at what we had and what could be salvaged from the experience.

We understood that the managers could not complete the tasks given to them, but we also saw that they provided a valuable service to Project Oasis. In the months since the councils were launched, these council members—all mid-level managers—had promoted the new learning process heavily within their own units. They became our internal marketing arm, singing our praises to their peers and encouraging their people to take advantage of the new system.

To maximize their influence and to salvage the effort put into the business-unit councils, we rebranded members as ambassadors of Project Oasis, making promotion of the project to their people their sole job.

The council members and learning consultants breathed a collective sigh of relief. They all wanted to see Project Oasis flourish, and they'd finally been given a role they could succeed in, to become powerful advocates of the learning-organization transformation. The learning consultants asked them to develop formal marketing campaigns for each unit, which included ideas such as attending the vice presidents' staff meetings to talk about Project Oasis, inviting learning consultants in to offer course demos, and promoting coming events.

They sang our praises, walked employees through courses, encouraged their people to use the training, and rewarded employees who availed themselves of the system. They were excited about the new offerings, and that excitement spread. An unintentional

grassroots marketing campaign carried our message to the masses. Employees saw that management supported the initiative and were thus more eager to get on board. Executives heard regularly from managers about how excited they were about the changes that the learning and development team was making and how successful the new learning initiative was.

The functional-group learning councils continued to run successfully. Because they were made up of experts in their areas, they had the background and knowledge of the roles to accurately define the components of their jobs. With the guidance of our newly trained learning consultants, they broke those components down into core competencies and tied them to training goals. For most of the functional groups, after two years they achieved their goals and disbanded. However, there are a few engineering groups that continue to meet to this day to assess their constantly evolving training and competency needs.

The enterprise-wide learning council was never launched. Our goal had been to populate it with rotating executives who would oversee the output of the other learning councils and verify the accuracy of their training requests, but it quickly became clear that their function would have been redundant. Instead of pushing executives to participate in another function that would require much effort for little result, we scrapped that piece of the project and saved them the trouble. Because we acknowledged our misjudgments early on and didn't force an initiative just because we'd said we were going to do it, the project actually won esteem from our leaders. They appreciated our willingness to move on, and this allowed the team to focus on the more profitable, more successful elements of the project.

We didn't view the problems with the learning councils as mistakes. In almost every case, our team was going where nobody had gone before. These were uncharted waters. Because we were flexible and willing to change in mid-stride, we made the corrections that were necessary.

## Monitor and Market

As you proceed, remind yourself that problems are to be expected and are acceptable. Even if something is committed to paper, and even if you've pitched an idea vehemently in your business case, if it doesn't work, be prepared to change it or scrap it. Don't waste effort on initiatives that won't work. You will lose credibility throughout the company and create hostility where you once found allegiance.

But beyond scrapping those things that fail, you also need to constantly assess and modify your processes and plan. Elements of the project that are working will still require tweaking; certain employee groups will need more attention than others to get them involved in the project; and certain elements of the plan will need to be changed or tossed aside if they aren't working. This is a time to be flexible, to be introspective, and to be honest about your successes and failures. It's a time to constantly evaluate your choices, and to pinpoint what's working and what's not.

There was an instance where a Rockwell Collins manager said that we were making an inaccurate assessment of the viability of e-learning and that the entire strategy was doomed to failure. She went on to suggest that if we wanted to look good, we should choose a different approach. Looking good was more important to some in the culture than doing the right thing. We chose to do the right thing.

Your learning-management system will help you assess course usage and success rates of employees. For some companies, usage alone or time spent in each course will be an acceptable reflection of the value of a course. You may want to track modules completed, time per page, or test scores.

Some companies only track completion rates; however, we believe that with Web-based training, the focus should be primarily on learning acquired, not final tests completed. The idea is to deliver knowledge in a fast, efficient package, not to force users to take modules they don't need in order to provide you with trackable test scores.

We reject the notion that people must complete online courses



before they count. The popular trade media are full of articles bemoaning the 25 percent completion rate that most learning-management systems record. The truth of the matter is that we think that's about right.

Research clearly shows that adults learn differently from the way children do. One of the key differences is that adults simply acquire what they need and utilize that knowledge. It is completely logical to assume that people go online, learn what they need, and then exit. They don't spend time going over material they already know. Mandated courses and forced completions serve only to frustrate adult learners and turn them off to the education process.

Don't let your success be measured by completion rates. The real measure of success is whether the employee base has the skill and knowledge to do their jobs properly. If you let senior management hold you accountable for an arbitrary completion rate, you are allowing managers and supervisors to avoid *their* responsibility . . . namely, assessing their direct reports' performance; providing clear, unambiguous feedback; and correcting any performance deficiencies.

The commitment to completion rates is a cultural issue that you may or may not choose to do battle over. Regardless, usage rates, whether they monitor time spent or courses completed, will provide you with valuable information regarding two elements of your project. They will allow you to monitor which groups of employees are taking advantage of training and which ones aren't. You can use that information to plan your marketing campaign and to schedule user presentations.

Whenever our data shows a drop in use within a group or functional unit, we deliver our Project Oasis presentation again to reintroduce the curriculum and our enterprise rationale. We tell executives why this system is important to the future of the company, how it ties to the business vision of the company, what needs it meets, and how to use the system. Sometimes we need to reintroduce groups to the training because their needs have changed so much in two years. Sometimes they have a large crop of new employees or Rockwell Collins acquires a company and the new population is unfamiliar with

the system. Even years after our initial launch, a constant process of monitoring and reacting is required to maintain a balance of users throughout the organization. Any project will die on the vine if the marketing stops.

We also use usage rates to prove our success with new courses and the system as a whole. That can come in very handy when you are inundated with complaints from a small minority who can't use the system. And it's powerful data with which to verify that you hit or exceeded your targets. For example, in Year Three (2002) our team set a goal of having 21,000 courses accessed. At the time we set the goal, we thought it was a stretch and that it would take a lot of work and marketing, but we wanted to push ourselves to achieve it. By June of that year we already had 36,000 users and expected to have double that by the end of the year. That's a great indicator to us and our supporters that the program is valuable and useful to the employees.

If you aren't succeeding, your usage rates will tell you that as well. They show you if particular courses are underutilized, which may tell you that there isn't a need for that topic or that people find it confusing or of little use. Learning-management system report rates indicating a lack of use across employee groups is the first sign that something is wrong with a course or set of courses. From there you can survey end users, evaluate content, and reassess the process you used to choose the content in the first place.

Every quarter, the learning and development team gets rid of the thirty least-used courses and replaces them with thirty new ones. This keeps content fresh, it gives us new courses to announce and market, it keeps users curious about what's available, and it ensures that we continue to offer the highest-quality courses available.

## **Monitor Your Money**

You should also assess your budget, comparing dollars spent with dollars earned. You need to gather and track that information to see whether you are hitting your targets and to get proof that you are suc-

ceeding in the cost savings you promised when the program was launched. Every statistic you collect can be used to further sell your program and show your supporters that you are delivering on your goals.

Many of our later custom programs were funded by dollars that our team saved on the front end by reducing travel costs, classroom costs, and lost hours of productivity. For example, instead of spending the projected nearly \$1.5 million on teaching IT and desktop-applications classes in the classroom, we spent \$300,000 on our initial 300 Web-based courses. That saved the company \$200,000 on travel expenses, \$450,000 on materials, and almost \$900,000 on labor. Of that savings, 60 percent went back into our budget.

It was critical that we were accurate with our budget forecast before the launch because Purington had promised the company that we could deliver 400 percent more training for 40 percent less budget. That meant our budget was automatically 40 percent smaller the day we started. The money saved up front was earmarked for custom development that otherwise would not have been possible. At the end of the first fiscal year, we came out \$126.00 over our projected budget.

It's not just important that you hit your targets; it's equally critical to publicize them. Those numbers—compared with our original baseline—had a powerful impact when we reminded executives why they had supported this initiative in the first place.

### **YOU ARE READY TO MOVE ON TO STEP 10 IF YOU:**

1. Have acknowledged and eliminated your failures. Even the best strategic plans are flawed. The sooner you weed out the mistakes and tweak the existing system, the sooner you can focus on those elements that are successful.
2. Are monitoring usage rates. The continuing success of your project will rely heavily on making sure that existing and new users are taking advantage of your system.
3. Have evaluated the effectiveness of your content. Training needs will change constantly. It's a good idea to constantly

examine course usage and rotate out those offerings that are least successful.

4. Are selling your successes. If you don't brag about what you've accomplished, no one else will. Take every opportunity to share your accomplishments with the employee population, executive team, and the media. Soon others will start spreading the word.

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# STEP 10

## Celebrate Your Success

*“The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather a lack of will.”*

VINCE LOMBARDI

### GOALS FOR STEP 10:

1. Keep employees abreast of changes.
2. Alert executives to your achievements.
3. Broadcast success stories to the media.

Have we stressed enough the importance of marketing? Your transformation process cannot have the kind of phenomenal success that Rockwell Collins continues to see if you don't constantly and aggressively market your project. It's not enough to do well; you need to brag about it. If you want people to be impressed with what you've done, shout it from the rooftops. Take your successes out to the company

and broadcast what you've accomplished. Failures get plastered all over the bathroom walls of most organizations, but the successes are buried in the company bulletin, so you're going to have to market yourself—nobody else will do it for you.

Communicating our success stories has always been an integral part of the strategic process. It is a critical element of the change-management process, and it's tied inextricably to our team's ability to effect change in the Rockwell Collins culture. Our team is always communicating with leaders and end users in an attempt to win their support and demonstrate the value of Project Oasis. We do this personally by constantly updating and delivering the presentation; learning consultants regularly refresh course offerings, and the learning and development team frequently hosts giveaways, sends e-mails, and writes articles for the newsletters. All of these efforts, which take up a considerable part of our team's daily lives, are aimed at converting the population of Rockwell Collins to a learning-organization mindset.

You can't just throw change at people, and you can't expect them to understand the value of change unless you show it to them. When we show employees and executives our statistics and tell them our success stories, we communicate to them that this project will happen whether they climb on board or not. The goal of sharing successes is not just to boast, although that is an element of it. Mostly, you do it to prove, anecdotally and statistically, that you are achieving what you set out to accomplish, that this transformation is having significant, positive results within the company, and that everyone is benefiting from it. Through our communication techniques we make it clear that this project is in the company's best interests and that if employees want to continue to thrive as members of Rockwell Collins's team, it's in their best interests as well. If we didn't share these successes we would fail to deliver on the communication aspect of our strategic plan, and converting employees from the old way of learning to the new would be much more difficult.

There are several things you can do to celebrate your successes and maintain a constant stream of communication with end users and executives. To keep the employee population abreast of your latest

achievements, make ongoing announcements regarding the day-to-day activities of your team. Use global e-mails and articles on the Web site to make everyone aware of additions or changes to course content, updates in technology, and the addition of new delivery mechanisms. Create a “learning highlights” section online or in your corporate newsletter showcasing new courses or successful end users. By supplying end users with snippets of information, you keep the project foremost in their minds without inundating them with material. They become aware of the program changes and excited about new offerings, and this flow of communication ensures that new content will be taken advantage of quickly. Stagger implementation of new elements to your system so that every month or two you have an exciting reason to make contact with end users.

There will always be a reason to promote your system. If you can't find one, create one. For example, send out annual or biannual surveys to measure end-user reaction to the process, to gather information about changing needs, and to create new volumes of data to support your cause; or offer incentives in the form of gifts or certificates if users take advantage of certain courses or tools in the system. Make them aware of the support structure and reward system you have in place, emphasizing the benefits of taking early advantage of the system. This builds a culture of positive reinforcement. Those who support the system should receive the greatest reward and attention.

At Rockwell Collins, the learning and development team constantly gives away promotional material to show our appreciation and to flood the workplace with the project logo. Participants in pilot tests and subject-matter experts are also generously rewarded with larger gifts such as handheld computers or gift certificates to favorite restaurants. We also lavish them with public praise.

Recently, a small group of employees refused to participate in developing QuickLearns. They have the reputation of being contrarians and tend to take extreme positions on a variety of issues. We could have forced them, through their union leadership, to participate, but we chose another avenue. This group worked the day shift, and the same work was done by another employee who worked nights. The



night-shift employee agreed to act as a subject-matter expert for the QuickLearns. The Performance Engineering Group (PEG) created the QuickLearns over a series of four nights, and, at the end, the employee was presented with three separate gift certificates—from the learning and development team, the consultants, and his manager. We made sure he was given the gift certificates at the end of his shift, just as the recalcitrant co-workers were arriving for their shift. We also made sure he was noisily praised in front of the others by his immediate supervisors for his cooperation and expertise. Instead of punishing the behavior we didn't want, we made sure the behavior we did want was rewarded.

Delivering the presentation to end users, hosting brown-bag lunches, and giving system demos provides end users the chance to acquire new information about the system and get to know you and your team. We constantly update and deliver our presentation, adding the latest statistics on usage rates. This data also comes in handy when the team is confronted with the small percentage of employees who steadfastly refuse to support the project. When they complain that a course doesn't work, we counter with piles of statistics to prove that it does. For example, when the learning and development team recently rolled out three new custom courses, our team received forty e-mails complaining that the courses were confusing and didn't work. But in that same time period, 8,500 people had successfully completed them. Because we gather those statistics, we have a stocked arsenal of weapons with which to fight the negative minority and prove that any problems they have are not with the technology or the courses but with their own computer configuration or cultural obstacles. Usually, they haven't read or followed the on-screen directions, or they've been told by a supervisor to take a given course and they're rebelling in anger at being forced to do something they didn't have any input into.

We don't just ignore their complaints, but we do make sure they understand what the problems are and what the learning and development team is trying to accomplish with the course. Context is critical if you are to win over naysayers. In some cases, pointing out the personal benefits of taking a course or of using e-learning to someone who's

never given it a chance is all it takes. It is never our intent to belittle or demean people who complain that a course doesn't work, but with our statistics we can gently help them understand that something else is going on if they're having problems completing a course. Learning consultants work personally with everyone who complains, in order to resolve their problems and convert them to the new learning system.

Along with using statistics to prove our everyday achievements, we target the big victories, the courses that have caused profound changes in the company's ability to meet its goals, and we tell the world. The team broadcasts its triumphs in articles published in the company newsletter, writes stories for national trade magazines, and distributes flyers and posters around the company, reminding people to use the system.

It's important to keep up this flow of information so that employees at every level of the company, from service reps to management, are aware of what you've accomplished. Doing so further secures support for the project from the top and pushes contrarian end users to give in to the change and take advantage of the system.

## **Manage Management**

Besides marketing to end users, you have to stay in touch with your constituents, making sure they are aware of your casual accomplishments as well as your major business-altering successes. Keep them tuned in to your daily efforts and further cement their support of your initiative by sending them memos to share monthly or quarterly statistics showing high levels of participation, completion rates, or proof that you are meeting budget expectations. If you defined your core objectives with measurable parameters, you will find it easy to gather data to prove that you've achieved your goals. For example, our goal was to deliver 30 percent of training using technology by the end of Year One, 50 percent by Year Two, and 70 percent by Year Three. With those parameters established, it became a simple matter of collecting data and doing the math to determine whether our team was accomplishing its objectives. As of June 2002, the end of our three-year project plan for Rockwell Collins, we'd met every budget goal ahead of

schedule and have converted more than 80 percent of the curriculum to computer-based modules.

Along with quarterly data on our enterprise goals, we collect budget data on our conversion efforts comparing costs of classroom training with those of technology-based courses. Every time the team converts a course we have new data, such as the chart shown in Figure 10-1, to show further cost savings to the company.

We also get monthly course-usage reports (see Figure 10-2) that detail the number of completions of our top thirty courses and chart

**Figure 10-1. Conversion data.**

## EMI Basics

Instructor-Led	Cost	
◆ 20-Hour Classroom	◆ Student Time (180 x 20 x 55)	\$198,000
◆ Presented 6 times per year	◆ Student Travel (180 x 3 x 1 x 55)	\$29,700
◆ 7:30–4:30 M–F	◆ Student Materials (180 x \$60)	\$10,800
◆ 180 students	◆ Instructor Fees	<u>\$12,000</u>
◆ Would require 13 years to get everyone through	(6 x 20 x 100)	
	<b>TOTAL</b>	<b>\$250,500</b>
(Identified Need of 2,000–2,500 Engineers)		
<b>CBT</b>	<b>1<sup>st</sup> Year</b>	
◆ 8-Hour Course	◆ Development	\$250,000
◆ 60% Less Time	◆ Student Time	<u>\$79,200</u>
◆ On Demand	(180 x 8 x 55)	
◆ Worldwide		<b>\$329,200</b>
◆ More Robust and Interactive		
◆ All 2,000–2,500 can complete first year	<b>2<sup>nd</sup> Year</b>	
	◆ Maintenance/Upgrade	\$70,000
	◆ Student Time	<u>\$79,200</u>
		<b>\$149,200</b>
<b>NOTE:</b> EMI has been identified as causing over \$1M in product test delays		
<b>SAVINGS SUMMARY</b>		
<b>ILT</b>	\$250,500	
<b>CBT (1)</b>	\$329,200	+\$78,700
<b>CBT (2)</b>	\$149,200	-\$101,300
	<b>2<sup>nd</sup> Year Savings</b>	<b>\$22,600</b>

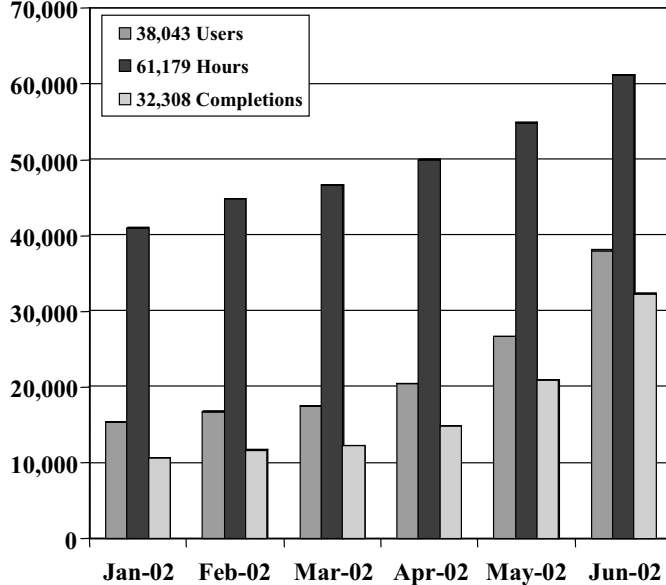
We regularly tracked the cost savings of converting classroom courses to e-learning.

**Figure 10-2. CBT usage report.**

*Oasis Learning Center*

**CBT Course Usage Report**

**As of June-End 2002**



**Top 30 Completed Courses as of June 2002 End**

Safeguarding Proprietary Information	5703
Emergency Plans (AC)	4538
WIN Timecharging Refresher (AC)	2227
Perform Rev & Dev Plan (Centra)	1608
ETCP: Overview (Intro & Navigation) (SI)	1355
ISO 14001 Engineering (CentraOne)	1183
ABACO Timecharging Refresher (AC)	973
WIN Timecharging in SAP (AC)	755
ISO 14001 (CentraOne)	636
HPWS Orientation for Lean Certification (Centra)	504
Emergency Plans for Supervisors (AC)	501
RCRA Refresher C Ave. 2001 (Centra)	484
LEAN Value Stream Mapping & Analysis (AC)	380
ETCP: Software (SI)	351
ETCP: Systems (SI)	306
Metrics Development Part 2 (CentraOne)	294
Metrics Development Part 3 (CentraOne)	291
SkillScape General User Basics (CentraOne)	290
Metrics Development Part 1 (CentraOne)	280
SkillScape General User PDP (CentraOne)	248
ETCP: Hardware (SI)	226
RCRA Refresher C Ave. 2002 (CentraOne)	207
Root Cause #1 (CentraOne)	156
LEAN Quality Cost of Non-Conformance (Centra)	143
Change Management (Centra)	134
LEAN Quality Mistake Proofing (Centra)	133
Rockwell Collins Benefit Update (Centra)	125
SAP Basic Navigation (Centra)	125
Centra User Training (Centra)	119
Conduct'g Mtgs Effective Mtg Comm (KCI)	112

Usage reports provide proof that the new system has been embraced by the Rockwell Collins population.

user progress for the year. For example, as of June 2002, Rockwell Collins had a total of 38,043 users take 61,179 hours of training, and there were 32,308 course completions. Our goal for the entire year had been 21,000 users, so this report showed we were far out-achieving even our own aggressive targets.

## **Make the Most of Big Successes**

Besides daily statistics, tell them the stories of your monumental successes, don't be too shy to brag. If you don't, who will? Taking the time to tell your story ensures that it gets framed in the best possible light and reminds your audience why they put their faith in you. Bring executives your numbers, but wrap the numbers in detailed stories of how your system affects the lives of employees and the success of the company. Statistics on their own spur only a limited amount of excitement. They have a much deeper impact when they are delivered in a context that links them to the business imperatives of the audience.

When the learning and development team hits major home runs at Rockwell Collins, you can't get us to stop talking about them. For example, the electromagnetic interference (EMI) course our team developed, which solved a multimillion-dollar-a-year problem in the engineering department and enabled the company to bid on new contracts, was a powerful example of our success. The course was linked directly to a critical business issue—products meant for airplane cockpits were failing design tests because the electromagnetic interference they emitted disrupted other avionics equipment in the airplane. The learning and development team helped to eliminate that problem through our work processes—front-end analysis and the delivery of a targeted competency-based computer-based training course.

But if we had simply told executives that the learning and development team delivered EMI training to 2,500 engineers, the story would have had little impact, especially given that few of them understood the specifics of EMI and its effects on the business. Instead we told them a story, first setting the stage with the way things were, showcasing how this problem went unaddressed for years because the

old training system didn't have the tools to uncover the flaw in the business cycle, and highlighting the amount of money the company wasted redeveloping products every year. Then we told them how our system was designed to pinpoint such problems, how after considerable front-end analysis our team created a single twelve-hour CD-ROM course that got all 2,500 engineers trained in six months, and how the problem promptly disappeared. Even without taking direct credit for the elimination of this immensely costly situation—you never know what environmental factors affect training results, and we didn't have the time or money to isolate them—the story, linked with the multimillion-dollar savings to the company, painted a vivid picture of the influence Project Oasis was having on Rockwell Collins's business. Our leaders were suitably impressed.

Big successes like this one should receive lots of attention to maximize their impact. We talked this course up to anyone who would listen because it was the clear illustration of how our learning-organization transformation directly caused increases in productivity, potential for new business, and a reduction in costs. It changed a development process, sped delivery of a product line, and eliminated a significant skill gap in the engineering community.

## **QuickLearns Revolutionize Team Processes**

EMI training was just one of the great stories that came out of our learning-organization transformation. Our greatest victory, the story we tell the most and the one that has had the most significant effect on the business, is the invention of QuickLearns. QuickLearns are condensed computer-based training modules that feature streamed video of subject-matter experts performing specific tasks while they talk the audience through the process. Coupled with the video are text blocks outlining the steps—for learners who prefer to read—and short quizzes with feedback at the end.

Our team invented QuickLearns to combat a critical problem that came to our attention during one of the many follow-up meetings we conducted with our executive team. While we were delivering the

updated presentation to the senior vice president of operations, he asked us if we could help him deal with the loss of tribal knowledge. He wasn't even sure his problem was training related but he had seen the impact Project Oasis was having on business units across the company and thought we could offer some guidance.

His best people, his experts, were employees who possessed critical skills known only to them. They had been with the company for decades and many of them were ready to retire—if they hadn't done so already. Thanks to the “knowledge is power” mentality of the company and its history of insufficient training processes, every time those subject-matter experts retired, they took that valuable information with them. This senior vice president was losing expertise, and this loss was having a profound impact on his ability to meet performance goals. He was unsure of what to do about it.

At that time we had been exploring an intriguing rapid-development computer-based training process that we believed could solve his problems. We knew that the answer to this issue was to establish a system of training that captured the knowledge of these aging experts. This captured knowledge would then be used to rapidly train other employees within their workgroups.

The problem was, this required custom curriculum design and development, which is costly and time consuming. Justifying high-cost training development for a skill that would be utilized by only one or two people was obviously cost prohibitive. We needed a process that was of high quality, was of low cost, and had a quick turnaround cycle. The rapid-development process met those requirements. It was a way to capture best practices being performed by experts and disseminate them to end users, who could watch and copy tasks as they were performed. The process seemed relatively simple—videotape the expert on the job and burn the resulting movie to a CD.

Using that model, Chris Butler wrote a business proposal for QuickLearns that included cost parameters dictating one learning module—which could be at the most twenty minutes long—that should cost no more than \$4,000 to produce. With that formula he predicted an eight-to-one payback on the investment.

After the front-end analysis was completed, we targeted clean-room gowning techniques for the initial pilot training course. Rockwell Collins's internal video-production department taped the process. PEG produced the module following our cost guidelines and adhering to our instructional design methodology, and we took the finished product—a seventeen-minute tutorial—back to the senior vice president of operations. He loved it. He said the course was exactly what he was looking for and while he was still sitting in the meeting, he made a list of fifty other topics of issue to him that Quick-Learns could address.

Thrilled, we set out to hire a contractor to take over the business, but we were stopped short by the fact that no vendors were interested in the business. Because our budget was so small and our expectations were so great, everyone we asked to bid on the project said it was an impossible goal or they weren't interested in producing low-end videos. Typically, a video shoot costs thousands of dollars and hours of work for a team of people—even for small segments of finished product. We expected the process to be completed using one videographer and one subject-matter expert, and we wanted it done in days, not weeks.

We found an independent consultant willing to attempt the task. Unfortunately, he wasn't able to produce the quality we required. He didn't have all the required skill sets to be successful. In hindsight, we recognized that we'd hired someone who couldn't succeed for reasons beyond his control.

We knew from experience that a high-quality product could be created within the parameters we had established, but we realized it would take a very specific set of skills—instructional-design expertise, professional videography experience, digital editing, and the ability to put non-actors at ease on camera. We agreed that the process would be best served by contracting PEG to do all of them. They invented the process, they proved with the pilot that it was possible to accomplish our goals, and they had the in-house expertise to take on the project.

Using a professional-grade camera, digital video-editing tools,



and custom-designed authoring software, PEG began producing QuickLearns for topics that fell into four target areas:

1. *Repetitively taught skills.* We built courses focusing on techniques that are taught constantly to new employees or as refresher training and were critical to the business process, such as safety behavior, microscope use, or cleanroom gowning techniques.
2. *Best practices.* Anywhere there was one person who had a particular way of doing things that was better or faster than the traditional process, PEG created QuickLearns that recorded their unique process.
3. *Mentoring skills.* The old model of training at Rockwell Collins's plants required seasoned employees to mentor rookies on the job until they were up to speed. This was a great way for new employees to learn the job, but it dramatically reduced the productivity of the teams' best people. Instead, PEG turned those coached skills into QuickLearns, allowing new employees to be "mentored" by a best-practice video instead of by live experts.
4. *Tribal knowledge.* Where critical skills or knowledge was held by a few individuals, PEG captured that expertise to disseminate to the team. This was the most important use of QuickLearns at Rockwell Collins, because key experts held the power to shut down product development if they left the company. For example, many of the products Rockwell Collins produces have several elements, each of which is built by an individual team for later assembly. On those teams there is often only one test technician who can test his subset before it can be completed. If that person is sick or quits, the productivity of seven teams is affected because assembly cannot be completed until every part is ready.

## **QuickLearn Success Stories**

In three years, PEG has shot more than 500 QuickLearns for Rockwell Collins, covering a range of manufacturing topics—everything from how to use solder pots to tuning sophisticated radios. The results have been phenomenal. Many of Project Oasis's best success stories, the ones we shout from the rooftops, emanated from this QuickLearn process.

### **Cleaning Cleanrooms**

Early on we targeted tribal knowledge—the skills or information that was held by small groups of experts—because it made the company extremely vulnerable. One of the first courses completed was how to clean a cleanroom. At the time PEG began building QuickLearns, there was one person on staff at the Manchester, Iowa, production facility who cleaned both of the cleanrooms on a third shift. She had no protégés and no backup. If she left the company, the cleanrooms could be shut down until a new person was brought up to speed.

PEG shot five QuickLearns of her performing her specific duties. Months later, the company faced mass layoffs that included this person. Because we had the QuickLearns, training an existing employee to replace her took one-third the amount of time it normally would have. The replacement was ready to go in two days, and no cleanrooms closed as a result of the layoff.

### **Faster Training Supports the War Effort**

QuickLearns also played a major role in helping the company increase productivity in response to the war on terrorism. Rockwell Collins manufactures many products used by the military, including a handheld global satellite positioning tool that soldiers on the ground use to precisely locate themselves. The team that manufactures this tool was producing roughly forty-five units a day until the war began, and then their orders increased to more than 200 a day.

This item is a complex piece of equipment. Using the mentoring training process from the old training model, bringing other production teams up to speed would have taken months—dramatically decreasing

the productivity of the original team in the process. PEG shot QuickLearns for the eight stations of the production and shipping line in one week. As a result of these training modules, the two newly assigned teams were able to ramp up to full productivity in two months.

Similarly, Rockwell Collins makes a highly sensitive and classified radio called a Joint Tactical Information Distribution System (JTIDS) to manage air-combat communications from an AWACS plane. On the team that produced these radios—which cost \$1 million each—was a technician who broke at least one component of the final product on every shift. It was unclear what he was doing wrong, but his repeated errors forced the entire team to stop and fix that piece, dramatically affecting their productivity, which was already well below their target goals.

PEG shot one QuickLearn—for roughly \$4,000—of the entire process and put that tech through training. He immediately stopped breaking the equipment, and the team's productivity improved in less than three weeks.

This is just a small sample of the influence QuickLearns have had on Rockwell Collins's productivity and financial success. QuickLearns have been so popular with the manufacturing team that its leaders rave about them publicly, even without our urging. In a May 2002 article in *Fortune* magazine about Rockwell Collins called "A Big Maker of Tiny Batches," the vice president of operations talked unsolicited about the impact QuickLearns have had on his business processes. In the article, he praised the flexibility and mobility of the QuickLearn learning modules. He touted the company's ability to move production of any product to any plant because the QuickLearn modules can go with it, "cutting the amount of time it takes to train an individual by a third to a half."

This was especially useful when workers at a plant in the Coralville, Iowa, facility went on a brief strike in 1998. According to the article, "production of the circuit card for the JTIDS communications device was temporarily shifted to another plant, which got up to full production in three weeks. In the past that ramp-up . . . could have taken a year."

Even though the learning and development department was not involved with the article, QuickLearns were still talked about because people are aware of the impact they have on the business. It proves how deeply our processes have been felt around the company. We aren't the only ones who see it. Our leaders are as excited and supportive of the process as ever. The initiative is well acknowledged among the senior executives of this company, and, as a result, the learning and development team is now seen as a vital element of the business process.

QuickLearns are an excellent example of why you need to keep selling and educating your leaders on what you can accomplish. The vice president of operations didn't know enough about the training process to see how Project Oasis could solve his business problems, but by getting him to share his concerns we were able to identify a training need. That interaction allowed us to craft a solution that revolutionized the company's ability to rapidly train employees and added flexibility to job roles and plant production cycles.

## **YOU HAVE COMPLETED THE LEARNING ORGANIZATION TRANSFORMATION IF YOU:**

1. Along with completing Steps 1 through 9, are constantly keeping employees abreast of changes to content, tools, and offerings.
2. Regularly alert executives to your achievements through newsletters, e-mails, and budget updates.

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# Looking Toward the Future

*“Tomorrow is the most important thing in life. It comes in to us at midnight very clean. It’s perfect when it arrives and it puts itself in our hands. It hopes we’ve learned something from yesterday.”*

JOHN WAYNE

## GOALS FOR THE FUTURE

1. Don’t rest on your laurels.
2. Reassess needs and readiness.
3. Monitor your progress.

Have you completed every step? Have you done the necessary research to uncover the hidden truths about your culture and business vision? Have you written a bold and committed strategic plan detailing every step you planned to take, complete with budget and timelines? Have

you sold it brilliantly, implemented with great success and continued to market and adjust the process until it was humming along with few problems and great support?

Congratulations. If you've made it this far, you have won the right to call yourself the champion of a learning organization. Your organization and its employees are transforming themselves from passive learners waiting to be filled with information to active gatherers of skills and knowledge. Your management has backed up this transformation with its infrastructure, guidance, and support, empowering its people to complete that quest. You've created a learning system with targeted objectives, front-end needs-assessment tools, and an educated team of learning consultants who can take your message to the masses and determine which problems require training as a solution. You have stood up to the pressures of naysayers and perhaps even converted many of them with your deep understanding of the project and a wealth of statistics to combat their complaints. You have begun changing the culture of your organization, making it a place where learning is a key component to every job description, knowledge is starting to be shared openly rather than guarded because of its intrinsic power and use for personal gain, and learning is directly tied to the business vision of the company.

The transformation may not be complete, but it's moving. Research shows that it takes five to eight years to change the culture of a medium-to-large-sized company. And as you've read so many times on the preceding pages, fundamentally this is a culture-change initiative—not an e-learning initiative. In terms of actual time, you are probably two to three years into the actual implementation, which means if you are doing things correctly you will only now begin to actually see the culture of your organization shifting.

So how do you know that the change you want is taking place? There are no hard rules to tell you when it has happened. Generally speaking, though, you'll know that the culture is changing when managers fill out the needs analysis before requesting a training program and when they automatically assume that you'll provide it online, even if that's not the appropriate vehicle. Another good indicator that the

culture is changing is when required courses delivered in computer-based training format generate a very small number of complaints versus successful completions. Of course, this assumes that required courses work properly and are of high quality.

Early on in the process you will know you're being successful by the number of complaints you receive. Keep in mind that change is always accompanied by a lot of griping, if you're doing it correctly. If after your initial "go live" nobody complains to you, something is wrong. Check it out! Remember when we stopped providing free lunches and doughnuts for the instructor-led classes at Rockwell Collins? The learning and development team had to deal with a huge outpouring of complaints and outright anger. At the time, the change really stressed the staff, but we knew by the number and nature of the complaints that we were doing the right thing. The issue of the refreshments was a petty one, but it symbolized the reward culture of training at the company. We believe that the change served as a tangible element of the entire transformation that was taking place and it made it easy for people to latch onto.

If you see the change, and have met your initial goals, be proud of what you've accomplished, but don't fall into the mindset that "this is the way things are." That's the death knell for training. Even a revolutionary learning transformation will stagnate without proper care and attention. Pat yourself on the back, reward your staff, then go back to the beginning of the process and start again.

Being a learning organization is a never-ending process of research, evaluation, selling, and upgrading. The reason you wanted to become a learning organization is still valid—to stay on the cutting edge of a knowledge economy. You can't just arrive on that edge and settle in for the ride. Getting there is the toughest challenge, but staying there requires diligent attention and reaction to the rapidly evolving marketplace. It means providing your people with new tools and structures so they can constantly improve their ability to acquire new skills. In a world in which technology development evolves monthly, your strategic plan will not be valid unless it is constantly reevaluated and upgraded to maintain pace with the competition.



The balance you need to strike is to keep advancing the learning system without getting too far out in front of your organization's ability to adapt to changes. Going too fast with a lot of change will confuse the organization and cause frustration. Going too slow will also frustrate the organization because the system becomes stagnant and loses the momentum and robustness that is now expected.

Going back to the beginning of the process may seem like a waste of time, but you must realize that the company you have now is vastly different from the one you started with.

In the beginning you were in the infant stages of a learning-organization transformation. Your plan was based on a certain level of readiness and access to technology, and your strategy was tied primarily to changing the mindset and skill-acquisition process of your workforce. Now everything has changed. By the sheer force of your project and the achievement of your objectives, your target audience is not the same group of novices you started with. Their knowledge of what it means to be an active learner will have developed. As a group, they will have adopted the behaviors that ultimately translate into a learning organization, and most will have done so without any real understanding of what a learning organization really is. Their ability to understand the value of e-learning and use it will have grown significantly. They will have a new attitude about their own learning. Their desire to push their skill sets will have increased, and they will expect you to support that desire.

Once you achieve your initial objectives and push the change process forward, reevaluate what you are now capable of delivering. Reassess end users' computer literacy, access to technology, and motivation to learn. You'll find that people's attitudes and savviness have changed, and this change will affect your ability to roll out new tools and processes.

At Rockwell Collins, we began with a population largely new to the concept of self-paced learning. Our team battled cultural issues, such as the belief that the classroom is the only legitimate place to learn, and the fear and skepticism toward e-learning. Over three years we fought those cultural issues and changed the attitude of our core population. They now use e-learning readily and require much less

prodding and hand holding then they did in the past. Because their learning skills have matured, we are now able to launch tools that the company has wanted for years but couldn't make work because end users weren't ready or able to use them.

For example, in our original project plan we wanted the learning councils to break job roles down into core competencies and tasks. They were unable to achieve that goal, but the need for that information remained. Two years after our team launched Project Oasis, software was developed to accomplish that task. SmartForce now offers SkillScope, a relational database software system that identifies job families and breaks each one down into tasks and how they are supported through the specific skills, knowledge, and abilities required to perform each role. With the jobs broken down sufficiently, employees can assess themselves and gather feedback from their respective supervisors, peers, and subordinates if appropriate, on their ability to do the tasks associated with their jobs. For the first time in their performance-review process they are able to measure themselves against a defined list of competencies instead of relying on subjective ratings of perceived performance.

This system won't work in isolation; it will be linked to other HR systems at Rockwell Collins—including performance assessment, training and development, staffing, and succession planning. The new goal is to create a seamless connection between systems allowing the company to flow valuable employment information across functions so that everyone can benefit from existing knowledge. Doing so will give us a better perspective on existing knowledge and skill gaps and allow us to forecast staffing and training needs to support future objectives. Rockwell Collins will be able to delve deeper into the competencies of the organization and see the hidden talents that reside within. Typically succession-planning efforts are targeted only at high-profile employees who've made big splashes within their units. This system identifies low-profile high achievers, ensuring that the company takes full advantage of all our best people.

This is a huge initiative that Rockwell Collins has been striving toward for seven years.

Had our learning consultants not still been researching the industry and communicating with our vendors, we might not have discovered this relatively obscure piece of software. And this style of tool fits much more smoothly into our new learning-organization culture, because our people have a greater comfort level with computer-based training applications and an increased desire to improve their performance. Four years ago, even if the software had existed, it would have been a struggle to get our people to see its value.

Before Rockwell Collins implements this tool, however—or any new piece of software—we go back to the research phase. Over the past several months our team has been surveying employees and managers about the need for these capabilities and quietly testing the tool to see if it can do what it claims—before rolling it out to the company.

Besides forging new trails into the uncharted territories of performance-management software, keep a constant eye on your existing tools and how well they are meeting your needs. This advice may seem contradictory, but it is valid nonetheless. Even though this whole process is about culture change, you've likely chosen to use technology as the major tool to drive that change.

In some cases, tools need to be upgraded every eighteen months or they become obsolete. In other cases, a great new technology that can vastly improve your process may hit the market. Bandwidths will get bigger and cheaper; simulations will become more realistic and more powerful. Artificial intelligence will create training scenarios unheard of today. The U.S. Army is already working with virtual-reality headsets programmed with artificial intelligence to train junior officers in problem solving. While the technology is expensive today, it won't be five years from now.

New tools are always popping up, which means that conducting research and staying in touch with new and existing vendors is always going to be part of your job. You can't let these issues linger or you will fall behind. The industry will continue to change and improve. If you aren't careful, your cutting-edge system today will be obsolete in three years.

At Rockwell Collins, we've made the conscious decision to continue teaching certain nontechnical skills in instructor-led classes because we believe live interaction is necessary for communication skills, feedback, and performance conversations. The technology isn't here yet to accommodate that environment online in a self-paced course, but that doesn't mean it won't be.

At Rockwell Collins, instead of trying to monitor every piece of software ourselves, Cliff Purington gives responsibility for specific tools, such as our virtual-classroom software or learning-management system, to the learning consultants who oversee those areas of Project Oasis.

Every tool has a schedule of evaluations. We rely on the learning consultants to tell us when the system no longer meets their needs. They help us decide whether to upgrade an existing piece of software or to scrap it and start over.

As you move forward, launching new projects and overseeing old ones, always keep the future in mind. Every eighteen months to two years, reassess your organizational environment and survey end users about their needs and how well those needs are being met. Ask your constituents what needs to be changed and whether you are helping them meet their needs. In the beginning these people probably knew very little about training, but by now they have seen what you can do. Just as the senior vice president of operations came to us with the problem of a loss of unique team expertise or tribal knowledge that spurred The Performance Engineering Group to invent the hugely successful QuickLearn methodology, so too will your executives begin to see the potential of your new training system. If we hadn't gone back to our executives regularly with our updated business case, we might not ever have uncovered that particular training issue. Even though the senior vice president of operations didn't completely understand that his problem was training related when he brought it to us, he saw Project Oasis as a valuable resource that could provide new insight into old problems. From these insights, new initiatives arose.

Also, don't ever forget that this is a change-management process. Keep asking yourself, "How far have we come?" Have the changes you

predicted come to fruition? If not, what else needs to be done? If you have achieved the change-initiative element of your plan, you can focus more effort on the architecture and infrastructure to support it, but never take your eyes completely off the cultural elements of the project. Every time you roll out something new, you will encounter pushback. The business model will become unbalanced as your strategies and initiatives fall out of alignment with your culture. Pay attention to both the cultural and strategic needs of your organization. Melding cultural attitudes with strategic goals is a constant balancing act that requires consistent and delicate intervention. If you stay on top of it, you will avoid becoming overwhelmed by the needs of the business or your people.

Companies are living, growing entities. Just like people, they change and require new clothes or new hairstyles. Pay close attention to the evolving culture and constantly go back to your business executives to see what has changed strategically for them. Help them match their strategies to the culture.

As long as your primary goal is to provide a learning structure that directly supports the business needs of the company and you tie every piece of training to measurable performance-related goals, you will continue to thrive as a learning organization.

## MAINTAINING SUCCESS IN THE FUTURE

Congratulations. If you've made it this far, you have turned your company into a learning organization. But don't forget that this transformation is a never-ending process. Don't stop monitoring users' needs and new opportunities in the training industry. Regularly reassess your needs and employees' readiness for continuing change. There will always be opportunities for improvement.

# Lessons Learned

*“Perhaps the most valuable result of all education is the ability to make yourself do the thing you have to do, when it ought to be done, whether you like it or not; it is the first lesson that ought to be learned; and however early a man’s training begins, it is probably the last lesson that he learns thoroughly.”*

THOMAS H. HUXLEY

After three years of working and reworking our strategic plan and battling resistance, Rockwell Collins is now benefiting from the fruits of our labor. Most of the employees embrace the new system, and the learning culture at the company has been revolutionized. It has been a tough journey, and along the way we learned valuable lessons about how this process should be accomplished. We suspected some of them early on, while others were a complete surprise, and they were all valuable and so we share them here with you.

## Know Your Reasons for Implementing E-Learning

You have to know what you are attempting to do in order to establish your core objectives and define your boundaries. Don't move your organization to e-learning just to be trendy. Or, if you are doing it to be trendy, recognize that this is your reason and craft a plan to accommodate that desire for trendiness. The point is that your actions need to be driven by some set of measurable strategic imperatives that arise from your reason for implementing the project. If you are transitioning to e-learning in response to a directive from the executive team, your objectives will be vastly different than if you are doing it because you recognize the inherent value of tying training to the business vision of the organization. For example, if your reason for doing e-learning is to improve the time it takes to get products to market, one of your core objectives might be to shorten product-development cycles. With that foundation laid out, you can measure the time to market before and after e-learning is delivered and rate your success. On the other hand, if you give employees access to online training merely because you can, what will you have achieved?

Whatever your reasons, craft quantifiable core objectives that will help you achieve these goals so that sometime in the future when that cultural beast rears its head you can prove you've accomplished the task you committed to. Without objectives, there can be no measure of success. You will find yourself in a no-win situation of perpetually trying to justify your initiative. Remember the nature of resistance. There are people who will be threatened by the loss of power or control, and they will respond by trying to stop or disrupt this initiative. Measurable goals provide you with the information to defend yourself against their attacks.

## You Need a Comprehensive Strategic Plan

Providing e-learning to your employees and becoming a learning organization are not synonymous. E-learning is *only* a tool. It can help you move your organization's culture toward the ultimate goal of

becoming a learning organization, but it won't make the transformation happen.

The strategic plan is the bridge that will carry you from your present ineffective training situation to a future in which e-learning can succeed. It is your guide to changing the learning environment, tearing down the cultural barriers, and tying your training to the goals of the company.

Even if your reason for launching the initiative is to appease the whims of your CEO, this is your opportunity to revolutionize your training process, to have a serious impact on the business, and to gain significantly more credibility in the eyes of management. You may already have the tacit support of management—even if their reasons for doing e-learning aren't particularly valid—and this is your chance to change the way they view you and the role that learning plays in achieving business success.

But you can't move forward without a plan. The strategic plan gives you the data to build legitimate budgets and timelines, and it defines your solutions for tackling the cultural obstacles that lie in your way. It draws a picture of the old system, the waste and the gaps, and it tantalizes its readers with a vision of what the company could become. It shows you where you are most likely to encounter difficulties. It helps you build support throughout the ranks of the company and enables you to field the hundreds of questions that will ultimately be thrown at you by supporters and nonsupporters alike. This is especially true if you operate in a company that lives and breathes business plans, as Rockwell Collins does. Showing management that you understand the value and principles behind strategic planning will drive them to pay attention to you. Doing so will clearly illustrate to management that you are a viable player in the organization, and that you've put in the time to prepare a solid, business-focused strategy.

Trying to become a learning organization without a strategic plan would be like trying to make sausage by stuffing a 300-pound pig into a meat grinder. You may have the essential ingredients for sausage, but all you end up with is a big mess and an angry pig. Just as there are certain steps for making sausage, there are certain specific steps you have to fol-



low to change your organization's culture. If you skip any of them, your project will flounder, management won't support you, and any technology you manage to implement is unlikely to be used.

## **Do a Considerable Amount of Research and Planning Before You Begin Writing Your Strategic Plan**

The details of a strategic plan will not appear to you out of thin air. If you are embarking on this process, you've made the first, most difficult step—admitting that the learning process in your organization needs to be changed. Most organizations have enormous potential for improving their approach to training—if they are willing to acknowledge the need to do so. You, as the training leader, are the one who needs to identify the problems and come up with an appropriate solution.

If you've gotten this far in the book, you are obviously committed to change, which is commendable. But the sheer need for change should tell you that you don't know enough about your culture or the business vision to begin writing a strategic plan that will carry you all the way to your vision of the future state of learning. Cultural research will provide you with the answers you seek.

Your job as a training leader is to provide a service to the organization and its people—not to do what you think is best for yourself or for the learning team. To effectively fulfill your role, you need to travel outside of the training department and find out exactly what's going on in the rest of the organization. You need to explore the recent historical data regarding training and its impact on the business. You need to talk to managers about their needs, and spend time with employees so you can experience the subtle challenges they face every day and understand the competencies they need to do their jobs. This is the research that will help you build a relevant business-focused plan.

There are four reasons why the research phase is critical:

1. *When you conduct organizational research, you will always learn new things about the culture, attitude, and needs of the people.* The research phase is the time that you establish your strategies and tweak

your opinions. No matter how in touch you think you are with the problems at your company, there is always something left to learn. Don't be so arrogant as to ignore this truth.

Even though you will have preconceived notions going into the research phase about the problems with your present state and the changes that need to be made, this process will garner you new and in some cases surprising data. You will inevitably discover cultural facts of which you were previously unaware. For example, in our research at Rockwell Collins, we assumed the employees would be fairly technology savvy, but focus-group studies showed a surprising degree of confusion about what e-learning was and, more important, what it wasn't. When one employee was asked if she'd like to start and stop training to meet her work needs, she replied, "Yes, but wouldn't that be disruptive to the instructor?" It was an amusing response, but it symbolized for us the true level of readiness within the population. We knew they had used only classrooms to train for fifty years, but we did not know how deeply ingrained was the belief that classrooms are the only place to learn. The data we collected from those focus groups showed what a radical change e-learning would be for this organization and prepared us for the fear and anxiety that learners would initially exhibit toward the new learning format.

*2. Even if you are completely accurate in your assumptions about the organization, you need to do the research in order to compile hard data.* Telling management that you know what's best for the company without backing it up with facts and figures will destroy your credibility and ruin your chances to proceed with the project. You need to connect your ideas to the business with appealing facts to win the support and admiration of your leaders. You need to be able to draw visual connections between your goals and the success of the organization.

You will refer to this data endlessly over the course of the learning-organization transformation. Without it, you will have only your opinions to support the plan, and no matter how valuable you think you are to the company, your opinions alone are not enough to sell this project. Too many training departments lose standing with senior

management because year after year they roll out training programs that nobody attends or particularly values—they act without looking into the needs of the business leaders in the company. Doing so is the only way to win their support and ensure that training is linked to the needs of the business.

3. *The research phase gives you a baseline.* The historical research you collect in this phase sets the standard for change. Organizations have extremely short memories. Without this baseline, which defines the amount of time and money previously spent on training each year, you will have no proof that change has occurred.

Also, if you have conducted a well-crafted, statistically valid survey, you will be able to repeat it on a regular basis and see if you're effecting the organization in measurable ways. Assuming that you are changing the culture, you will be able to point to later survey results as proof positive that your initiative is making a difference.

4. *The research process gives you valuable face time with key executives and the masses of people who will be expected to radically change their behavior toward learning.* If you invent this project in the isolation of the training department and then try to push it out to the organization, the pushback will be crushing. You cannot expect a company to absorb substantial change without notice, without its being eased into the process. Spending time in the units, talking with employees through focus groups, and meeting with executives, all serve to introduce the company to your ideas. This face time is how you show your concern for their needs. Asking about their daily challenges and their business goals empowers them with the sense that they have contributed to the strategic plan. It makes them part of the learning process and reduces the amount of pushback you will later encounter.

There is a widely held belief that employees don't like change. However, compelling research shows that most people actually crave change—if they can be a part of the process. They don't like change when it's foisted on them and completely out of their control, which is why it is important for employees to feel as though they have input into the changes you are proposing. The more enthusiasm you can

generate for the new way of learning, the more the converts will help co-opt the rest of the employees.

## **This Is Fundamentally a Change-Management Effort, Not a Training Initiative**

In order for a company to become a learning organization, people need to alter their behaviors and the belief structures they've clung to for years. This process will change the way employees learn and the importance they place on acquiring new skills and knowledge. It also takes power away from managers, who have historically controlled who gets training on what subjects and schedules. To implement this process, you must reorganize employees' ways of doing things and put your faith in their ability to see the value of that cultural shift.

Implementing the technology is the easy part; getting people to use it is the true challenge. Most companies that have tried and failed to become learning organizations miss this point entirely. They get so caught up in choosing tools and technology that they forget about the needs of their people. How many failed attempts have there been in your industry as a result of management's not understanding the cultural relevance of e-learning? Buying technology is an easy alternative to a fundamental cultural revolution, but in the end, the technology can't succeed until the revolution happens.

## **If You've Already Tried an E-Learning Initiative and It Isn't Working, You Can Still Save It**

Many large companies build complicated e-learning systems and are mystified when they don't work. It's because they approached it as another technology solution looking for a problem. It's analogous to the VHS boom that occurred in the 1980s, when videos were magically going to be the salvation of the training world. How effective did they turn out to be in the absence of a well-thought-out implementation plan? Technology alone isn't the answer, and e-learning is doomed to

the same fate as every other innovative delivery method that has been introduced in the past because the people responsible for training stay focused on the wrong end of the learning process. Launching a lot of technology without conducting the front-end assessment and research, developing a plan, communicating the project, and dealing with the cultural issues that make or break an e-learning initiative will ultimately cause it to fail.

If you've made this mistake, don't give up hope. You may be able to salvage your efforts, but only if you go back to the beginning of our ten-step process and start from scratch. It's impossible to know why your project failed until you do the research, uncover the cultural obstacles, and craft a strategic plan with clear objectives that are tied to the business goals of the company. Once you have the plan in place, you can compare what you've learned about the organization and what you want to achieve with the infrastructure that you've already implemented.

That comparison will show you the gaps in your original initiative. Depending on what you've learned, you can determine whether elements of it should be scrapped because they don't fit the business needs or if elements should be added to tie the whole project together. You may discover that the changes you need are relatively minor, such as delivering a stronger or more targeted communication plan. You may find that you have a great infrastructure but the wrong content, or your employees may want the training but are not ready to use a complicated new e-learning system because they haven't received the appropriate preparation or technology upgrades.

At Rockwell Collins, if we hadn't recognized that managers initially wouldn't support e-learning at the desktop, we might have implemented the same great technology, but it would have gone untouched because people wouldn't have been allowed to use it. The use of resource rooms—a small but critical element of our strategic plan—allowed us to do an end run around an obscure cultural issue that otherwise would have damaged the whole project.

The point is that you won't know where the problems are until you do the front-end analysis. This critical research is the only way to

clearly and objectively identify what the enterprise requires and what you need to change to support it.

## **Plan, Plan, Plan . . . Then Underpromise and Overdeliver**

Your final presentation to management is the one shot you have to sell your idea and your credibility, so don't blow it by jumping in too soon. Take your time in the planning phase of this project. The more up-front time you spend, the greater the success of the final solution will be.

Once you launch the initiative, you are going to be in the spotlight and everything you do will be judged. Until that point, however, you will be working in relative obscurity. Use that freedom from scrutiny to refine your ideas, get feedback, and tweak the business case.

When you do go live, you need to shine by performing miraculous changes in small amounts of time. This is not a time to make mistakes, take chances, or move slowly. Target high-priority issues that you know you can succeed with in quick succession. Add a time and money cushion of 10 to 15 percent to your budget and timeline in case your projections are off. This gives you breathing room and makes you look even more impressive when your project comes in early and under budget.

Our big miracle at Rockwell Collins was meeting our Year One goals on Day One. Management was skeptical of our ability to put 30 percent of the company's content online in a year, so they were floored when the learning and development team accomplished it sooner.

Although we didn't publicize our launch for two months, it still looked like a phenomenal success, even more so because our team used that time to get rid of all the bugs. The unofficial project launch was several months early and nearly flawless.

We can't overstress how important these early successes will be. This is the time when people will scrutinize your every move. Many of them will have their own preconceived notions about e-learning and its worth. They will be waiting for you and your technology to screw up, to prove that you aren't capable of leading such a revolutionary change. Before people will completely buy into your message, they need to

know you are capable of delivering on it. Don't crumble under that pressure. If you triumph early, you will secure support from management and build confidence among the masses. They will come to trust you, which makes the system successful. This support causes the cultural shift to happen and allows them to change on their own terms and in their own timeframe.

## **Don't Empower the Naysayers**

Battling cultural pushback will be the hardest part of managing this process. More than half of all major change initiatives are cut short because those in charge panic in the face of antagonism. Even if you have the best strategic plan in the world, a competent team, and a supportive leadership, naysayers will be a powerful and damaging bunch if you take them too seriously. Don't let them destroy your self-confidence. Don't doubt yourself because of their pushback. Change is a difficult process for every company, and there will always be those loud and angry few who fight it tooth and nail. If you acknowledge that this will happen and are prepared for it, you will triumph.

The pushback will occur just about the time you are feeling confident that things really are changing. When you are feeling good about all the effort that has been put into this implementation, that is when the naysayers will apply the maximum pressure. Cling tenaciously to your facts and figures and prove them wrong.

Managing naysayers is a delicate balancing act. Paying too much attention to them makes others want to join their ranks, but you cannot completely ignore them because, like everyone else in the company, they are your audience. Left unchecked, their complaints will grow louder, and they will also win attention from others in the organization. You need to address their needs quickly and firmly to nip their complaints in the bud and show them that the technology is worth adopting.

If they claim that the system doesn't work, show them that it does. Explain the principles of the tool and offer to walk them through its use, but don't reward them for grudgingly going along. Give them just

enough of your time to show them that you are in charge and that you are not going away. Set expectations and let them know that if they are willing to try something new, you will support them; otherwise, they can take their career development into their own hands and suffer the consequences.

The longer the initiative is sustained and continues to gain support, the less pushback you will encounter. This is the transformation process in action: The new gets more and more reinforced and the old slowly loses strength and fades, but it never completely goes away. Even today, three years later, there is still resistance at Rockwell Collins every time the learning and development team rolls out something new. It's a constant battle, but we fight it with rational, logical arguments. When naysayers use emotions, we counter with facts. In the end, we usually win.

## **Assemble a Good Team**

You can't pull this off with mediocre talent. We are not suggesting that you fire your old people and hire anew. Chances are, even if your training system is inadequate, your team is not to blame. We have worked in many organizations that had terrible training systems in place for years. The training department at Rockwell Collins was little more than an all-request hotline when Cliff Purington arrived, but that wasn't because its members were lazy or inept; they simply had no leadership. He found a group of eager, willing, and clever people who just needed the guidance and training to put them on the right path. It's true that their morale was low when this project got started, but we were amazed at how quickly they rallied and jumped on board.

Most people have the ability to learn a new way of doing things if they are willing, but they need help making the transformation. Give your staff a vision, a purpose, and a set of goals. Dedicate the time and energy early on to prepare them for the challenges they will face in the following months. This is a difficult journey for everyone in the company, but for the learning and development team most of all. Not only will they be expected to change their own viewpoints of the way learn-



ing happens, but it falls to them to deliver that message, push back the naysayers, and juggle the old and new systems until the transformation is complete.

At Rockwell Collins we continue to train and mentor the learning and development team even today. They've spent hours listening to our presentations, attending seminars, and using the workflow processes defined to make their jobs easier. They just needed support and feedback to manage that chaos. We let them know that it is okay to make mistakes, and we acknowledge their successes boldly and with great fanfare. They have become the voice and face of our project, and we made sure that everyone on the team was well equipped to handle that responsibility before they were sent out to the wolves.

## **You Will Invariably Need Some Outside Help**

Expert guidance from someone outside of the company is vital in providing you with the feedback and the context you will require to pull this initiative off. This process is about culture change. If you've been with the company for more than six months, you have become a part of that culture and you can't look at it with a critically neutral eye. Your cultural blinders make it impossible for you to carry out the planning, research, and execution entirely from within the organization.

And, regardless of whether the perception is accurate or not, most companies view only outsiders as experts. They may have hired you because you were the best of the best, but once you are on staff, you automatically lose some of your credibility. You cannot be a prophet in your own land. Adding an outside expert to the team will back up your research and personal suggestions and reestablish your authority in the eyes of your superiors.

That doesn't mean you should hand the project over to a consultancy. This is your mission, your baby—just don't be too proud to ask for help. Selective outside perspective from an organizational-development specialist will help you avoid costly errors and give you someone to rely on when you feel the culture turning against you.

The team members from The Performance Engineering Group (PEG) were key players in the success of this project. Many areas of the project were either completed by PEG consultants or they were significant contributors along with members of the Rockwell Collins learning and development team:

1. *PEG designed, delivered, and analyzed the employee surveys.* Writing a questionnaire may seem like a simple process, but unless you know how to phrase the questions and how to analyze and use the resulting data, your efforts could actually do damage to your project. Sending out employee surveys is the same as making a promise to people. It tells them you are interested in hearing their opinions and it sets their expectations for change. If you don't have the skills to interpret and react to your survey data, you will in essence break a promise to those people and establish yourself as unreliable early on.

Developing surveys internally also increases the likelihood you won't ask the right questions, avoiding those topics that are too sensitive to mention. And even if you manage to get those questions in, expecting people to answer honestly when they know the completed surveys are being delivered to someone within the organization is naïve. A surveying expert won't avoid the tough questions and will provide the neutrality and anonymity necessary to get candid feedback.

2. *PEG conducted research and built the foundation of the strategic plan.* They did much of the research and ultimate analysis of the data we collected and worked with us to pull it all together.

3. *PEG had a large role in the development of the business plan.* An outsider's opinion of your business case will ensure that your information, language, and tone are relevant. Use your consultant to practice your pitch and incorporate his or her feedback into your final presentation. We had the consultants work closely with us as we wrote the business plan. They developed many of the metrics we used in the business plan and helped us make sure our data was provable and

accurate. We also relied heavily on Rockwell Collins's finance group to substantiate our metrics.

4. *PEG evaluated the needs of external offices.* We sent these consultants out to various Rockwell Collins locations to help evaluate needs and identify any issues that could impede implementation. On a number of occasions they traveled to remote Rockwell Collins facilities to perform diagnostic work or simply to obtain recommendations for fixing what was broken. They often served as our proxies when there were major time constraints and our own staff was already being stretched thin.

5. *PEG developed and facilitated the learning councils along with designated learning consultants.* While the functional learning councils didn't achieve their intended goals, our team learned a great deal from them while they became effective promoters of Project Oasis. We couldn't have achieved what we did with the learning councils without the help of our consultants.

6. *PEG assessed our current staff.* Taking a cold, hard look at your own team members and evaluating their ability to succeed in this environment can be a painful and delicate process. An outsider may be more honest, and if a team member needs to be let go, a consultant can be a valuable "bad guy" to take responsibility for the decision.

While Purington didn't let anyone go, PEG provided valuable perspective on the skills and gaps in the original group and did most of the training to get them up to speed. They helped ease the transition from team members' prior jobs to that of learning consultants. In some cases that meant the learning consultants had to learn entirely new sets of job skills. PEG administered various assessment tools and provided each of the team members with specific feedback, both from the assessment tools and from their personal observations. Then they worked with every team member to come up with a first-rate development plan. They continue to coach and support team members to keep their skills fresh and build on their existing talents.

7. *Perhaps one of the greatest contributions these consultants made was the development of the business plan to support the concept of QuickLearns.* When we couldn't find a vendor to produce this innovative learning technology, PEG was willing to take the risks required to fulfill this critical business need. They had to commit a significant capital expenditure to produce the first QuickLearn module. They were willing to do this because they had faith in the strategic plan and a willingness to think beyond quick profits. They had put as much effort into this initiative as the inside team had.

The intention of sharing these contributions is not to promote PEG but to emphasize how valuable top-notch consulting help can be to a project. A good consultant relationship can save you far more money than it will cost you. Even today, with our processes in place and running smoothly, hardly a week goes by when we don't communicate with the consultants. They continue to serve as a sounding board, reality check, and sanity check.

Find a firm you trust and that you can work with. You need someone who is "on your side" but still willing to tell you when you are wrong or point out the faults in your logic.

Make sure your consultants don't think they have all the answers and also make sure they can work effectively with your staff. After all, if you select the right firm, they'll be with you for some time.

## **One Final Lesson**

This systems approach to a learning transformation is extremely challenging and full of career-limiting pitfalls. It's difficult, frustrating, and time consuming, but the rewards are immense. The only way to truly benefit from the enormous technology opportunities of today and the future is to initiate the necessary cultural changes. As a training professional, you have a responsibility to provide true value to the organizations you serve. Trendy, ever-changing technology will never be the solution, only an enabler and a vehicle for accessibility and speed of delivery. Don't become so enamored of the

tools that you ignore the needs of your audience—doing so is the most common and most avoidable mistake that training professionals make. Don't be part of that statistic. Once you recalibrate your personal beliefs about adult learning and its role in the success of the business, the need for cultural change will be unmistakable.

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# About the Authors

**Cliff Purington** has been working in the Organization Development and Learning space for over twenty-two years. He started his career as an air traffic controller in 1966, working his way up to a superintendent in one of the busiest radar approach controls in the country. In 1979, he decided to change careers: He completed his graduate degree and was trained in the Air Force as an organizational development consultant.

Cliff was assigned to Air University and traveled around the world providing combat readiness assessments and consultation to senior Air Force commanders. He also lectured at the Air War College and authored numerous papers on leadership and management.

Cliff joined Martin Marietta in 1984 as the manager of training and development in their New Orleans Space Shuttle facility. While working with Martin, Cliff led numerous change-management initiatives in Denver and Cape Canaveral. He reengineered the Titan IV production line in response to a national security issue arising from the Challenger disaster. He has worked on mergers and acquisitions with a focus on streamlining and improving production and launch of space vehicles and satellites.

In 1993 he left Martin Marietta to cofound and lead the design, development, and sale of a revolutionary Internet-based learning software system. He sold his share of the company in 1998.

He is currently the director of learning and development at Rockwell Collins in Cedar Rapids, Iowa. Cliff manages the development and implementation of an award-winning, multi-million-dollar worldwide learning environment, which includes conventional, virtual, computer-based, and Web-based training and learning. He was



recognized by ComputerWorld as a 1999 Premier IT Leader for his innovation and application of technology.

Cliff has a masters degree in business and a bachelors degree in engineering from Southern Illinois University. He is married to Rebecca Long and has a son Grant. His most memorable experience was as a bodyguard for the Queen of Libya.

**Chris Butler** has more than twenty-four years of experience in management consulting in addition to twelve years as a manager at different organizational levels within private industry. He is a member of numerous professional and civic organizations and has served in a leadership capacity in several community organizations.

Chris has managed a number of organizations and has trained over 5,000 managers and salespeople in a classroom environment. His management experience includes the clothing manufacturing industry, industrial sanitation, the printing industry, and numerous consulting engagements in a broad variety of industries. In addition, he has authored several texts and numerous proprietary training programs.

Chris is president and cofounder of The Performance Engineering Group, Inc. As such, he has served as principal consultant on a variety of engagements that required his broad technical expertise. He has successfully completed consulting assignments in such diverse areas as mining, aerospace, telecommunications, high-tech electronic manufacturing, building materials manufacturing, city and state government, healthcare, and pharmaceuticals.

Chris specializes in helping client firms manage change, working closely with them to lessen the impact of unexpected change and helping to initiate major organizational change. He has been a principal consultant along with other Performance Engineering Group consultants while Rockwell Collins has undergone profound changes and has worked closely with Cliff Purington from the inception of the project laid out in this book to this day.