

# DESIGNING FOR PERFORMANCE, PART 1: ALIGNING YOUR HPT DECISIONS FROM TOP TO BOTTOM

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Wanting to improve individual and organizational performance is a worthwhile ambition. Yet your success in accomplishing this relies heavily on the suitable selection, design, and development of performance technologies. Only when capable performance technologies are systematically aligned with the desired results of your organization and its partners will you achieve sustainable performance improvements. In this article, the first of a three-part series, you will find a systematic process for initiating the design of a performance system that will accomplish useful results. From identifying the performance expectations of internal and external partners to justifying the performance objectives you establish as guides for future decision making, the systematic processes described in this article will provide you with the initial tools for successfully selecting an integrated set of performance technologies that have the capacity to accomplish valuable results.

THE SUCCESS AND MERIT of any human performance technology (HPT) are derived from its ability to accomplish valuable results that are aligned with the strategic ambitions of your organization and its partners. And though this may at first sound like a simple and straightforward undertaking, don't be fooled. The tasks associated with identifying and selecting the right performance technologies for accomplishing useful results can often be more taxing than those associated with developing and implementing the selected performance interventions.

From clarifying the expected results to sorting through the hundreds of potential performance technologies that are available, the processes associated with aligning what you do with what you want to accomplish require a focused and systematic approach. Just as you would use systematic design procedures for developing instructional materials or creating an online performance support tool, you will be most successful at identifying and selecting the right performance technologies when you formalize and continually improve your decision-making processes.

This article, the first of three focusing on the systematic design of performance systems, provides a structured process for aligning all your HPT decisions, from

top to bottom. This alignment will verify that whichever performance technologies you select for achieving results will produce valuable contributions to the long-term success of your organization, its clients, and its partners. Because performance is all about achieving valuable results, this first article will focus on identifying and defining desired results. The second article in this series will then provide a useful framework for selecting the *right* set of performance technologies for accomplishing those desired results. In the final article a systematic process for designing, developing, and continually improving upon the results you are accomplishing will be described. Together, these three articles can provide you with a practical framework for developing performance systems designed to accomplish valuable results.

Your time and energy are precious commodities and, thus, should be used wisely. Avoid spinning your wheels designing, developing, and implementing performance technologies that may or may not accomplish the results desired by your organization and its partners. Resist premature selection of performance technologies, made before the desired outcomes are clearly defined. Achieve both of these goals by starting with a systematic process

that aligns all of your performance improvement decisions. This ensures that the performance technologies you select for development and implementation will be aligned with achievement of worthwhile results.

## WHAT IS PERFORMANCE AND WHY MUST WE DESIGN FOR IT?

To start with, *performance* should not be confused with *performing* (Gilbert & Gilbert, 1989; Watkins & Leigh, 2001). This is an important yet often misunderstood distinction. Performing is what we do, whereas performance is the useful result that we accomplish. Airplane pilots, for instance, perform a variety of activities and safety procedures to ensure that the desired performance of a safe landing is accomplished. Similarly, we brush our teeth each evening to achieve the desired result of no tooth decay. Performing and performance have an interdependent relationship but distinctive characteristics.

In all professions and for all tasks, we benefit when we can separate what we do (that is, *performing*) from what we accomplish (that is, *performance*). This separation allows us to focus on the performance as an objective and to subsequently select the processes for achieving that performance from all the options available (Watkins, 2006b). In other words, it allows us to accomplish results without the constraints of preselected interventions. When this distinction is operative, the start of effective efforts to improve performance is rooted in the accomplishment of valuable results rather than just the improvement of what people do.

Although both performance and performing can be improved, improving the latter does not necessarily ensure that you will make gains in the former. Improving the efficiency of a process (for instance, using an electric toothbrush to shorten the time required to brush your teeth) does not necessarily mean that you are going to accomplish useful and desirable results (fewer cavities). Many organizations have found this to be true. For example, increasing investments in training as a performance technology does not consistently lead to the intended or desired results (Stolovitch, 2002; Clark & Estes, 2002). The same lackluster results are equally familiar in mentoring, software development, leadership workshops, employee retention programs, and almost any other performance technologies you can imagine when they are not properly aligned and associated with the accomplishment of desired performance.

An inappropriate or misaligned set of performance interventions will not lead to sustainable performance improvements. Your performance technology

decisions should therefore focus first and foremost on the accomplishment of valuable results. Only after identifying the results you want to accomplish should you begin to select the performance solutions (for example, career counseling, workplace redesign, incentive systems, training, computer systems) that will most efficiently and effectively achieve those results. In this way you can align all your HPT decisions from top to bottom. Decisions—from “What results do our clients’ clients want us to accomplish?” to “Should we use a combination of balanced scorecards and team building?”—can then be made with a principal focus on the accomplishment of desired performance (that is, results).

## WHERE DOES ALIGNMENT BEGIN?

Alignment begins with the strategic goals and objectives of individuals, organizations, communities, and societies. It begins with these intentions because they define the expected results of any performance improvement effort. The anticipated results from your organization are, for example, set by the clients, clients’ clients, and community partners that buy and use the products or services your organization delivers. Likewise, your organization expects definable results from each division, department, team, project, employee, and supplier. All these anticipated results make up a system of strategic goals and ambitions that should be the foundation for all the decisions you will make in selecting, designing, developing, and implementing performance technologies.

The performance expectations of most organizations are readily communicated through strategic plans and related documents. Ideally, these planning documents provide practical guidance for decision making. You can then use them to align your performance initiatives with the strategic objectives of your organization and its partners (Watkins, 2006b).

For employees at all levels of any organization, strategic plans should offer guidance and support for making personnel, acquisitions, time-management, performance improvement, and all the other decisions that are linked to organizational accomplishments. Yet, as most HPT professionals have witnessed, strategic plans are typically created every year or two only to sit on the shelf and gather dust. These plans typically fail to focus on intended results and instead merely identify a wish list of new initiatives (Watkins, Triner, & Kaufman, 1996; Mintzberg, 1994), giving no clear guidance to essential decisions about which performance technologies to implement. This failure of strategic plans frequently leads to choices that are not aligned

TABLE 1	STEPS IN DECODING STRATEGIC DIRECTION
STEP TOWARD SUCCESS	BRIEF DESCRIPTION
<p>Step 1</p> <p>Review strategic plans and related documents</p>	<p>Look at strategic plans for client organizations, suppliers, competitors, regional community groups, and any others who play a part in defining what results should be accomplished within and by your organization. Also examine annual reports and other documents for clues about the results anticipated in the upcoming years and the ways those expectations may influence your decisions. Assess each strategic document for information that will help you align what you use, do, and produce with the results your organization delivers to clients and the contributions of those results to the local community and society (Kaufman, 2000, 2006; Watkins, 2006a).</p>
<p>Step 2</p> <p>Review needs assessment results</p>	<p>In practical terms assessment is a process used by individuals or organizations to determine the value or worth of something (Scriven, 1967). Likewise, organizations use needs assessments as a structured process for identifying discrepancies between desired results (ideally as defined at three levels through systemic strategic planning) and current results in order to assess their value or worth (Kaufman, 2006). Needs assessments can provide information that is of exceptional value and often essential for selecting appropriate performance technologies. Conclusions derived from needs assessments will help you prioritize among competing strategic ambitions.</p>
<p>Step 3</p> <p>Review SWOT analysis results*</p>	<p>A SWOT (strengths, weaknesses, opportunities, and threats) analysis identifies environmental and operational factors you should consider in defining the results you are going to accomplish and thus your definitions of success. According to Leigh (2006), SWOT analyses identify strengths as enhancers of desired performance and weaknesses as inhibitors, and both are within an organization's control. For example, your strengths might include employee knowledge, reliable suppliers, or new technologies, and your threats might include new competitors, employee recruitment, or limited raw materials. Opportunities are also identified as enhancers of desired performance and threats as inhibitors, but both are outside an organization's control.</p>
<p>Step 4</p> <p>Set priorities</p>	<p>The final step in decoding the strategic direction is to set priorities among the numerous goals and objectives that may be diverse or appear to be competing. Translate the desired results of multiple partners into a set of performance priorities that you can aim to achieve. This can be challenging, but your analysis of the results of strategic planning, needs assessments, and SWOT analyses (of factors both internal and external to your organization) will give you the necessary data.</p> <p>When prioritizing the expected results from numerous partners, you should remain focused on performance (that is, results). You should avoid confusing desired processes (such as quality management, leadership workshops, outsourcing, and other performance technologies) with the desired results at the individual or team, organizational, and societal levels. Desired performance at each of these levels will define the results your performance improvements should accomplish, thereby defining your success.</p>

\* If your organization has not recently completed a systematic, results-focused strategic planning, needs assessment, or SWOT analysis, then you should champion these efforts before making decisions about which performance technologies to design, develop, and implement. Moving ahead without these guides to validate and justify your decisions can lead to misinformed choices and less-than-desirable results.

Source: Based on Watkins, 2006b.

TABLE 2		STEPS IN DERIVING PERFORMANCE OBJECTIVES	
STEP TOWARD SUCCESS	BRIEF DESCRIPTION		
Step 1 Analyze strategic goals	<p>From the prioritized performance expectations of your organization and its partners, derive the specific results that will lead to attaining strategic goals. For example, if your organization has a strategic objective of increasing the number of successful sales calls to 50 per day, then you would want to analyze that objective to determine what interim results must be achieved to make it a reality (for example, motivated sales agents, phone systems that can handle increased volumes, a receptionist who accurately assesses and forwards appropriate calls). Only later on will you consider what performance technologies can accomplish these desired results (for example, incentive systems, mentoring, high-tech phone systems, receptionist training, job aids, or online performance support tools).</p>		
Step 2 Select your performance objectives	<p>Carefully select the results you are committed to accomplishing. Prioritize, group, and review the results of previous analyses, then identify a set of performance objectives that will guide your decisions about which performance technologies to design, develop, and implement.</p> <p>At the same time, use this effort as an opportunity to negotiate with internal and external partners on the results criteria that will be used to evaluate success. Performance objectives will be the primary (if not sole) criteria used to evaluate the accomplishments of selected performance technologies.</p>		
Step 3 Relate objectives and current processes	<p>You are likely to find that your organization is already making valuable contributions to the achievement of the selected performance objectives. To capitalize on these current accomplishments you should connect each performance objective with the current processes making measurable contributions. For example, if one performance objective is the elimination of lost office supplies, then you should identify any current initiatives to track, store, or inventory office supplies and also identify the results they are achieving.</p>		
Step 4 Perform a task analysis	<p>Complete a task analysis for each of the current organizational processes (both those achieving and not achieving desired levels of performance). Task analyses describe and document current processes in your organization, offering valuable insights that can inform decisions for improving performance. Performance technologies can then complement or supplement the current activities to accomplish your selected performance objectives (Watkins, 2006b).</p> <p>The task analysis technique(s) used to identify and document process activities and results will depend on the process itself. Use hierarchical, if-then, model-based, or cognitive task analysis techniques, either individually or together, to review the details of the ways current results are being achieved (Jonassen, Tessmer, &amp; Hannum, 1999; Watkins, 2006b).</p>		
Step 5 Review and revise performance objectives	<p>Given the information obtained through the task analyses, reexamine your selected performance objectives to verify that they should remain the focus of your improvement efforts. Frequently, while completing your task analyses, you will learn about new initiatives or about programs that are being phased out. As a result you may want to change the performance objectives you strive to accomplish or the priorities that you established earlier.</p> <p>This is also an excellent time to verify the alignment of performance expectations from top to bottom. Review each of the strategic ambitions and related performance objectives to ensure that the achievement of results at one level (such as the societal or organizational levels) is supported by the achievement of results at other levels (such as the organizational, team, or individual levels). This alignment of intended results is the only foundation on which you can base practical decisions about which performance technologies to select.</p>		

Source: Based on Watkins, 2006b.

with the strategic ambitions of the organization or its partners (who range from clients, suppliers, and clients' clients to society as a whole).

Aligning your HPT decisions with the desired results of your organization and its partners is the sensible alternative. Knowing and accomplishing valuable results is the key to your success, your organization's success, and its partners' success. For instance, even the best-developed online performance tool for sales managers is not worth the investment if it does not accomplish results that add value to the individuals and organizations that are part of the performance system.

## DECODING STRATEGIC DIRECTION

Use a variety of sources and tools to align your decisions with the strategic ambitions of your organization and its partners. Start by identifying the results that should be accomplished. Review the strategic plans of your organization as well as the plans of clients, clients' clients, suppliers, and other external partners with a stake in defining expected results. Then supplement that information with the results of any needs assessments conducted by your organization or its partners and the results of any analyses that have defined strengths, weaknesses, opportunities, and threats (SWOT). Use all three of these resources to shape and characterize the desired results that will drive all your performance technology decisions (see Table 1). From your intended results to your solution set of performance technologies, let your decisions be guided by strategic objectives.

## DEFINING SUCCESS

The success of any performance technology is ultimately defined by its ability to accomplish useful results, for individuals and organizations alike. Yet the process of defining success for performance improvement efforts (and specific performance technologies) quickly becomes convoluted and challenging as you begin to analyze the criteria for success. After all, success is typically more a perception than a fact, and not just a single perception but the multiple perceptions of partners, sponsors, and clients. A performance technology project will likely have multiple players involved in the selection, design, development, implementation, and evaluation of the technologies, and then it will have multiple workers, supervisors, clients, clients' clients, and other stakeholders evaluating the results long after the project has concluded; each of these individuals and

*The process of defining success for performance improvement efforts . . . quickly becomes convoluted and challenging as you begin to analyze the criteria for success.*

groups represents a different perspective on the success of the project (Watkins, 2006a).

Adding to the challenge, most perspectives on success are developed with few supporting data. Personalities, politics, budgets, personal agendas, and other variables often play an equal or greater role than the numbers do in determining the generalized success of a performance improvement effort. In addition, HPT initiatives (as well as many other professional activities) are frequently designed, developed, or implemented following one set of criteria and then evaluated according to a different set.

Nevertheless, you should recognize and attend to the diverse strategic goals and objectives of both internal and external partners in any improvement project. These expected results can then guide your decision making and ensure that your selected performance technologies accomplish valuable results.

Define success for your project with specific performance objectives that are aligned with the strategic ambitions of your organization and its partners. Your definition of success then describes the results you are committed to accomplishing; it does not distract you or others from those results by listing the performance technologies that may be used. This approach not only provides clear guidance for your HPT decisions but also ensures that *favorite solutions* do not interfere with the accomplishment of useful results.

## STEPS FOR SETTING YOUR OBJECTIVES

Using the prioritized strategic ambitions, set your performance objectives. Far more than a list of desired benefits (such as increased profits, improved efficiency, or less turnover), performance objectives describe the results to be accomplished, the criteria that will define success, and the ways those criteria will be assessed. The performance objectives you derive from the strategic goals of your organization and its partners will then guide your

decisions about the performance technologies that will best achieve those results.

Expected results at the societal level are not defined by a single organization, nor is it expected that any one organization will accomplish them on its own (Kaufman, 2006). Likewise, no single performance improvement effort is expected to accomplish all the desired results of an organization and its partners (Watkins, 2006a). Although performance technologies can accomplish remarkable results, you must align your improvement efforts with prioritized strategic goals. This will not only guide your decision making during the selection of appropriate interventions but it will also provide unambiguous criteria for evaluating any performance technologies that are developed and implemented (see Table 2).

## NEXT STEPS TO SUCCESS

The alignment of strategic ambitions with performance objectives provides the ideal grounding for HPT decisions. By focusing first and foremost on performance expectations, you can systematically select performance interventions that will achieve those results. Use this foundation to guide your decisions, and you will consistently select, design, and develop valuable performance technologies.

Notice that up to this point no specific performance technologies have been identified or selected for implementation. And there is still one more step to complete before you can systematically select a justifiable set of performance solutions. Before choosing any interventions you must define the performance assessments linked to each performance objective. Performance assessments are used both to evaluate the performance capacity of alternative technologies and to assess the accomplishments of completed improvement efforts. In the next article of this series, a systematic process for using these assessments to judge the value of potential solutions will be described in detail. Then steps for using the *performance pyramid* (see Wedman & Graham, 1998) will be offered as a systematic process for identifying compatible performance technologies that when used in combination will accomplish desired results.

In designing performance systems it is important to begin with clear and measurable definitions of the performance that must be accomplished, and then let those desired results guide all your decisions. Start by completing a practical examination of the strategic plans, needs assessments, and SWOT analysis findings of your organization and its external partners. Next, verify that

the performance ambitions of each organization are aligned and that your performance improvement efforts will contribute valuable results toward those ends. Align all of your decisions with the accomplishment of these results, and your performance improvement efforts will be successful. 🌟

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# DESIGNING FOR PERFORMANCE, PART 2: SELECTING YOUR PERFORMANCE TECHNOLOGIES

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Strategic plans and performance objectives define the results to be accomplished, but selecting a suitable set of performance technologies for your organizations requires more than just knowing the intended benefits. The systematic procedures described in the article will guide you through practical processes and valuable tools for identifying potential performance technologies, evaluating alternatives, and developing a system of performance-focused activities that accomplish desired results.

IN THIS, THE SECOND of three articles on designing for performance, you will discover processes, tools, and techniques that can guide your selection of worthwhile performance technologies. Building on the steps described last month in “Designing for Performance: Aligning Your HPT Decisions from Top to Bottom” (Part 1), you can use these resources to evaluate and select appropriate performance technologies that accomplish desired results. The systematic steps for designing, developing, and implementing the selected performance technologies will then be presented in the third, and final, article.

## PLANNING FOR PERFORMANCE

For individuals and organizations alike, planning is the essential first step in achieving desired results. Yet, planning by itself is never enough. For intentions to be transformed into results, you have to select the right processes. This is always true, whether you are working to lose weight or working to improve individual or organizational performance. The desire to achieve valuable results remains the same, but the available options vary based on the context. When you choose to lose weight, for instance, you can select from options that include low-carb diets, low-fat diets, yoga, Thighmasters, and even grapefruit

extracts. Equally, when you want to improve organizational performance you might consider a mix of performance technologies such as balanced scorecards, financial rewards, classroom training, coaching programs, and job aids to accomplish desired results.

Subsequently, the design of effective performance systems requires that you align strategic ambitions (that is, the results you and your partners want to accomplish) with practical processes (performance technologies) to accomplish worthwhile results.

## PERFORMANCE

During the transition from establishing a strategic plan to selecting and designing performance improvement systems, a continuing focus on performance is essential. Hence, the operational definition you use for performance should be central to your performance improvement efforts. In 1989, Gilbert and Gilbert defined performance as a combination of both behaviors (what people do) and performance (what people leave behind). However, this two-dimensional definition often blurs our focus when we are selecting performance technologies (see Watkins & Leigh, 2001). This blurring occurs because the two-dimensional definition assumes that there is a constant and direct relationship between improving how an

individual, team, or organization performs and the results accomplished. Unfortunately, this is not the case in most situations.

Improving how individuals or groups perform does not guarantee that they will accomplish the desired results. Nor does improving their processes or procedures necessarily improve their performance (that is, results). It is therefore important to distinguish between performing and performance. For performance improvement, you will want to remain focused on the latter (that is, the results to be accomplished) before you make any decisions about how those results can best be accomplished. By applying this results-oriented definition of performance to your improvement efforts, you can better align the processes you select with the products, outputs, and outcomes you desire.

## PERFORMANCE ASSESSMENTS

As described in Part 1, the first practical step in translating your strategic intentions into valuable results is to develop meaningful performance objectives. These performance objectives can now be used to guide your decision making throughout the remainder of your improvement efforts. Every decision, especially those related to which performance technologies can be used to achieve results, should be measured by the standards set in the performance objectives.

Performance objectives by themselves, however, do not provide all of the essential information for guiding improvement decisions. The objectives you use in decision making must be related to specific performance assessments. For instance, if your performance objective is to lose weight, then the performance assessment you select might be the weight indicated on your bathroom scale each morning. Similarly, if your organization's performance objective is to improve workplace safety to the point where no employees are injured, your choice of performance assessment could include measures based on OSHA standards or records from your on-site safety officers. In either case the statement about what is to be accomplished is clarified by the addition of practical measures that will tell you when you are successful.

The clarity offered by performance assessments is especially critical when you are deciding which performance technologies should be selected, designed, developed, and implemented in your organization. Together with the performance objectives, these assessments provide the criteria and standards with which to evaluate various performance technologies. With the large number of performance technologies now available (such as mentoring, electronic performance support, incentive systems, e-learning, and

organizational reengineering), choosing the right combination of technologies for your performance improvement system can be challenging. Performance assessments are key for making critical evaluations that identify the performance technologies capable of accomplishing useful results (see Table 1).

As a Human Performance Technology (HPT) professional, you will use the selected performance assessments to evaluate each and every performance technology that is considered a potential ingredient in your performance improvement system. From coaching to training and quality circles to 360-degree feedback, each performance technology alternative should be appraised as an option for your organization, using the same objectives and assessments as those that will be used to evaluate performance technology success after implementation. To provide fair appraisals of each option, it is important that you systematically identify or create the necessary assessments for each performance objective before you begin to identify and review potential technology solutions.

## PERFORMANCE ANALYSIS

Inevitably, you will require a comprehensive system of several performance technologies to accomplish most performance objectives. The accomplishment of performance objectives in your organization may require two, three, four, or even more performance technologies to achieve strategic ambitions. For example, combinations such as (1) workplace redesign and process reengineering or (2) recruitment programs, retention projects, and e-learning resources may be used to create an improvement system that achieves desired results. Although performance objectives and assessments provide criteria for selecting performance technologies, the performance analysis is an essential technique for determining the types and number of performance technologies that you should consider.

Use a performance analysis to systematically analyze each performance objective (or cluster of objectives) and to define the contributing results necessary for success. Because each performance objective will require the accomplishment of a number of prerequisite results to produce the achievement of the objective, use a performance analysis process to identify those results and illustrate their relationships across objectives. The results of the performance analysis will then provide you with a clear chart of the products that must be accomplished to support the attainment of desired performance.

Performance analysis should not, however, focus solely on problems, root causes, or quick-fix solutions. Your performance analysis should also identify factors that will strengthen or increase results. Then you can identify the

TABLE 1		STEPS IN DEVELOPING USEFUL PERFORMANCE ASSESSMENTS	
STEPS TOWARD SUCCESS		BRIEF DESCRIPTION	
Step 1: Group objectives		Capitalize on shared measures of performance and reduce redundancies in evaluating potential technologies by systematically aligning performance objectives. Analyze, link, and cluster performance objectives that have related measures. Look for similarities, associations, sequences, and opportunities to share performance indicators throughout all divisions and departments in the organization. For example, identify the three or four performance objectives that will each require workplace safety records as a key element in their measurement and group these together.	
Step 2: Define desirable characteristics		For each performance objective or cluster of objectives, identify a set of desirable characteristics in a performance assessment. For instance, you may want to include in your list financial cost, personnel cost, number of indicators, partner agreement, validity, reliability, or a combination of hard data and soft data. Only assessments that demonstrate these characteristics will be considered as measures for these objectives.	
Step 3: Select or create		Use both the clustered performance objectives and desired characteristics as guides for identifying potential measures of success. Identify several potential measures for each performance objective. Having options is important; without them it is difficult to determine if you have the most appropriate measures.	
Step 4: Verify alignment		In pairing performance objectives with performance assessments, it is easy to lose focus and select measures that are not quite aligned with the desired results detailed in the objectives. Review the complete set of selected assessments to ensure that together they support the necessary measurement of accomplishments of all performance objectives. Without this verification you could end up using inappropriate criteria to select a set of performance technologies and, as a result, end up with less than ideal results.	

Source: Based on Watkins, 2007.

contributing factors (for example, motivation, vision, knowledge, skills, resources) that are necessary for the accomplishment of performance objectives at every level of your organization’s strategic direction. This forward-looking approach to performance analysis defines the building-block results that are necessary for the achievement of performance objectives.

By applying a systematic performance analysis process (see Table 2), you can also identify barriers that are preventing current processes from achieving desired results and improvement opportunities to introduce new, complementary processes. This will ensure that you have a complete perspective of what is required to accomplish your performance objectives. With the results of the performance analysis you can then verify that the performance technologies you consider will achieve the desired results and not just improve performing without improving performance.

At times, the results of a performance analysis will suggest that variations of the current processes can achieve necessary results without adding new performance technologies. More often than not, however, a performance

analysis will identify necessary results that current processes are not able to contribute. Here, use the performance analysis to identify the results to be contributed by selected performance technologies.

For example, your organization might be underusing an employee retention program. A performance analysis can identify supplemental performance technologies (such as current incentive systems, recruitment projects, or training) to assist the program in accomplishing targeted performance objectives. Likewise, the analysis can also identify necessary results that would benefit from the design and development of new performance technologies. You can use the performance pyramid (see Figure 1) to structure your performance analysis efforts.

The formality and duration of the performance analysis can vary and should be related to the criticality (that is, short- and long-term costs and consequences) of the performance objectives. For example, a seven-week analysis to determine the desired characteristics of colored paper for the office copier is likely more extravagant than required. Similarly, a weeklong performance analysis

TABLE 2	STEPS IN IDENTIFYING PERFORMANCE TECHNOLOGY OPTIONS
STEPS TOWARD SUCCESS	BRIEF DESCRIPTION
Step 1: Conduct a performance analysis	Performance analysis is more than just detailing the problems or shortcomings in an organization. To improve performance, look beyond current problems, failures, or challenges. Use systematic performance analysis to examine what results must be achieved for desired performance objectives to be accomplished. Begin by examining a variety of contributing factors and their interactions to determine what processes can contribute to the accomplishment of useful results. Explore all of the performance factors that lead to desired results, noting that missing or failing factors can jeopardize success. This process allows you to identify performance technologies that both address current problems and capitalize on future opportunities.
Step 2: Identify potential technologies	<p>Look for processes, tools, techniques, or resources that (a) accomplish the useful results defined in the performance objectives, (b) achieve the necessary results as measured by the performance assessment, and (c) address each of the contributing factors required for success. Review the current literature in fields such as performance improvement, organizational management, computer science, psychology, human resource management, and other associated disciplines.</p> <p>Find multiple performance technologies from which you can select the appropriate set of solutions for meeting identified performance objectives. Your list of potential performance technologies should be quite long, because each performance objective will have multiple options. You can use the performance pyramid (see Figure 1) to organize and cluster your HPT options.</p>
Step 3: Evaluate your options	<p>Use the criteria of each performance objective (or cluster of objectives) and the measures of each performance assessment to evaluate the alternative performance technologies. Most often your performance objectives will require a number of performance technologies to achieve desired results. Routinely, favorite or preferred solutions will end up not being part of the improvement effort after they have been evaluated based on the performance objectives and assessments.</p> <p>Use the planning, assessment, and analysis results from each of the previous steps to justify your selections. Data and systematic processes will help you defend the set of selected performance technologies and gain vital support for the accomplishment of useful results.</p>
Step 4: Select a set of technologies	Most often, single performance interventions cannot address each of the contributing factors to performance or accomplish all the necessary results for most organizations. Work with your organizational partners to select the set of performance technologies that will best accomplish the defined objectives. Often this process requires some level of compromise among the partners, because priorities will have to be established. When selecting solutions, be sure that the selected performance technologies will work in combination to accomplish the required results (and not contribute to performance problems in other parts of the organization).

Source: Based on Watkins, 2007.

before moving forward with a million-dollar e-learning purchase is not likely to be adequate for practical decision making (see Watkins & Wedman, 2003; Harless, 1975). Use prioritized performance objectives and their relationship to the strategic directions of your organization and its partners to develop a performance analysis plan.

## PERFORMANCE TECHNOLOGIES

For performance technologies to accomplish valuable results, you must identify, evaluate, and select the right mix of activities. Fortunately, a large number and great

variety of performance technologies are available to today's organizations. From electronic-based technologies (such as e-learning, podcasts, PDAs, and online performance support tools) to concept-based technologies (such as needs assessment procedures, strategic planning frameworks, and coaching models), you will have numerous performance technologies to evaluate when selecting the set of solutions that will help you and your organization accomplish desired results.

To begin, use the results of the performance analysis to define the components of a complete performance improvement system that must be addressed through



Source: Figure is based on similar graphic in Watkins, 2007; Watkins & Wedman, 2003; Wedman & Graham, 1998.

FIGURE 1. THE PERFORMANCE PYRAMID WITH ASSOCIATED PERFORMANCE TECHNOLOGIES

the performance technologies you select. Use the performance pyramid to identify the building blocks that should be included in your system (such as strategic direction, skills and knowledge, motivation and self-concept, or expectations and feedback). Use a systematic and comprehensive process to identify the many performance technologies available for accomplishing each performance objective (or cluster of objectives). The list of potential performance technologies should not be limited to those used in your organization in the past or to those suggested by internal or external clients. When looking for potential technology solutions, talk with employees who currently perform related tasks, interview outside businesses that may have had similar experiences, read journals and magazines from multiple disciplines, and take careful notes about each performance technology that may be of value. Identify at least two potential performance technologies for accomplishing results related to each building block of the performance pyramid.

Each potential performance technology should then be evaluated against the criteria established in the performance objectives and assessments. Use these as standards for making the often difficult choices among the various options that are available. It is especially important to be systematic in your evaluation. The data used to evaluate each option, and the orderly processes you apply in making your decisions, will be essential when you are justifying your choices and persuading colleagues to fully support the chosen performance interventions.

It is also useful to review the demands that new performance solutions will place on those responsible for their implementation. Their capacity to apply the selected performance solutions should be a factor in your decision, along with their motivation and support for the challenges and changes related to the introduction of any new performance improvement system.

You can also improve the odds of accomplishing desired results by involving both internal and external partners in selecting the appropriate mix of performance

technologies. Share your identification and evaluation processes, along with the criteria established through the performance objectives, with each of your partners. Next, encourage them to champion aspects of the initiative that affect their division or organization. They can then help guide the individual interventions to the achievement of useful results.

Finally, before you begin to design, develop, and implement any performance technologies, you should again confirm that the selected mix of performance technologies is adequately aligned with the desired results of your organization and its partners. Verify that each performance technology is clearly linked to the results of the performance analysis and the performance objectives established at the individual or team, organizational, and societal levels. You can use a simple table to make sure that each selected performance technology will make a valuable contribution to the performance improvement system (see Table 3).

## PERFORMANCE IMPROVEMENT SYSTEMS

Performance objectives define the results you wish to accomplish based on your analysis of the strategic ambitions of your organization and its partners. Accomplishing these results is then left to the set of performance technologies that you select for implementation. This set may be a combination of performance appraisals and coaching for some performance objectives and a combination of training, new equipment, and incentives for others. No matter which performance technologies are included in your final set of solutions, it is your responsibility to ensure they work together to achieve the desired results of your organization and its partners.

The development of a set of performance improvement technologies involves not only the selection of appropriate single interventions but also the development of a comprehensive system. As you move ahead with the design, development, and implementation of the multiple performance technologies in your system, you should work to avoid suboptimization (that is, the improvement of performance in one subsystem at the expense of performance in other subsystems or in the system as a whole). At each step on the path toward improved performance, verify that the decisions you make are developing a comprehensive system that will accomplish desired results.

Performance improvement systems are only as strong as their weakest performance technology. You would not, for instance, want to develop costly training and performance appraisal technologies only to learn later that reaching the desired objectives also requires an intervention aimed at performance capacity (such as an updated recruitment program or new resource allocation plan). Developing a complete performance system requires that you continually review your decisions from multiple perspectives and apply systemic tools for selecting appropriate technology solutions.

## NEXT STEPS TO SUCCESS

The performance technologies selected for the performance improvement system in your organization must be aligned with those factors known to contribute to achievement of useful results. The performance analysis provides a systematic process that can both define the necessary results and guide your search for potential performance technologies. From balanced scorecards and

TABLE 3 VERIFY SELECTED PERFORMANCE TECHNOLOGIES ALIGN WITH PERFORMANCE OBJECTIVES		
PERFORMANCE OBJECTIVES	CONTRIBUTING FACTORS TO SUCCESS	SELECTED PERFORMANCE TECHNOLOGIES
Objective A	Competence: knowledge and skill	a. E-learning b. Job aids c. After-work educational programs
	Expectations and feedback	a. Balanced scorecard initiative b. Quarterly performance reviews
	Motivation and self-concept	a. Mentoring b. Career counseling

Source: Based on Watkins, 2007.

coaching programs to training and job aids, the performance technologies likely to produce useful results can then be evaluated, compared, and prioritized using grounded criteria and standards established for each performance objective. This systematic process for identifying options and evaluating their value is an essential step to the achievement of useful results.

The selection of performance technologies based on assumptions, organizational politics, or someone's favorite solutions is never advisable. These and other nonsystematic processes reduce your chances of accomplishing desired results on a consistent basis. In contrast, the findings of a systematic selection process can align technologies with performance objectives, justify your decisions, and improve performance (Watkins, 2007).

Although selecting the appropriate performance technologies is a critical step toward accomplishing desired results, the selected technologies still have to be designed, developed, tested, and implemented for desired results to be achieved. You will also want to use systematic processes for designing and developing each of the performance technologies in your system. Managing the development of a performance system, therefore, requires skillful coordination and leadership to create a synergistic system where desired results are achieved effectively and efficiently. In the third, and final, article in this series on designing for performance, you will find guides for producing performance technologies that accomplish results in your organization. 🏠

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# DESIGNING FOR PERFORMANCE, PART 3: DESIGN, DEVELOP, AND IMPROVE

Ryan Watkins

In this final of three articles on how to design for performance, you will find practical steps and useful tools for developing the performance technologies that make up a performance improvement system. Use these systemic and systematic processes as the starting place in creating performance technologies that achieve the strategic performance objectives of your organization and its partners. Then improve on these processes by customizing them for the specialized Human Performance Technology (HPT) solutions you have selected for your performance improvement efforts.

THE ACCOMPLISHMENT OF VALUABLE results rarely occurs by chance. Rather, desired results are best achieved through the systemic and systematic design and development of comprehensive performance improvement systems. These systems use multiple performance technologies (such as Six Sigma, balanced scorecards, retention programs, coaching, training, motivational seminars, strategic planning, reengineering, and electronic performance support) to accomplish desired results. Going beyond quick fixes or narrowly focused efforts, the design of performance systems enables individuals and organizations to achieve strategic ambitions through processes that are both systemic and systematic.

The first article of this three-part series, “Designing for Performance: Aligning Your HPT Decisions from Top to Bottom” (Watkins, 2007a), provided guidance for identifying the strategic objectives of your organization and its partners as the starting place for defining what results should be achieved through any performance improvement efforts. These strategic ambitions were then translated into explicit performance objectives that could be used to guide decision making throughout the selection, design, and development of an improvement system. In the second article, “Designing for Performance: Selecting Your Performance Technologies” (Watkins, 2007b), processes were offered for developing performance assessments that could be used to evaluate the alternative performance technologies available to today’s organizations. In addition, alternative performance technologies were identified for seven interdependent components of a comprehensive system for improving performance

(Watkins, 2007b, 2007c). Guidance was provided for selecting the right combination of performance technologies for accomplishing strategic objectives.

This final article in the series focuses on the design, development, and implementation of the performance technologies that have been evaluated and selected to improve performance. Building on the foundational products of the first and second articles, this article offers processes, tools, and techniques for producing performance technologies that are capable of accomplishing valuable organizational results.

## DESIGNING PERFORMANCE TECHNOLOGIES

The selection of performance technologies such as mentoring, recruitment programs, e-learning, leadership retreats, coaching, and workplace redesign provides a blueprint for implementing improvements within your organization. Although this blueprint can provide an essential map of the relationships between selected technologies and the desired results, you have to design and develop, and later implement and improve, performance interventions for useful results to be achieved. From executive coaching and process reengineering to job aids and performance appraisals, the multiple performance technologies included in your performance improvement system will require varying design and development processes. For instance, some technologies may require the creation of software support tools, while others may rely on the approval of new

organizational policies. Thus, the creation of each performance technology will involve a different series of steps as it moves from design and development to implementation and continual improvement.

Just as no single solution will improve performance in all organizations, no one set of performance technologies is the right choice for all organizations. For that reason, as a Human Performance Technology (HPT) professional, you should use a mix of performance technologies that address the complex performance discrepancies unique to your organization. These should also take into account the current processes of your organization, the contributing factors, the organization's culture, the people who will be asked to change, and the input of external partners and clients.

Most of us enter any performance improvement process with primary experience and skills related to the design and development of a specific performance technology. Whether they are instructional design processes for producing training interventions, multimedia development procedures for creating electronic job aids, or steps for establishing a comprehensive mentoring program, the majority of us are most familiar and experienced with the design and development processes of one or two performance technologies at most (and these may or may not be the selected performance technologies for this improvement effort). Generalizing these systemic and systematic processes is, therefore, a valuable first step toward success.

Many analogous processes can be applied across the design and development efforts of various performance technologies. Comparable team structures, equivalent roles and responsibilities, corresponding timelines, and similar formative evaluation requirements can help support the systematic creation of a complete performance improvement system. In addition, many generalized project management principles can help guide you toward success.

The tasks associated with designing and developing performance solutions build on the results of the previous processes. Findings from your needs assessment and SWOT analysis, for instance, will help guide you in making useful performance improvement decisions throughout the design and development process. The performance objectives and assessments that you identified prior to selecting performance technologies will also provide guidance throughout implementation and formative evaluations. You can improve efficiencies within your performance improvement system by capitalizing on the common components found among diverse performance technologies (see Table 1). For example, if each of three performance technologies requires the input of expert performers from the sales division, then all three design teams can work together to share data from their interviews and performance observations with these experts.

Planning for the coordination of the multiple performance technology development processes within your set of solutions is a priority in generating a comprehensive and synergistic performance improvement initiative. Maintain a systemic perspective throughout the design and development of selected performance technologies. This coordination of performance technologies ensures that all strategic performance objectives are addressed, all contributing factors are responded to, and all technology interventions capitalize on the efforts of other improvement efforts to maximize efficiency and effectiveness (Watkins, 2007c).

Work to avoid "random acts of improvement" when designing and developing the performance technologies. The sustained success of a performance improvement initiative hinges on the capacity of distinct performance technologies to achieve desired results while supporting the accomplishments of other performance technologies in the performance system. Therefore, use systemic and systematic processes to develop each technology intervention, producing consistent and sustainable results that are aligned with strategic performance objectives.

## MANAGING THE DEVELOPMENT PROCESSES

Most interventions selected to improve performance will necessitate changes for both the organization and those who work within it (see Lick and Kaufman, 2000). As a consequence, develop a management plan that aligns information collected during the planning stages of the improvement initiative to the implementation requirements of the individuals, small groups, teams, divisions, and organizations tasked with accomplishing useful results. This comprehensive management plan can then address the integration of the collaborative performance technologies, the procedures for developing each distinct technology, and the successful implementation of the technologies in your organization.

Successful performance improvement initiatives rely on the support and commitment of key individuals within an organization as well as the valuable backing of external partners. Organize and develop the support you require for accomplishing useful results as an ongoing responsibility (see Table 2). This includes not only developing appropriate performance technologies but also creating the infrastructure capable of sustaining (and continually improving) the performance initiative. Leading change in your organization is a role you must take on when you develop a performance improvement system.

The design and development of performance technologies routinely requires specific procedures and processes that are unique to each organization. For instance, in one

TABLE 1	
STEPS IN PLANNING FOR THE DESIGN AND DEVELOPMENT OF PERFORMANCE TECHNOLOGIES	
STEPS TOWARD SUCCESS	BRIEF DESCRIPTION
Step 1 Verify alignment of selected performance technologies	Begin by creating a visual representation (or map) of multiple performance interventions and their associated performance objectives. Use this to verify that the selected performance interventions will work together to produce the desired results and that you can create synergy among the design processes for each performance technology included in the system.
Step 2 Define roles, responsibilities, and partnerships	For both the overall performance improvement initiative and each of the individual performance technologies you have selected for implementation, identify the key roles that internal and external organizational partners can play in the effort. In addition to the general roles (including leader, advocate, and manager) of almost any performance technology project, there are commonly unique technical aspects to each performance technology that require specialized staff to be assigned to the individual development project. For each role that you identify as a necessary component for designing and developing the included performance technologies, define the associated responsibilities (see Table 2).
Step 3 Design and develop performance technologies	Apply a generic development process to guide the development of various performance technologies. Although a generic process will not provide you with the details for managing all aspects in the creation of any single performance technology (for which there are likely many books available), as a framework it can offer guidelines and structure that are useful in developing a more detailed plan. Examples of how a generalized process can be applied to specific performance technologies are included in Table 3 (based on Watkins, 2007c).
Step 4 Align common and unique processes	Within your performance improvement initiative, there will be multiple performance technologies selected to accomplish valued performance objectives. During the design and development of these performance technologies, there will also be objectives, tasks, and resources that are shared among the projects. Therefore, capitalize on the similarities, maximize the benefits of the unique aspects, and ensure the alignment of all performance interventions. Throughout the design and development process, maintain your systemic perspective. You can then avoid both suboptimization and the development of performance technologies that do not accomplish desired results. Monitor the accomplishments and tasks of each development project to assess where improvements to the development processes can be made.

Source: Based on Watkins (2007c).

organization, the development of an interactive e-learning course may require a task analysis, while another organization may find that earlier task analyses provide the necessary information for its development process. Yet while the specific steps in creating performance technologies may require distinctive applications within an organization, there are generalizable development processes that can be applied across multiple technology development projects. For example, the ADDIE (analyze, design, develop, implement, and evaluate) process that is applied in many instructional design projects can also be applied in its generic form to the development of many other performance technologies (see Table 3).

Create a design and development plan for each performance technology selected for implementation. It is often helpful to involve both internal and external partners in all steps of creating the plans for each performance technology to learn from their experience, expand their knowledge of the performance improvement system, and gain their support for the specific performance technology.

## FORMATIVE EVALUATIONS

Include in the development of all performance technologies time and resources for formative evaluations (see Table 4). Formative evaluations provide multiple opportunities for an intervention's deliverables to be examined by future users, demonstrated for experts, and pilot-tested in the performance environment. It is, therefore, valuable to plan for ongoing formative evaluations throughout the creation of each performance technology. Going beyond the interim revisions that are characteristic of most any project, formative evaluations are done to identify specific design and development considerations. These considerations can add to the quality of performance technologies and ensure that the performance improvement initiatives focus on accomplishments.

Be sure to incorporate formative evaluations into your performance interventions prior to implementation. Key roles for formative evaluations in any performance improvement initiative include receiving feedback, docu-

TABLE 2 SOME COMMON ROLES AND RESPONSIBILITIES ASSOCIATED WITH PERFORMANCE IMPROVEMENT SYSTEMS	
COMMON ROLES	RELATED RESPONSIBILITIES
Performance improvement initiative leader	<ul style="list-style-type: none"> <li>• Oversees the design and development of multiple performance technology projects within a performance improvement initiative</li> <li>• Develops plans for the coordination of multiple performance technology projects</li> <li>• Assembles and manages the necessary partners (internal and external to the organization)</li> <li>• Communicates among the internal and external partners to ensure initiative success</li> <li>• Responsible for the successful accomplishments of the performance improvement initiative</li> </ul>
Initiative advocates (internal and external)	<ul style="list-style-type: none"> <li>• Communicate the benefits of the performance improvement initiative to internal and external partners</li> <li>• Work with partners to ensure alignment of strategic directions</li> <li>• Ensure that the initiative and related projects receive the support required for success</li> <li>• Serve as a change agent within the organization</li> </ul>
Performance intervention project manager	<ul style="list-style-type: none"> <li>• Manages the design and development of one or more specific performance technology interventions</li> <li>• Works with the initiative leader to ensure the alignment of performance technologies</li> <li>• Leads the technical development team</li> <li>• Responsible for the accomplishments of specific performance objectives</li> </ul>
Technical development team	<ul style="list-style-type: none"> <li>• Provides the design and development support necessary for creating performance technologies</li> <li>• Offers a range of professional backgrounds (for example, information technology, human resources, instructional design, computer interfaces) necessary for the design and development of distinct performance technologies</li> <li>• Creates draft products and obtains feedback through formative evaluations</li> <li>• Revises design and development products as necessary</li> </ul>

Source: Based on Watkins (2007c).

menting recommendations and changes, and assessing performance. In its initial role, feedback from formative evaluations offers essential input into the revision process that should be part of the development life cycle for any performance technology project. From specific information on which processes are not taking place in the correct sequence to general concerns regarding employee attitudes about policy changes, let feedback from formative evaluations guide the revision of project deliverables.

In your formative evaluations, pull together performance data using a variety of data collection techniques (see Table 5). This helps ensure the quality of your evaluations and provides sound justifications for changing your current design and development processes. For example, use a combination of data that is externally verifiable to supplement data that may represent the unverifiable perspectives of employees, clients, or other community partners. In addition, collect data that are numerical along with data represented in text, prose, audio, or illustrations. By combining data from numerous sources, you can gain a fuller view of how performance technology contributes to desired results.

Within a formative evaluation, each data collection technique has unique advantages and disadvantages that should be considered in determining which is most appropriate for meeting your objectives. For instance, if you are conducting a formative evaluation of a new employee recruitment program that focuses on interviewing, you would likely want to include survey data from potential employees who were interviewed (providing soft quantitative data), focus groups with interviewers (providing hard qualitative data), and performance data related to the performance objectives achieved by the recruitment program (providing hard quantitative data). The triangulation of data from each of these sources can provide valuable information for making decisions about how the technology can be improved (Watkins, 2007c).

Collect formative evaluation data for each of the performance technologies in your system, and then work with your development teams to identify systematic steps for improving effectiveness and efficiency. Sometimes achieving desired performance objectives requires only a few tweaks to a performance technology; at other times, you may have to go back to performance objectives to redesign an entire performance technology. Since the lat-

TABLE 3

## A GENERALIZABLE DEVELOPMENT PROCESS APPLIED TO SAMPLE PERFORMANCE TECHNOLOGIES

Electronic Performance Support System	<ol style="list-style-type: none"> <li>1. Analyze performance requirements</li> <li>2. Complete a task and performance analysis</li> <li>3. Define system specifications</li> <li>4. Identify integrated performance assessments</li> <li>5. Select performance support requirements</li> <li>6. Define media and software requirements</li> <li>7. Create rapid prototype of support system and do formative evaluation</li> <li>8. Review and revise based on formative evaluations</li> <li>9. Complete development of performance support system, and do formative evaluation</li> <li>10. Review and revise as required</li> </ol>
Balanced Scorecard <sup>1</sup>	<ol style="list-style-type: none"> <li>1. Analyze performance requirements</li> <li>2. Identify critical success factors</li> <li>3. Identify and define appropriate performance measures for financial, external, internal, and innovation perspectives</li> <li>4. For each measure, collect baseline data</li> <li>5. For each measure, identify desired performance standards based on objectives at the societal, organizational, and individual and team levels</li> <li>6. Review and revise performance measures as necessary</li> <li>7. Identify performance gaps or measures</li> <li>8. Define implications of performance gaps</li> <li>9. Create action plans for addressing performance gaps</li> <li>10. Monitor action plan implementations</li> <li>11. Review, revise, and repeat process, as necessary</li> </ol>

Source: Based on Watkins (2007c).

<sup>1</sup>For more information on balanced scorecards, see Kaplan and Norton (1993).

ter scenario can be costly, routinely conduct formative evaluations throughout the design and development process, as well as when the performance technology is nearing completion.

While you may be tempted during the formative evaluations to focus solely on the operational details of single performance technologies (for example, improved communication strategies for promoting a new incentive system or more interactive elements in an e-learning course), you can risk losing sight of the long-term strategic objectives that are to be achieved. Balance the recommendations for specific revisions to a performance technology with those related to the accomplishment of identified strategic objectives.

Plan for and make continual improvements throughout the implementation of the multiple performance technologies in your improvement system. Use your performance objectives to establish performance standards and criteria. From small changes that can improve process efficiencies of a single technology to performance reviews that ensure that the system of performance solutions is accomplishing necessary results, continual improvement processes lead to sustainable success.

Furthermore, continually assess your performance improvement processes. The procedures, steps, techniques, and processes that you are using to select, design,

and develop a system of performance technologies should be continually assessed and improved to make future performance improvement efforts even more effective and efficient.

## CONCLUSION

The desire to improve individual or organizational performance is an admirable ambition and one that HPT professionals can achieve through the application of systemic and systematic processes. In this three-article series, the performance-by-design framework provided systematic steps for creating performance improvement systems that accomplish desired results (see Figure 1). Guided by the strategic objectives of your organization and its partners, you can apply this framework to most organizational settings and not be tied to any one performance solution such as training, electronic performance support, e-learning, balanced scorecards, mentoring, or coaching. The framework provides a systematic guide for selecting, designing, and developing a system of complementary performance technologies that can be aligned with your strategic goals and objectives.

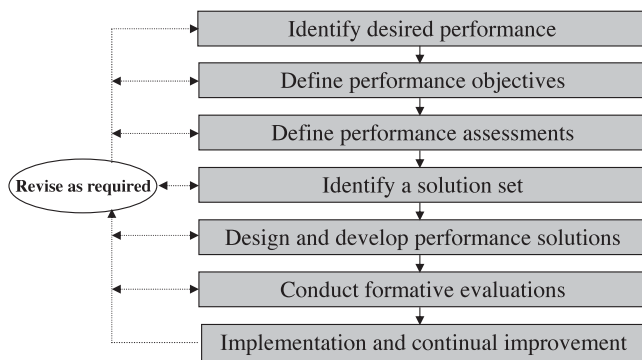
Use the framework as a starting place when planning your next performance improvement effort, realizing that it provides an initial guide rather than a restrictive

<b>TABLE 4</b>		<b>STEPS IN THE FORMATIVE EVALUATION AND CONTINUAL IMPROVEMENT OF YOUR PERFORMANCE SYSTEM</b>
<b>STEPS TOWARD SUCCESS</b>	<b>BRIEF DESCRIPTION</b>	
Step 1 Define objectives of formative evaluations	Formative evaluations can be conducted using a variety of techniques and a range of participant groups. Therefore, begin by defining the results you want to achieve through the evaluations. Specify evaluation objectives for each development project independently to ensure that you collect all the useful data for making improvement. You may, however, be able to capitalize on similar objectives for the formative evaluation of each of the performance technologies focused on the achievement of shared performance objectives.	
Step 2 Select formative evaluation techniques	Select a combination of data collection techniques that ensure the attainment of adequate and useful information for making future decisions. Use a combination of one or more evaluation techniques to ensure that you have data from several perspectives. For example, you can combine focus group reviews of the performance technology with both a one-on-one review by an expert performer and a pilot test of the technology with future users.	
Step 3 Manage formative evaluations	Plan for the formative evaluation of each performance technology early in the design and development process. Let the desired results that are expected from the formative evaluations guide your decisions, and consider combinations of multiple evaluation techniques. Consider the sequencing and timing of formative evaluations within the development process to ensure that adequate time and resources are available for making necessary revisions.	
Step 4 Apply results	<p>Begin by taking an inventory of the findings from the formative evaluations of each performance technology, and compare the results from each of the evaluation techniques. This gives you the opportunity to assess and analyze the feedback from the multiple participants and perspectives. In the analysis, look for similarities, contradictions, recommendations for improvements, and opportunities to capitalize on related performance improvement activities.</p> <p>Prioritize the recommendations based on the potential value (for example, effectiveness, efficiencies) they add to performance and the potential costs (for example, time, financial, resource) associated with implementing the recommendations. Not all recommendations for improving a performance technology will lead to specific alterations to the current development processes. Some recommendations may be catalogued for use in subsequent continual improvement efforts after initial implementation, while others may be shared with other performance technology projects. All reasonable recommendations should, however, be documented, and an action should be assigned to each.</p>	
Step 5 Continually assess and improve performance	While formative evaluations provide for the improvement of performance technologies before they are implemented, systematic and continual improvement efforts are necessary for making improvements during and throughout implementation. No performance technology will accomplish all of its desired results in the most effective and efficient manner when it is first implemented. Therefore, plan for the continual improvement of all performance technologies during their design and development.	

Source: Based on Watkins (2007c).

<b>TABLE 5</b>			<b>EXAMPLES OF DATA COLLECTION TECHNIQUES</b>
	<b>HARD (EXTERNALLY VERIFIABLE DATA)</b>	<b>SOFT (NOT EXTERNALLY VERIFIABLE DATA)</b>	
Quantitative (numerical expressions of a variable)	<ul style="list-style-type: none"> <li>• Performance data</li> <li>• Budget analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Surveys with a Likert-type scale that quantifies perceptions</li> <li>• Performance ratings</li> </ul>	
Qualitative (nonnumerical expressions of a variable)	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Analysis of posting to a listserv</li> <li>• Document review</li> <li>• Multisource performance observations</li> </ul>	<ul style="list-style-type: none"> <li>• Open-ended opinion surveys</li> <li>• Individual interviews</li> <li>• Single-source performance observations</li> </ul>	

Source: Based on Watkins (2007c).



Source: Based on Watkins (2007a).

FIGURE 1. THE PERFORMANCE-BY-DESIGN FRAMEWORK

procedural set of rules. In application, the steps in the framework will regularly overlap and be completed in various sequences. So while the framework may appear to be rigid, in use it is quite fluid and dynamic. When starting out, however, you may want to follow the process closely. As you build expertise, use the framework as a heuristic that can be adapted to many situations. Later, the framework may become an integral part of your approach to improving performance, offering a unique and systemic perspective on selecting, designing, and developing performance technologies.

Nevertheless, no matter how you apply the steps of the framework, always maintain a focus on results. Use the strategic objectives of your organization and its external partners to guide your decisions, continually differentiating between the results to be achieved (performance) and the processes, tools, and resources used by individuals and organizations (performing). Applying this performance-focused approach to your improvement efforts will lead to valuable performance outcomes for you and the organizations you serve. 🏡

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