Swanson, R. A. & Holton, E. F. (1998). Developing and maintaining core expertise in the midst of change. National Productivity Review. 17(2), 29-38.

DEVELOPING AND MAINTAINING CORE EXPERTISE IN THE MIDST OF CHANGE

The contemporary management literature speaks powerfully about the struggle organizations are having in connecting their leadership roles and organizational systems to intellectual capital and workplace expertise of individual contributors—the fuel of an organization. This case study supports two core ideas that have been proven to work. First, it demonstrates the connection between business strategy and the development of process-referenced expertise in individual employees. Second, it goes beyond the traditional job and task analysis model and into a contemporary and more comprehensive business performance improvement model.

by Richard A. Swanson and Elwood F. Holton, III

Healthcare Inc. is facing a serious business problem. Even though the company salesforce is made up of some extraordinarily capable people, the largest accounts are increasingly being captured by the competition. Sales are down, and in response the company is changing the sales process and the way people do their jobs. The best people now working in sales do not like the pending changes and are considering leaving.

Although Healthcare Inc. is a pseudonym, it represents an actual case, one that is fairly common in contemporary organizations. For management the question is: How can an organization maintain and develop the organization's core workforce expertise in the middle of change? More specifically, how can an organization ensure that its workers' expertise is directly related to their work processes—that is, that the expertise is process-referenced?

Workplace expertise is the fuel of an organization. Characterizing human expertise as a complex and multifaceted phenomenon, performance improvement expert Richard Herling defined human expertise as *displayed behavior within a specialized domain and/or related domain in the form of consistently demonstrated actions of an individual which are both optimally efficient in their execution and effective in their results.*

Our contemporary communication technology allows us to regularly listen to and view performances by the true experts in many fields of endeavor. We are surrounded by high quality symphonies, lectures, books, movies, sports, and crafts. Most of us want and/or expect to be surrounded by high levels of expertise. While the desired state of high expertise can be easily held in the mind's eye, organizations have a continuing struggle in assuring minimal

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expertise for meeting existing requirements, let alone having expertise to meet future requirements. Meeting and maintaining workforce expertise requirements that are connected to organization goals and core work process requirements are a fundamental challenge to organizations.

THE TRADITIONAL JOB TASK APPROACH TO EXPERTISE

Organizations have, for the most part, embraced the job- and task-oriented approaches to defining workplace expertise and have relied on multiple analysis procedures. These approaches are familiar to most human resource management professionals and are driven by federal law in many cases. Essentially they all contain three basic steps:

1. Developing a list of job tasks that may be performed in a job.
2. Verification of the task list as a valid representation of the job.
3. Analysis of precisely what a person needs to know and be able to do to meet a specified performance standard for each task.

Fundamentally, job and task analysis methodologies address the proper unit of analysis: the work task. In practice, the custom is often to use existing job structures, current work practices, and current employees as the framework for determining those work task requirements. The outcome is task and expertise analyses that are grounded in the present. In stable environments, this approach works. What happens, however, if jobs, work tasks, and task expertise are not stable but changing rapidly? In today's fast-changing world, job responsibilities and requirements change and shift rapidly. New approaches are needed to develop expertise that prepares the organization for future changes.

One response has been to shorten the cycle time of data collection processes so that job analysis is more manageable as jobs change. The assumption here is that traditional thinking and analysis methods are okay, but that they need to be used more aggressively.

Other organizations are taking the position that jobs must be designed to be indeterminate and flexible. But how do you analyze them? Some experts suggest that flexible job models that allow organizations to manage competencies, not jobs, are necessary.

THE COMPETENCY-BASED APPROACH TO EXPERTISE

Acccording to David DuBois, author of *Competency-Based Performance Improvement,* competency assessment is an approach that can overcome some of the limitations of traditional job analysis. Competencies are generally defined as underlying characteristics of employees that enable them to perform a job or task. Because a competency is an underlying characteristic and one step removed from the task itself, the competency-based approach to expertise is a more flexible approach that can be used to select and develop employees across multiple jobs.

Competency models are also job-based and, therefore, operate under the same assumptions and are subject to the same criticisms that job-based methods are.

Competency models generally proceed in the same fundamental steps as the job analysis model, the only difference being that work tasks are analyzed for underlying competencies as opposed to knowledge, skills, and abilities. In some cases, steps one and two are skipped and experts are used to develop the competencies directly. This is particularly the case in occupational analysis.

The key point is that competency models are also job-based and, therefore, operate under the same assumptions outlined above and are subject to the same criticisms that job-based methods are. To the extent that competencies are more likely to be stable than job tasks, they are an improvement, but they still fall short for all situations, particularly in the realm of defining the specific expertise (not general competencies) required to perform.

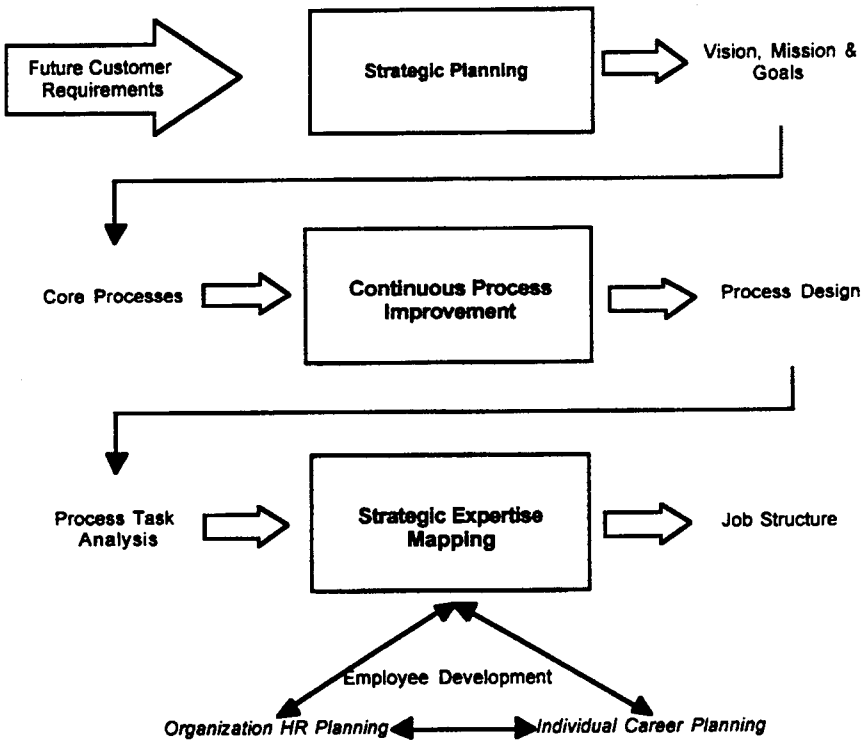
THE STRATEGIC APPROACH TO EXPERTISE

Organizations need a new system for identifying expertise for work outputs that:

1. is anchored in more stable components of the organization;
2. is flexible as it relates to job structures;
3. separates work expertise and individuals from job structures;
4. addresses organizational, process, and individual levels of performance; and
5. can be used strategically, not reactively.

Such a process, called Strategic Management of Expertise (**Exhibit 1**), is fundamentally different from traditional processes because it addresses the objectives listed above. In this model, organizations manage strategic goals, core processes, and core competencies and expertise. Job structures emerge as a final step in the process, but have no real role in the planning—that is, jobs can be reorganized without affecting the expertise planning. Jobs are expected to change frequently as expertise is redeployed to achieve strategic goals. Employee development systems are focused on

EXHIBIT 1. Strategic Management of Expertise



expertise, not jobs. This is an integrated planning process that links expertise to core business processes, which are linked to customer needs.

The planning system consists of three planning subsystems: strategic planning, continuous process improvement, and strategic expertise mapping. Each has inputs, a planning process, and outputs as discussed below. What is different about this system is not the particular subsystems, but the manner in which they are integrated and used. This model is not proposed as a replacement for job analysis in all situations but, rather, for those instances where job structures are constantly in flux.

Strategic Planning—The components of this subsystem are:

Inputs: The strategic planning subsystem begins with the identification of customer needs and requirements.

Process: Through strategic planning, customer needs and other environmental constraints are examined and compared to organizational strengths and weaknesses.

Outputs: Strategic planning results in organizational vision, mission, and goals.

Continuous Process Improvement—The notion of continuously improving organizational processes has become deeply ingrained in organizations through the quality movement. Although varying in approaches, all quality systems have at their core the idea that processes should be identified and continuously managed and improved. The methodologies and tools of process improvement have generally proven to be quite effective. Two problems with process improvement systems is that they often lack controls to ensure that process improvement resources are being focused on core processes and they often have weak links to specifying and developing the expertise required to function in the process.

Inputs: After identifying strategic objectives for the organization, core organizational processes to achieve those goals must be identified and become the candidates for process improvement.

Process: Process improvement methodologies are used to examine, improve, or redesign core processes.

Outputs: The outcomes are designs for core processes that maximize the likelihood of achieving strategic goals.

Strategic Expertise Mapping—As discussed earlier, assessment methodologies for linking expertise development to strategic goals are not well-developed. A basic assumption here is that personnel development should be focused on developing core expertise related to core processes in the organization.

Inputs: Core process steps are identified and then serve as inputs to this subsystem.

Process: Strategic expertise mapping is the process of determining the specific expertise that employees need to perform in core processes. Emphasis is on developing core work process expertise.

EXHIBIT 2. Performance Diagnosis Matrix of Enabling Questions

PERFORMANCE VARIABLES ↓	PERFORMANCE LEVELS → ORGANIZATION LEVEL	PROCESS LEVEL	INDIVIDUAL LEVEL
Mission/Goal	Does the organization mission/goal fit the reality of the economic, political, and cultural forces?	Do the process goals enable the organization to meet organization and individual missions/goals?	Are the professional and personal mission/ goals of individuals congruent with the organization's?
System Design	Does the organization system provide structure and policies supporting the desired performance?	Are processes designed in such a way as to work as a system?	Does the job design for the individual contribute to his or her job performance?
Capacity	Does the organization have the leadership, capital, and infrastructure to achieve its mission/goals?	Does the process have the capacity to perform (quantity, quality, and timeliness)?	Does the individual have the mental, physical, and emotional capacity to perform?
Motivation	Do the policies, culture, and reward systems support the desired performance?	Does the process provide the information and human factors required to maintain it?	Does the individual want to perform no matter what?
Expertise	Does the organization establish and maintain selection and training policies and resources?	Does the process of developing expertise meet the changing demands of changing processes?	Does the individual have the knowledge, skills, and experience to perform?

Outputs: Operating structures are devised to deploy the expertise in a manner appropriate for management and human resource systems in the organization. These may be jobs, process teams, task forces, etc.

THE HEALTHCARE INC. CASE

Healthcare Inc., a major healthcare insurance company and provider in the United States, wants to increase sales in a changing and competitive environment. In this case, the sales process was a core work process needing revision and realignment in relation to the business goal and the expertise of the workforce. In this case, which clearly illustrates the need for new approaches to analyzing and building workplace expertise in fast-changing competitive environments, six steps were taken to improve performance.

Step 1: Diagnose current performance. The general steps of this performance diagnosis process were: (1) articulate the initial purpose, (2) assess performance variables, (3) specify performance measures, (4) determine performance needs, and (5) construct an improvement proposal. A summary of the up-front analysis data was reported to senior management through the cells created by the performance diagnosis matrix of enabling questions used in this diagnosis phase (**Exhibit 2**).

The data from these cells in the context of the strategic business goals of Healthcare Inc. were used as a basis for uncovering existing system sales performance problems and solutions. A major conclusion was that the existing sales process was incapable of meeting the strategic business goals of timeliness and quality features necessary to retain market share. Thus, the sales process needed to be significantly improved, the roles in the process needed to be clarified, and the expertise required to expertly carry out the roles within the process needed to be in place.

Step 2: Document the existing process. The existing sales process was documented and found to be composed of 79 steps spread over nine job categories. The resulting integrated flowchart—an integration of the steps within the process and the people that work in the process—brings the process and the people working in the process to the fore. As **Exhibit 3** shows, each step from the integrated flow-

EXHIBIT 3. The Record of Sales Process Steps

IMPLEMENTATION & ACCOUNT MANAGEMENT SUBPROCESS:		MGMT	NBM	PSS	CM	BSC/ Serv	Pro	UW	IM/IS	C
#25	Assign Service Representative to case **OR**	X	X		X	X				
#26	Request Case Mgr. from BSC for the case.	X				X				
#27	Are Customer's expectations in sync w/ _____ capability to deliver product, price & service? (If no, go to #15 & #16)				X	X	X	X		X
A	**Process Measure:** # of times _____ capability is not in sync w/ Customer's requirements of cost, product, or service; check possible areas: Underwriting, Sales, Producers, Customer, as well as magnitude of difference.	X								
#28	If yes, review pre-sale file, proposal, and Underwriting rates.		X	X	X					
#29	Confirm internally what products were sold.		X	X	X	X		X	X	
#30+	Advise Customer of network developments and/or introduce any new service delivery.		X		X		X			
#31	Notify implementation team of sale and engage.		X		X				X	
•#32	**Conduct implementation meeting.** (**Comment:** *For mgmt. training, stress* minor *role of NBM; exceptions will occur depending on whether CM has been introduced or not; this is situational.*)		X		X	X	X		X	X
	#32.1 Answer benefits questions.				X	X			X	
	#32.2 Answer questions on administrative process.				X	X			X	
#33	Send letter to Customer following up on implementation process.				X	X			X	
•#34+	**Deliver and negotiate financial contracts.**				X					X
#35	Monitor service process.	X		X	X					

• **Large, multi-step activity.**
+ This activity *could* occur anytime from this point on.
A This step should be automated.

chart is coded against all the job roles directly involved in that step. For example, there are three job roles engaged in step 31. Of those, the new businses manager (NBM) is primarily responsible for the oversight of this step with input from CM and Pro. The bold "X" against the NBM role for step 31 indicates responsibility. A separate time-sensitive longitudinal flowchart of each of the 79 steps is also produced.

The core method of documenting the existing process was to:

- Telephone interview a select group of salespeople, sales managers, and sales support personnel. In this case interviewees came from four regions throughout the United States.
- Create a first draft of the integrated flowchart.
- Visit multiple sales offices and observe sales personnel and sales support personnel carrying out their work (including going on sales calls).
- Create a second draft of the integrated flowchart.
- Send out the integrated sales flowchart to the select group for review, revision, and approval.

Step 3: Improve the process. The integrated flowchart of how the work is presently done is used as a basis for selecting a group of personnel to review and revise. This was done in a face-to-face two-day work session. Each participant received the integrated flowchart before the meeting and was informed of the process improvement goal. As each step was reviewed, along with the job roles contributing to that step, improvement revisions were entertained, evaluated, and acted upon by the group. In this case, the 79-step process was reduced to 52 steps and all nine job categories contributing to the existing process continued to contribute to the revised process in a modified manner. In addition, the 52 steps were clustered into subprocesses or

phases: pre-sale (24 steps); implementation and account management (25 steps); sales renewals (18 steps); and settlement (12 steps). Following the work session, the revised integrated flowchart was sent to a discrete list of Healthcare Inc. decision makers for final approval.

Step 4: Specify process-referenced tasks. This phase and the next two phases were completed in one two-day work session. This phase involved the earlier team of Healthcare Inc. experts—the select group of salespeople, sales managers, and sales support personnel—along with the professional trainers that had, up to then, been responsible for developing sales expertise in sales personnel and that would be partially responsible for the new Healthcare Inc. sales personnel development system.

Given the improved sales process, the team clustered 52 sales process steps into tasks attributable to one or more of the nine job roles in the sales process. In some instances, a single step was equivalent to a task, and in most instances several highly related steps were clustered into a process-referenced task. When this occurred, a task name was given to the grouping of steps. **Exhibit 4** graphically characterizes this process. This phase is relatively easy to do and, yet, it is fundamental in connecting work tasks to core work process(es)—something regularly missing in organizations and a source of major performance "disconnects" in organizations.

Step 5: Establish process-referenced task standards (performance, expertise, knowledge). While the preceding phase is relatively simple, this phase is quite taxing. Task standards for each task, in the forms of performance "measure and standard," the "must know" knowledge, and the "must do" expertise are established. In doing this work, a data sheet is used to record decisions (**Exhibit 5**).

One critical time-saving aspect to this effort is to identify existing documentation and sources of knowledge, expertise, and measurement. In fact, participants in this process were asked to bring along all readily available relevant documentation to the process-referenced tasks under consideration for review and consideration during the work session. So many good ideas were coming out so fast from the

EXHIBIT 4. Process-Referenced Tasks
Identifying job tasks within major business processes.

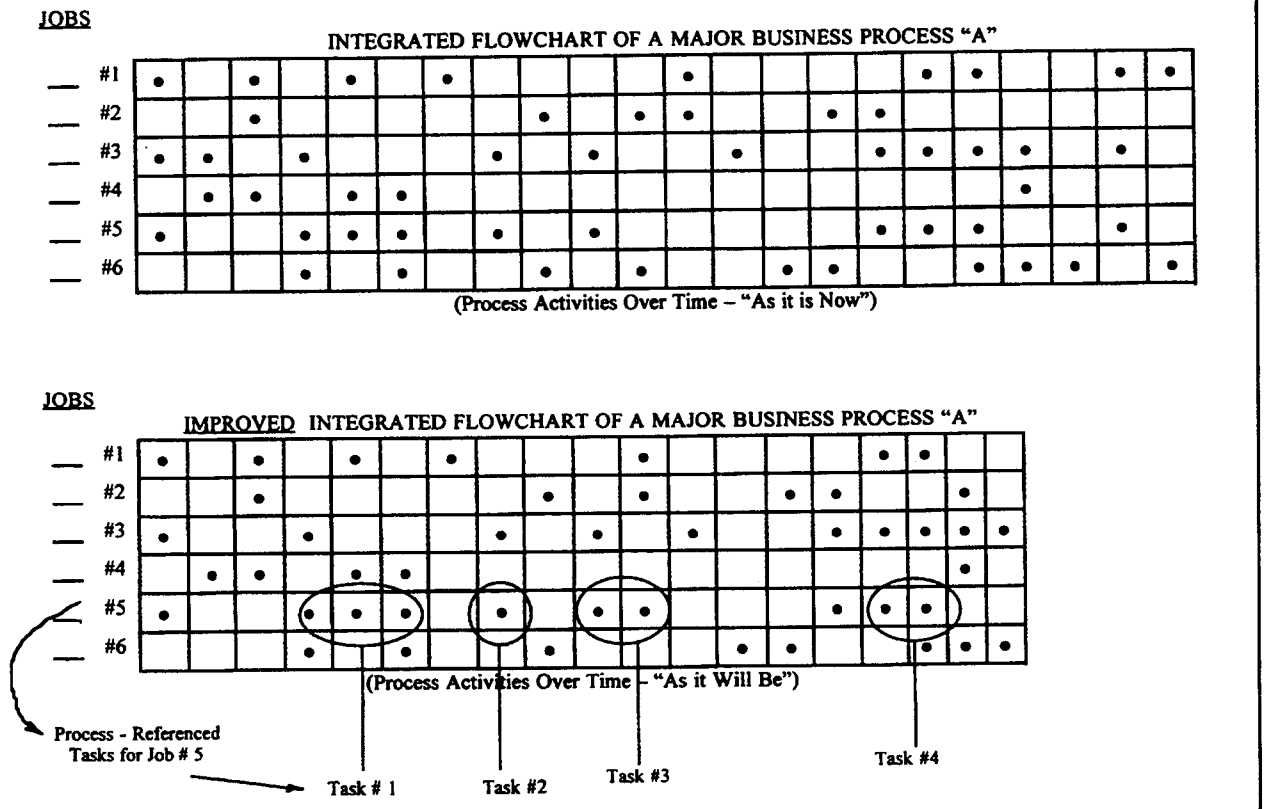
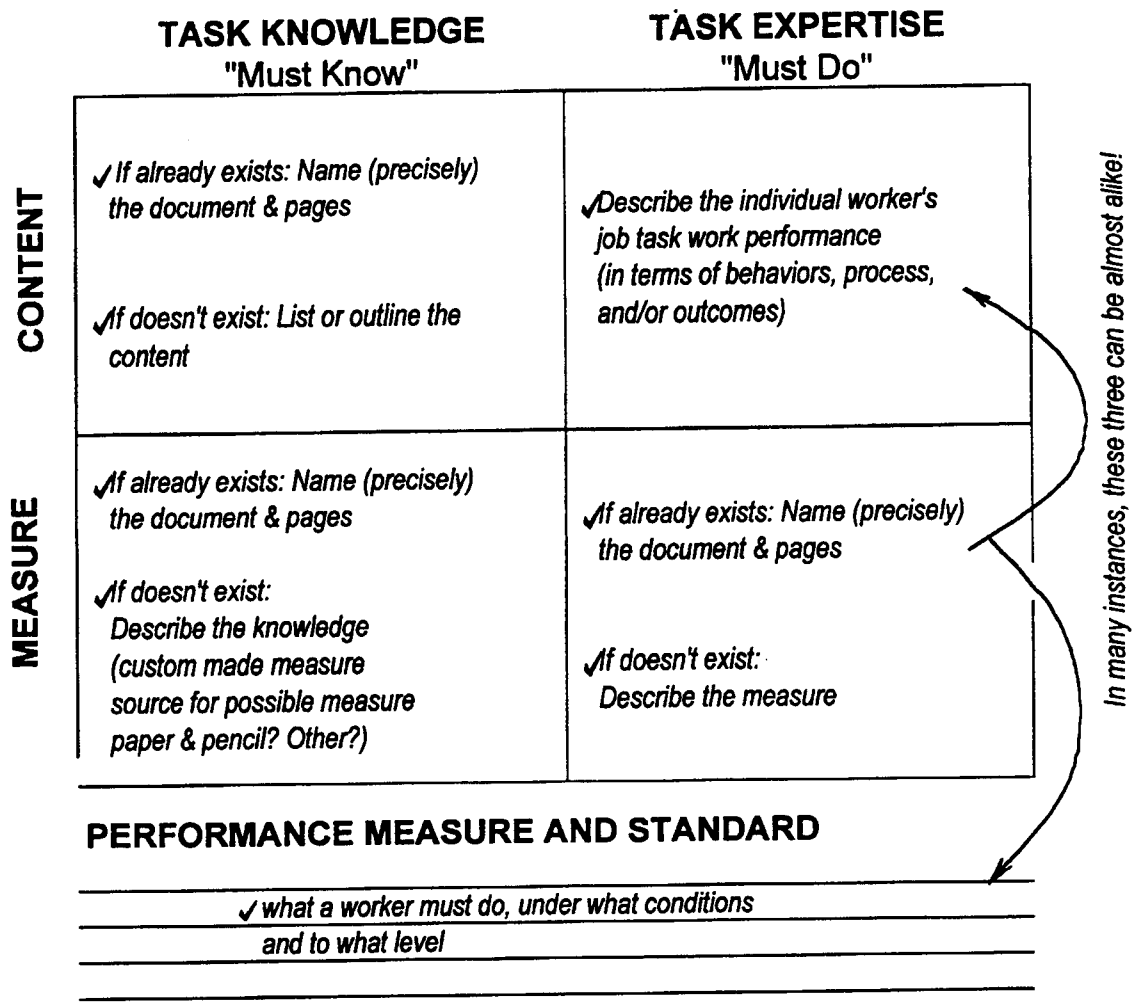


EXHIBIT 5. Process-Referenced Task Standards
Performance, Knowledge, and Expertise Data

Task # ✓*From integrated flowchart*

✓*Unique and discrete*
✓*Intermediate and reasonable size*

Task Name ✓*Action verb & object of action*



group that it was critical to have an official recorder of information so that no information would be lost. This highly charged session at Healthcare Inc. yielded critical information in the realms of performance standards, basic knowledge, and unexpected sources of expertise and related training materials.

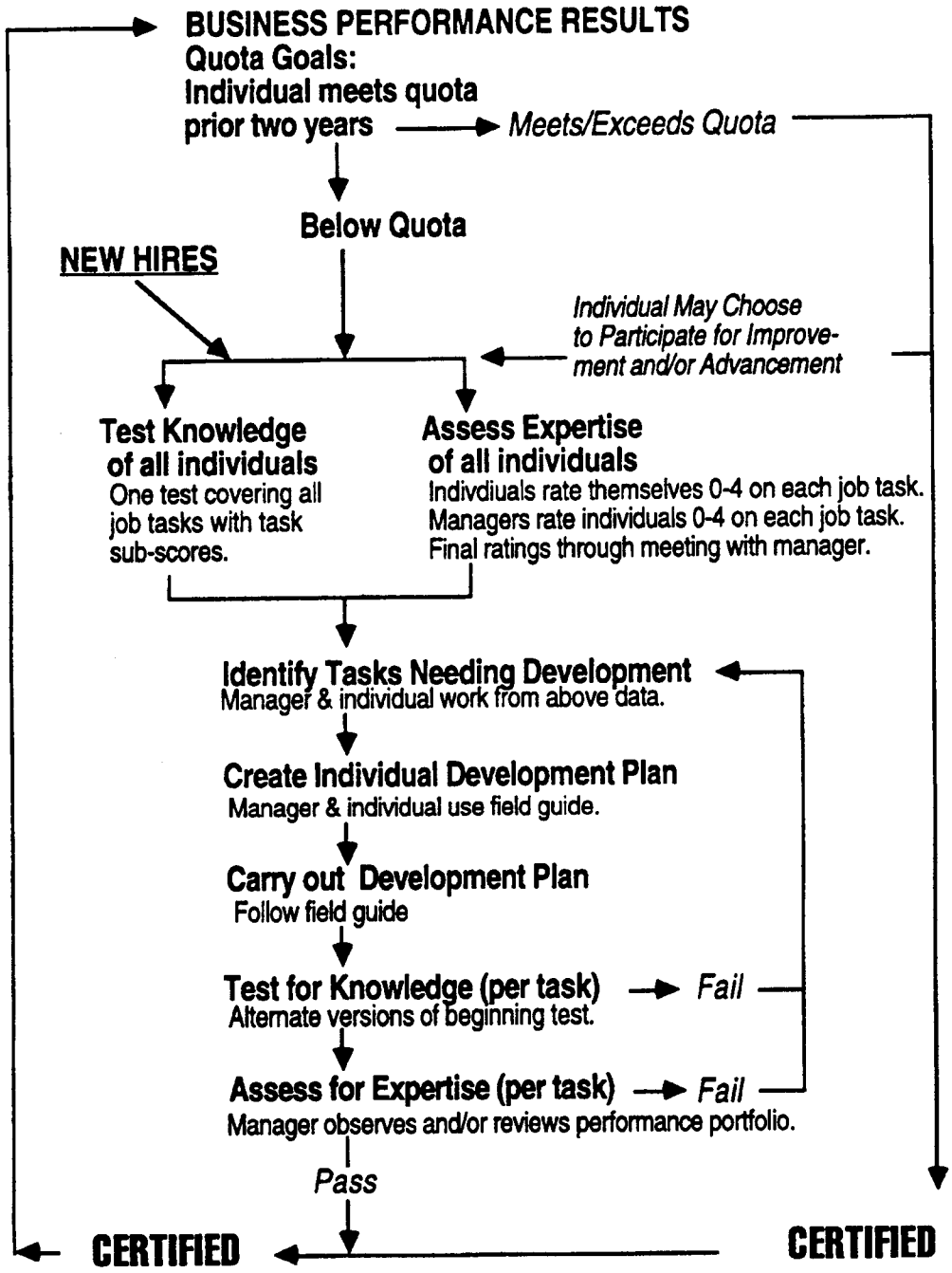
Step 6: Produce task training and certification modules. Following the establishment of process-referenced task standards, Healthcare Inc.'s training professionals put together field-based learning modules for those working in the sales process. The learning objectives, field learning guides, and support materials were produced to develop the

required knowledge and expertise for sales process tasks.

In addition, tests were developed and administered to certify knowledge and expertise on a task-by-task basis. Individuals working in the improved Healthcare Inc. sales process were required to be certified in each process-referenced task within their job. The personnel assessment and development process is illustrated in **Exhibit 6**.

The strategic management of expertise at Healthcare

EXHIBIT 6. Personnel Assessment and Development Process



Inc. proved to be efficient and effective. A significant portion of the activity represented uncharted territory for the company and its consultants. While the individual elements appeared rational and at times routine, the overall perspective of directly connecting business goals and the process-referenced expertise of individuals was radical. In addition, the timeline of eight months to accomplish this with credibility was almost revolutionary.

MANAGING THE DEVELOPMENT OF EXPERTISE

A primary goal of management is to develop and maintain workforce expertise that is systematically connected to business goals and the process(es) by which the work is carried out. Even if the world stood relatively still—such that work methods and normal employee turnover were evolutionary, not revolutionary—this would be a challenging task.

A naive assumption would be that most of the human expertise required to understand and fulfill performance requirements already exists in the organization and that the job of management is simply to patch it up as necessary. But the system described here points to a fundamentally different approach to employee development, one that focuses on employees building a portfolio of expertise linked to core processes. A strategic expertise map allows organizations to manage expertise rather than jobs. Employee development systems become future-oriented and closely linked to core business processes and critical strategic goals. Employees can manage their careers based on expertise, rather than jobs. Jobs become temporary holding places that can and will change frequently.

The work of developing and maintaining workforce expertise is not so simple. The two primary selection strategies available to management are to: (1) select individuals based on their having the required expertise or (2) select individuals based on their capacity to develop the required expertise. In addition, there are two primary development strategies available to management: (1) the organization determines the required workplace expertise and development method or (2) individual workers determine the required expertise and development method. These choices are illustrated in **Exhibit 7**.

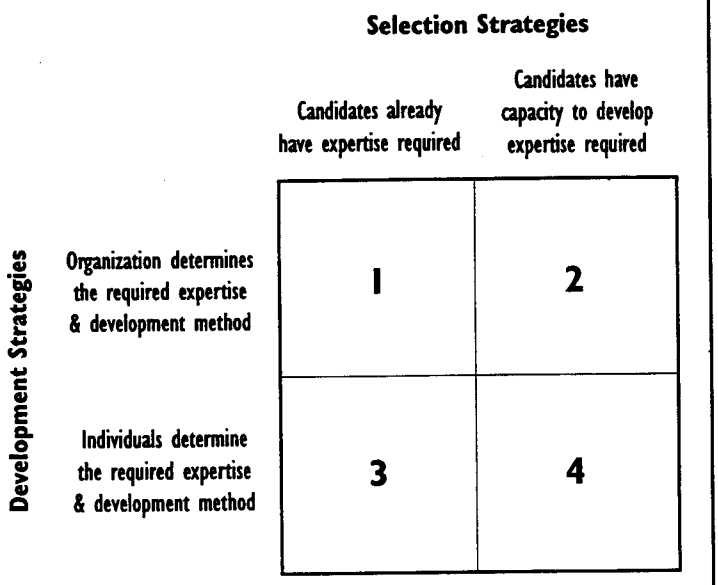
The first selection strategy is that of candidates already having the required expertise. The problem here is that much of the required expertise to be a true expert in an organization is organization-specific. To the point that this expertise is generic professional or industry-wide expertise, it can likely be obtained by hiring in the marketplace. Organization-specific expertise can only be developed in or through the organization. For example, many management skills are generic and can be acquired in the marketplace. However, a manufacturing manager is unlikely to have the expertise needed to oversee proprietary processes.

The second selection strategy is that of candidates having the capacity to develop the required expertise. This perspective informs us that adults have a capacity that directs and limits their growth. This capacity should not be thought of as being organization- or industry-specific. Rather, it is content- and context-specific. For example, a person's mathematical aptitude (content) will limit his or her ability to handle complex financial equations. And a person's social style (context) will limit the interactive arenas in which he or she will be effective. Many organizations today are finding that their employees lack the basic skills to adapt to even unskilled jobs. One hospital changing to a computerized system for patient services found that fully half its employees could not operate the system because they could not read what was on the computer screen. At higher levels, some traditional managers accustomed to a command-and-control approach to managing people have not had the capacity to adapt to newer team-oriented organizations.

The first development strategy is that of the organization determining the required expertise and the appropriate development strategy. Nuclear plant operator and airline pilot training are two examples of this approach. In these cases, organizations must carefully control the expertise development process to ensure safety where death and destruction are the direct result of lack of expertise.

The second development strategy, that of the individual determining the appropriate

EXHIBIT 7. Strategies for Obtaining Expertise



expertise needed and the development strategy, is quite typical of professional roles, especially highly specialized ones. It is probably quite appropriate that such professionals as field biologists or certified public accountants determine their expertise development. Increasingly though, organizations are involving frontline workers in determining development strategies, particularly in organizations adopting quality management or learning organization strategies.

What is the best approach? Each of the cells shown in the matrix in Exhibit 7 provides advantages and disadvantages. A caution would be to not find yourself locked into one cell or one view. Staying locked into a cell 1 strategy of hiring all the required expertise and having the organization control the expertise determination and development process may lead to frequent reengineering and layoffs as expertise requirements shift. Equally dangerous is using only a cell 3 strategy, whereby employees are selected for their capacity to develop and then determine expertise development needs themselves. While learning capacity and activity may be high under this approach, the organization may find itself lacking in the core expertise required to achieve its strategic goals.

A rational approach might be to embrace all cells when thinking strategically. Such a holistic approach is probably best for organizations in high change environments that want to be prepared for all scenarios. Developing expertise in the midst of change means organizations must abandon unidimensional approaches and find an appropriate balance among all four cells.

Employees should be selected both for the expertise they bring with them, and for their capacity to develop new expertise as needs change. Especially in high-technology arenas, today's expertise may well be obsolete in a short time. In the midst of change, the capacity to develop is just as important as current expertise. At Healthcare Inc., sales employees were afraid of the change, in part because their capacity to develop was not adequately considered when they were selected. When their expertise became outdated, they struggled to change.

Similarly, organizations should be partners with the individual to determine future expertise and development needed. The organization clearly has the most strategic view and needs to be sure that development will lead to business performance in the future. On the other hand, the individual employee is often the first to realize that changes are occurring in the marketplace that will require new expertise. In many instances, employees recognize the need for new business practices and innovations before management. Healthcare Inc. could have benefited from a stronger partnership with employees to recognize the need to reengineer sales processes to meet growing competition. As it was, the changes only occurred when competitive pressure reached crisis levels.

Most organizations have not done very well when it comes to managing and developing their core expertise. As a result, false notions about the nature of experts and expertise gain wide acceptance—to the detriment of organizational performance. As the Healthcare Inc. case study showed, however, there is a practical and strategic method for assuring process-referenced expertise among today's workforce. ■

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