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# INVALUABLE KNOWLEDGE

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Securing Your Company's Technical Expertise

William J. Rothwell

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# Preface

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Talent management has emerged as a topic of importance. Many organizational leaders are aware that baby boomers around the globe are nearing retirement age. The only thing preventing many of them from retiring now is the long-term influence of fluctuating stock prices. While much attention has been focused on preparing managers for promotion as waves of these baby boomers leave the workforce at some future time, less attention has been devoted to the unique issues associated with losing *knowledge workers*—that is, technical and professional workers whose knowledge is critical to the long-term competitive success of their organizations. Technical and professional workers are essentially “knowledge workers” whose special training, skills, abilities, and experience provide their organizations with competitive advantage.

This book focuses on the unique issues associated with what I call *technical talent management*—that is, the process of attracting, developing, and retaining technical workers (such as engineers, IT professionals, accountants, and finance and investment analysts, whose performance centers on the acquisition and application of knowledge), as well as transferring their knowledge to less experienced workers.

This book consists of nine chapters. [Chapter 1](#) is titled “Introducing Technical Talent Management.” It justifies technical talent management as a topic related to, but distinctly different from, traditional views of talent management that focus primarily (and sometimes exclusively) on attracting, developing, and retaining individuals suitable for higher-level responsibility. The chapter also builds a sense of urgency for the book. It explains why organizational leaders and HR professionals should pay more attention to the critical role played by technical and professional workers and how the loss of their unique knowledge might be catastrophic to an organization’s competitive advantage. [Chapter 2](#), “Conceptualizing the Issues in Technical and Talent Management,” describes the characteristics of effective technical talent management programs, reviews the common mistakes to avoid in implementing such programs, and summarizes some variations in implementing the programs. [Chapter 3](#) offers advice on the unique problems of recruiting and selecting technical and professional workers; [Chapter 4](#) reviews practical approaches to developing these technical and professional workers to achieve their best. [Chapter 5](#) examines how to retain technical and professional workers, while [Chapter 6](#) looks at how to manage and engage these people. [Chapter 7](#) describes theories and models for transferring knowledge, while [Chapter 8](#) lists practical strategies for making this transfer. [Chapter 9](#), the final chapter, offers predictions of challenges that organizations will face in attracting, developing, and retaining this talent, and in transferring the knowledge of workers whose value to their organizations stems from their special expertise.

The book ends with three appendixes. The first consists of case studies to illustrate how organizations have met the challenges of technical talent management. The second appendix is an assessment instrument to help decision makers compare their organizations to best practices for establishing a strategic framework that can support a technical talent management program. The third appendix is an assessment instrument to help decision makers measure how well managers are supporting a technical talent management program on a tactical (that is, daily) basis.

## Acknowledgments

I would like to thank my wife, Marcelina, and my daughter, Candice, for just being there for me. Although my son is far away—out there in the cornfields of Illinois—I have not forgotten Froilan Perucho, either.

Thank you to my training session participants, both in the United States and in many other nations

who have shaped my thinking on this topic. A special thanks to my friend Gem Ong at Salvo in Singapore, and to participants in Hong Kong, where I first presented on the topic of this book, and to the many participants in the United States and in many other nations who have participated in my workshops on “technical succession planning,” “technical talent management,” and related topics. They helped me hone the ideas and realize just how critical is the need for talent management programs distinctly focused on people who possess invaluable knowledge.

I also wish to thank people who reviewed this book in early drafts and offered advice. Thanks to my graduate assistant, Aileen Zabellero, who helped secure the necessary copyright permissions for this book and to others who contributed in some way, such as my students Naseem Sherwani and Smitri Raj.

A special thank-you to Christina Parisi, my editor at AMACOM, for her support and patience in helping this book reach the press.

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# Advance Organizer

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## 50 Questions to Test Your Organization's Technical Talent Management

**How well do your organization's leaders** attract, develop, and retain its technical and professional workers? And how well does the organization transfer their knowledge to succeeding generations of workers?

Review the following Advance Organizer pretest before you read this book. Use it to help you identify topics of special interest so that you can jump right to the subject that will best address your organization's problems.

### Using the Advance Organizer

Read each item in the pretest that follows. Circle **T** (true), **N/A** (not applicable), or **F** (false) in the left-hand column, next to each item. Spend about 20 minutes on this organizer. Be honest! Think of how your organization manages the individuals who possess special knowledge of the work, work processes, customers, technology, and other matters of critical present and future competitive value to your organization. When you finish, score your results, and interpret those results using the instructions at the end.

Then, be prepared to share your responses with others in your organization. Use the results as a starting point for improving the way your organization conducts its talent management for technical and professional workers such as engineers, IT professionals, research scientists, research and development (R & D) workers, and others who possess special knowledge that is invaluable to your business. To learn more about each item on the pretest, refer to the chapter number in the right-hand column, where the subject is discussed in detail.

*Has your organization established each of the following, geared specifically to technical or professional workers whose knowledge is critical to the organization's present and future success?*

<i>Response</i>			<i>Question: Is (Are) there . . . ?</i>	
T	N/A	F	1. A clear definition of the individuals who possess knowledge that is "business critical" for the present or future competitive success of the organization?	1
T	N/A	F	2. Awareness of the difference between promotable individuals (HiPos) and in-house experts (HiPros)?	1
T	N/A	F	3. A compelling sense among decision makers of how important to the future of the business is the knowledge possessed by technical and professional workers?	1
T	N/A	F	4. A clear understanding of the difference between talent management programs designed to prepare individuals for more responsibility (promotion) and technical talent management programs designed to attract, develop, and retain people who possess unique knowledge and can transfer the experience, knowledge, or competencies of crucial value to business success?	1
T	N/A	F	5. A clear understanding of the difference between technical talent management and replacement planning for technical or professional workers?	1
T	N/A	F	6. A clear sense, linked to the organization's strategy, of why a technical talent management program is important?	1
T	N/A	F	7. A good sense of the importance of a strategic model to guide a technical talent management program?	1
T	N/A	F	8. Measurable goals for a technical talent management program?	1
T	N/A	F	9. Distinct roles in technical talent management that are played by each key stakeholder group?	1
T	N/A	F	10. Ways that each stakeholder group in the technical talent management program will be held accountable for achieving the organizational goals as part of the program?	1
T	N/A	F	11. Identifiable work processes that are critical to the organization's success?	1
T	N/A	F	12. Up-to-date present work duties of importance to technical and professional workers?	1
T	N/A	F	13. Identified technical competencies of knowledge workers?	1

T	N/A	F	14. A way to pinpoint which workers possess the most valuable knowledge (that is, who the HiPros are)?	1
T	N/A	F	15. A means to estimate the risk of losing workers who possess the most valuable knowledge?	1
T	N/A	F	16. Awareness of the need to attract workers who possess special knowledge of value in enhancing the organization's core competence?	1
T	N/A	F	17. A method to align strategic plans with future talent needs?	1
T	N/A	F	18. A plan to implement the technical talent management program by recruiting, developing, and retaining people with special knowledge?	1
T	N/A	F	19. Practical ways to implement knowledge-transfer strategies to get HiPros to help less experienced people learn more of what the HiPros know?	1
T	N/A	F	20. Practical ways to evaluate the continuing results of the technical and professional talent management program?	1
T	N/A	F	21. Plans to ensure that top managers support the technical and professional talent management program?	2
T	N/A	F	22. Determination of whether top managers are willing to devote resources to the program?	2
T	N/A	F	23. Assurance that the technical talent management program is responsive to the differences between technical/professional workers and management workers?	2
T	N/A	F	24. Guarantees that the technical talent management program recognizes the difference between potential (promotability) and expertise (know-how)?	2

T	N/A	F	25. Assurance that the program focuses on the person, not on the position or hierarchical level?	2
T	N/A	F	26. Belief that the program is based on knowledge of critical business value?	2
T	N/A	F	27. Certainly that the program avoids confusion about why it exists?	2
T	N/A	F	28. Supposition that the program avoids devoting insufficient resources to the effort?	2
T	N/A	F	29. Guarantees that decision makers do not have unrealistic expectations about what can be accomplished in a short time?	2
T	N/A	F	30. A recruiting effort based on the organization's reputation (that is, employment brand) as an employer of choice for technical and professional people?	3

T	N/A	F	31. A recruiting effort that recognizes the unique differences in attracting most employees and technical and professional workers?	3
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T	N/A	F	32. A selection effort that recognizes the unique differences in choosing between most employees and technical and professional workers?	3
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T	N/A	F	37. Establishment of individual accountability for development?	5
T	N/A	F	38. Recognition of the disadvantages of dual career ladders and steps to minimize those disadvantages?	5
T	N/A	F	39. A tactical model to guide managers' contributions to the technical talent management program?	6
T	N/A	F	40. Clear daily roles for each manager who oversees technical and professional talent?	6
T	N/A	F	41. Daily accountabilities for each manager in attracting, developing, and retaining technical and professional talent?	6
T	N/A	F	42. Established management accountability for facilitating transfer of knowledge on a daily basis?	6
T	N/A	F	43. A means to measure, on a daily basis, how well each manager carries out his/her role in technical talent management?	6
T	N/A	F	44. Ways to improve what managers do every day so as to contribute to the technical talent management program's success?	6
T	N/A	F	45. Systematic efforts to improve what managers do to cultivate technical and professional talent and transfer valuable knowledge?	6
T	N/A	F	46. Evaluation of efforts to improve managers' cultivation of technical and professional talent and knowledge transfer?	6
T	N/A	F	47. Assurances that knowledge from experience is transferred from those who have gained it to their replacements?	7
T	N/A	F	48. Reliance on multiple methods to encourage knowledge transfer?	7
T	N/A	F	49. Recognition that HiPros will not transfer knowledge unless they see a reason for doing so (what's in it for them)?	7
T	N/A	F	50. Periodic updates of technical talent management programs so as to accommodate likely future trends?	8

## Scoring and Interpreting the Advance Organizer

Give *1 point* for each **T** and *0* for each **F** or **N/A**. Total the number of **T**s. Then interpret your score as follows:

40 or more	Your organization apparently is using effective technical talent management practices. Although improvements can be made, the critical success factors for an effective technical talent management program already are in place—assuming of course, that you answered this assessment honestly and that the score does not merely represent wishful thinking.
39 to 30	Improvements could be made to technical talent management practices in the organization. But, on the whole, the organization is proceeding on the right track.
29 to 20	Technical talent management practices in your organization do not appear to be as effective as they should be. <i>Significant improvements should be made.</i>
19 or less	Technical talent management practices are ineffective in your organization. Your organization may be at significant risk of losing invaluable knowledge. <i>Take immediate corrective action steps.</i>

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## Introducing Technical Talent Management

What is your organization doing about the special challenges of recruiting, developing, and retaining technical and professional talent, such as its engineers, IT professionals, accountants, and others who rely on specialized knowledge—knowledge that may be key to your organization’s strategic, competitive success? What is your organization doing to transfer the invaluable knowledge these people have to your new hires and to less experienced knowledge workers? Are you preparing for a possible future wave of retirements as the baby boomers leave your workforce? Are you preparing systematically for knowledge workers as your organization grows explosively? How well is your organization managing its knowledge transfer as part of its talent management and succession planning strategies?

### Five Mini-Studies: Can You Solve These Problems?

Read the following mini-cases and describe how your organization would meet the challenges you find in each situation. If your organization has ways to solve all of these problems, then perhaps it already has an effective strategy for technical and professional talent management (abbreviated throughout this book as *technical talent management*, or TTM). If your organization could not solve the problems presented below, then your leaders may want to consider a technical talent management program as a means to solving them when they appear.

#### Mini-Study 1

You analyze the retirement eligibility of your organization’s engineering division. Shaking your head, you note that, in five years, about 40 percent of all the engineers in the division will be eligible for retirement. Considering the organization’s recent downsizing efforts and early retirement offers, you wonder where the next generation of engineers will come from. Hiring engineers is possible if the compensation is attractive enough—although you are keenly aware that some people believe there is a global shortage of engineers (an opinion not universally shared)—but you know that new hires will not have in their heads the special knowledge of the technical decisions that have been made to reach your company’s current generation of high-tech products. How, then, will the new hires be positioned to contribute to the next generation of products if these engineers have never had a chance to learn from experience?

#### Mini-Study 2

Medical researchers in your organization have spent years pursuing various research plans to perfect new drugs and find cures for many of humankind’s worst ills. But recently several of the most prominent medical researchers in your organization have given their supervisors notice that they plan to retire within one year. Your managers wonder how to retain and transfer the knowledge these researchers have before the scientists leave the organization. One idea that decision makers have offered is to keep the researchers on contract for a year or two while they train their replacements. However, the organization’s HR policies do not make that easy to do, nor do the retirement plans for which these researchers are eligible. And a one-year effort seems like a Band-Aid placed on an artery.

hemorrhage. Even if it is possible—and that is by no means certain—how can a lifetime of learning be transferred in only one year?

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### Mini-Study 3

Lou Smith is one of those rare people on your company's assembly line who knows every quirk about the machine he has operated for fifteen years. It has been easy to take Lou for granted, since he rarely takes a vacation or calls in sick. In fact, he has been first in line for all the overtime the company would give him. But, overnight you receive word that Lou is in the hospital, having suffered a massive heart attack. Nobody is sure whether he will make it. The supervisor of Lou's assembly line is complaining that, while he has a backup for Lou, that person does not know as well the machine that Lou has made "sing" for years. You worry how much production might be lost while Lou is out sick.

### Mini-Study 4

Martha Milhouse knows every decision maker in the high-tech companies she has sold to for over five years. She has been diligent about remembering their birthdays; she knows her stuff, too, and can sit in a product meeting with engineers and understand what they are talking about, even though she is not an engineer. Her combination of good interpersonal skills and grasp of the technical side of the products has made her a top salesperson for the technical products your organization produces. But Martha's husband has just retired; he is pressuring her to do likewise. As sales manager, you wonder how you can find another person who knows the products—and customers—as well as Martha does. And you wonder how many sales will be lost if you do not find that person.

### Mini-Study 5

Rhonda Yeager has been a systems analyst with the company for years. People feel that she knows everything about every IT system used by the organization. But Rhonda walked into her supervisor yesterday and, without warning, turned in her resignation. The IT manager was stunned. He shook his head, then he voiced dismay at the prospect of hiring or developing anyone else who could know even a fraction of what Rhonda knows about the IT systems. Some of the systems in IT, the manager knows, are "legacy systems" that have been around so long that nobody else remembers how they work, as there is such limited documentation.

## Describing "Knowledge Workers"

Let's be clear on definitions. What is a knowledge worker? And, more specifically, what is a technical or professional worker? A *knowledge worker* is usually understood to be those people who rely on professional judgment or specialized training to perform their work. According to the Bureau of Labor Statistics (BLS),

the professional, scientific, and technical services sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.<sup>1</sup>

Technical, scientific, and professional workers are, therefore, those who work in occupations that



require specialized knowledge and training. For this sector, average wages are high—averaging \$29.7 per hour in the United States in November 2009. According to BLS, 7,605,300 people were employed in this sector in the United States in December 2009, the most recent date for which statistics are available. The number of employers in the sector during the second quarter of 2009 was large: 1,010,967 in private industry, 906 in local government, 401 in state government, and 1,482 in the federal government in the second quarter of 2009.

## Defining “Technical Talent Management”

As the mini-studies at the opening of the chapter illustrate, today’s leaders need to do more than merely plan for their own replacements. While leadership succession is undoubtedly important, it is just not enough in this current age, when what people know and what they can do are as important as how people can lead or manage. Real-world cases of organizations struggling to deal with an expected “brain drain” have figured prominently in the business press (see [Appendix I](#)).

*Technical talent management* (TTM) is the process that focuses on attracting, developing, and retaining the most talented technical and professional workers and transferring their specialized knowledge to less proficient or less experienced workers. Its goal is not so much to ready people for promotions or vertical mobility in the way management or leadership-oriented talent management does. Instead, it aims to transfer *institutional memory*, defined as the collective wisdom that an organization’s members have gained from their experience and that is embedded in its corporate culture.

Technical talent management also aims to transfer *tacit knowledge*, or what people carry around in their heads as a result of their experience and learning. TTM should not be confused with *knowledge management* (KM), an activity that treats knowledge as an important component of business and intellectual assets as critical to achieving business results. TTM can, however, be properly regarded as a subset of KM. Of particular importance to TTM is *knowledge transfer*, meaning the communication of practical business knowledge that has been learned from experience with the work, work processes, people, customers, and business challenges and problems with which the organization deals or has dealt with.

TTM at the organizational level should not stand alone. It should be combined with efforts to focus attention on daily practices by managers to attract, develop, retain, and transfer the knowledge of especially talented knowledge workers. Sophisticated IT-based knowledge management systems and software, while helpful, should not be the only means by which knowledge transfer is managed over time. TTM assumes that most “talent building” does (and should) occur in practical ways and in real time through experiences with people, work processes, customers, typical and special problems, and challenges stemming from the work, as well as any other specialized knowledge of key value to the business.

It is important to distinguish among *data*, *knowledge*, and *information*. As Boisot observes:

Think of *data* as being located in the world and of *knowledge* as being located in agents, with *information* taking on a mediating role between them. Data can be viewed as a discernible difference between different energy states only some of which have information value for agents. Where data are thus informative, it will modify an agent’s expectation and dispositions to act in particular ways—that is, what we call its knowledge base.<sup>2</sup>

A TTM program is, therefore, a systematic effort to attract, develop, and retain the most knowledge-proficient people while, at the same time, seeking to identify, capture, distill, and transfer

specialized knowledge from those who possess that valuable knowledge to others who do not possess it. The TTM focus is not so much on management continuity as it is on ensuring the continuity of knowledge essential to business operations and competitive success and on cultivating knowledge workers and in-house experts who possess special know-how.

*Knowledge workers* are individuals who have undergone specialized training and who possess unique knowledge that is of value to an organization. In that sense, many people are knowledge workers because participation in organizational life gives people some memory of what happened. And the collective memory of what has happened, and what was learned from it, amounts to *institutional memory*. At the same time, in-house experts—also called *High Professionals* (HiPros)—may not necessarily be promotable up the traditional organizational hierarchy but they are the recognized “go-to” people for solving myriad technical and professional problems. A HiPro can be the one person who knows the most about any one thing of critical value to business operations.

One aim of TTM is to transmit the institutional memory so that mistakes made in the past are not repeated. Without institutional memory, members of an organization would have to keep reinventing the wheel, doing what seems essential to the organization’s mission and strategy. As poet and philosopher George Santayana once said, “those who cannot remember the past are condemned to repeat it.”<sup>3</sup> And without memory of the past, future workers will not know what to do or how to do it.

Another aim of TTM is to retain and transmit tacit knowledge. Experience is valued precisely because people learn from it. But most practical learning is not taught in school, though education does provide an important basic, theoretical foundation for practical learning on the job. (It would be difficult to imagine doing a job without the abilities to read, write, or work mathematical problems.) Some of what people learn can be easily transmitted—this is called *explicit knowledge*; some learning is not so easily transmitted because it is embedded in the process of gaining the experience—what is called *tacit knowledge*. Without tacit knowledge, people could not have learned from their experience or their mistakes. Likewise, people can learn *formally* (through planned educational events), *informally* (based on experience), or *incidentally* (based on accidental learning that results serendipitously from experience).

## Distinguishing Technical Talent Management from Related Topics

Specialized terms can lead to confusion. For that reason, it just makes sense to begin with some definitions so as to distinguish TTM from other topics with which it may be easily confused.

### TTM vs. Replacement Planning

*Replacement planning* is a form of disaster planning or risk management.<sup>4</sup> To conduct traditional replacement planning, managers are usually tasked to identify emergency backups for themselves in case they are unexpectedly (and disastrously) lost through sudden resignation, disability, sickness, or death. Managers also may be asked to identify possible backups for their immediate reports. The results of traditional replacement planning are usually reviewed by higher levels of management, and perhaps by peers of the manager as well, as a reality check on how likely individuals are to be selected as replacements in an emergency.<sup>5</sup> The final outcome of the process is a replacement chart that identifies who the backups are, how ready they are for emergency promotion, and in what order they should be chosen. If fewer than three backups are identified for each key position, the organization is said to “have holes.” A *hole* is an area in which the organization is exposed if something should

happen to the present job occupant. When no backups are identified, the organization's leaders may take steps to "fill the hole" by finding understudies.

It is important to emphasize that, in replacement planning, people are not guaranteed promotions simply if they appear on a replacement chart. When their names are listed, it merely means that they can serve as temporary backups until there is time for a proper job search to find a suitable replacement. That may, or may not, result in choosing the person who fills in during the emergency.

According to available research, fewer than 40 percent of U.S. companies have identified emergency backups in case of the sudden loss of key people.<sup>6</sup> That places their organizations at extraordinary risk. If the plane crashes carrying the CEO, or even the entire senior management team, the event can be devastating to the organization. Since passage of the Sarbanes-Oxley Act, enacted by Congress following the Enron scandal to make boards of directors accountable for more than their organizations' financial results, corporate boards have become more aware of the risks posed when an organization does not have replacement plans or succession plans.

Replacement planning charts can be adapted for use in recording the special knowledge, skills, attitudes, or other competencies possessed by workers. Unlike traditional replacement charts, however, competency-based replacement charting does not automatically regard managers as special knowledge workers. Instead, the key criterion is special expertise that would pose a hardship if its owner is suddenly lost. See [Exhibit 1-1](#) for an example of a replacement chart with slots to note individuals' talents and strengths. Note the assumption here that some people possess knowledge that may be absolutely critical to continued business survival or continuity, and that some provision must be made for their sudden loss.

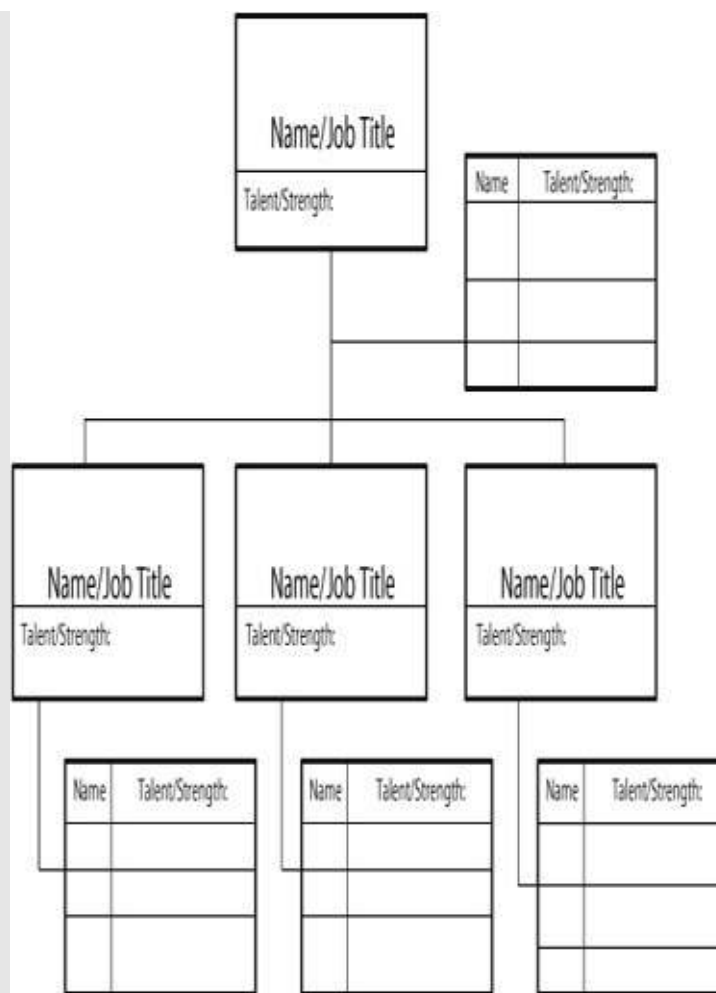
TTM, therefore, focuses on special knowledge, while replacement planning focuses on backups for people. TTM thus emphasizes the collective knowledge of the organization that is needed to achieve strategic objectives over time. Replacement planning is a crude substitute, but TTM requires a more sophisticated view of what kind of knowledge the organization requires for achieving and sustaining competitive success.

## TTM vs. Workforce Planning

Few organizations make a comprehensive comparison between the competencies of existing workers and the requirements posed by the organization's strategy.<sup>7</sup> Instead, a typical norm is "vacancy-by-vacancy" planning, probably because that is the way it has always been done in most organizations. This usually is more common than a big-picture look at how well the collective competencies of all workers match present and future competitive business needs. In addition, more organizations classify workers according to the cost of their wages and benefits or by headcount than according to their unique know-how, talent, or specialized expertise.

### EXHIBIT 1-1 .

SAMPLE REPLACEMENT CHART FOR TALENT OR INDIVIDUAL STRENGTH.



TTM requires the organization's leaders to consider the special knowledge and competencies needed for the organization's competitive success. It can include a big-picture look at where the experts are in the organization and what their expertise is, framed in the context of the organization's customers, work processes, products, and practical problems.<sup>8</sup>

### TTM vs. Traditional Talent Management

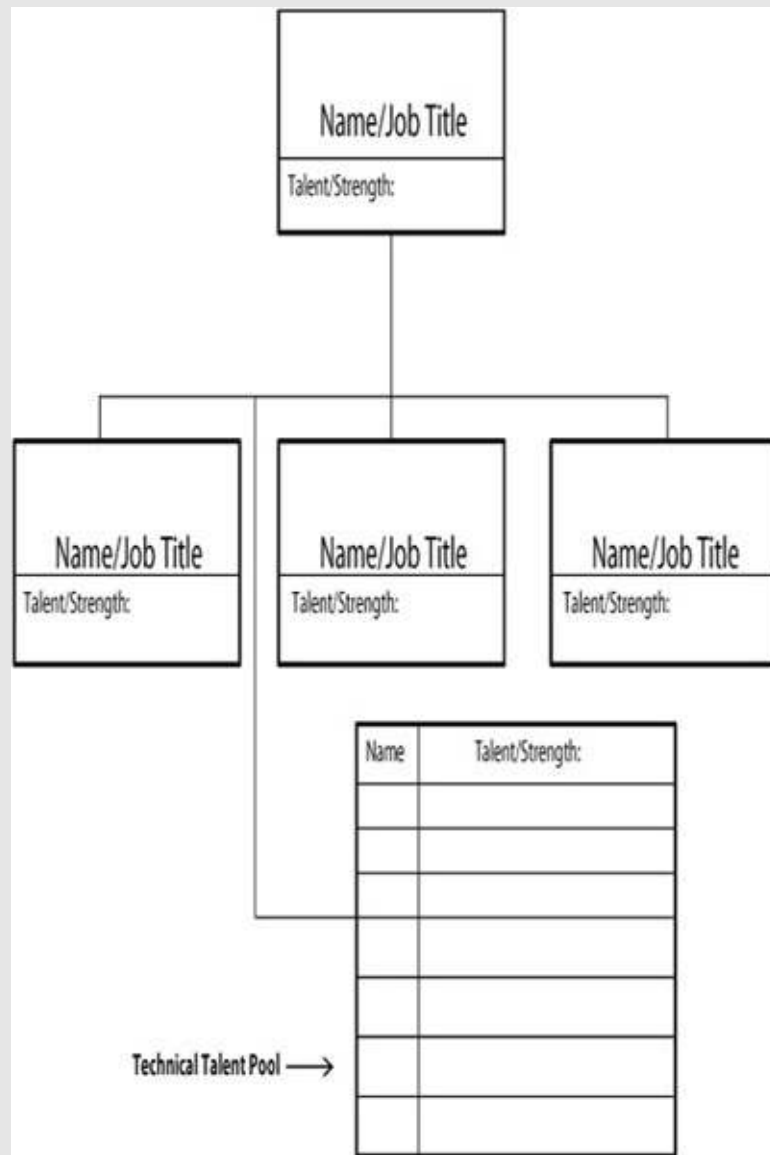
Talent management traditionally has been linked to sourcing the best people, preparing them, and retaining them. But not everyone agrees on the meaning of the term, and that leads to much confusion. Some organizational leaders associate talent management with giving special attention to managing the best-in-class talent of the organization—the upper 1 to 10 percent.<sup>9</sup> Yet, traditional talent management need not be limited to so-called *top-of-the-house planning*, where the focus is solely on finding successors for the senior executive team. Traditional talent management may also include investments in training, education, and development where the financial returns to the business are likely to be greatest—that is, applied to high-performing, highly knowledgeable, or high-potential talent at any level. Hence, efforts to develop talent that is strategically important for the organization's future implies the *strategic development of talent*.<sup>10</sup>

Technical talent management can be viewed simply as a way of attracting, developing, and retaining people in a technical talent pool. The idea is to prepare a large number of people to assume technical or professional positions, but to consider them for their strengths, expertise, or special abilities when making decisions about specific assignments, projects, or promotions. One way to conceptualize it is as a group of people listed by talent, special expertise, or personal strength, and

then keyed to leveraging those strengths to advantage. See [Exhibit 1-2](#) for an example of a technical talent pool chart, with slots for noting individuals talents and strengths.

**EXHIBIT 1-2 .**

TYPICAL TECHNICAL TALENT POOL CHART.



### Making the Case for TTM

Organizational leaders are surrounded by competing priorities, so it requires a compelling case, based on legitimate business needs, to “sell” technical talent management to them. And, since what leaders see depends on their placement in an organization and what they value, it may be easier to sell TTM to some managers than to others.

Of course, it depends on the type of organization, as well. Some organizations are more dependent on specialized knowledge—its acquisition, analysis, communication, and manipulation—than are others. They use knowledge as an important factor in achieving competitive advantage.

Consider, for instance, high-technology firms like Siemens, Motorola, Microsoft, Apple, or Intel. Without their (enviable) engineering expertise, where would they be? Out of business, most likely. And the same is true of consulting companies such as McKinsey, Booz Allen, and Accenture, which

provide expert advice or manage highly specialized projects. There is, thus, a relationship between how well an organization competes and how well it manages its knowledge assets.<sup>11</sup>

## A Strategic Model for Technical Talent Management

Most best-practice firms have a strategic model or roadmap that represents all the complicated components of a technical talent management program. These models are considered *strategic* because they are long term and are tied to meeting key business needs and achieving strategic business objectives. They are *integrated* because they show how all the “moving parts work together to achieve those results. [Appendix II](#) will help you consider how your organization rates in the strategic management of technical talent assets.

[Exhibit 1-3](#) is a nine-step strategic model that depicts technical and professional talent management. A good place to start building management awareness of a need for technical talent management is to interview managers at all levels; see the interview guide in [Exhibit 1-4](#), designed for collecting information from managers in the organization.

### Step 1: Clarify the Goals, Roles, and Accountabilities

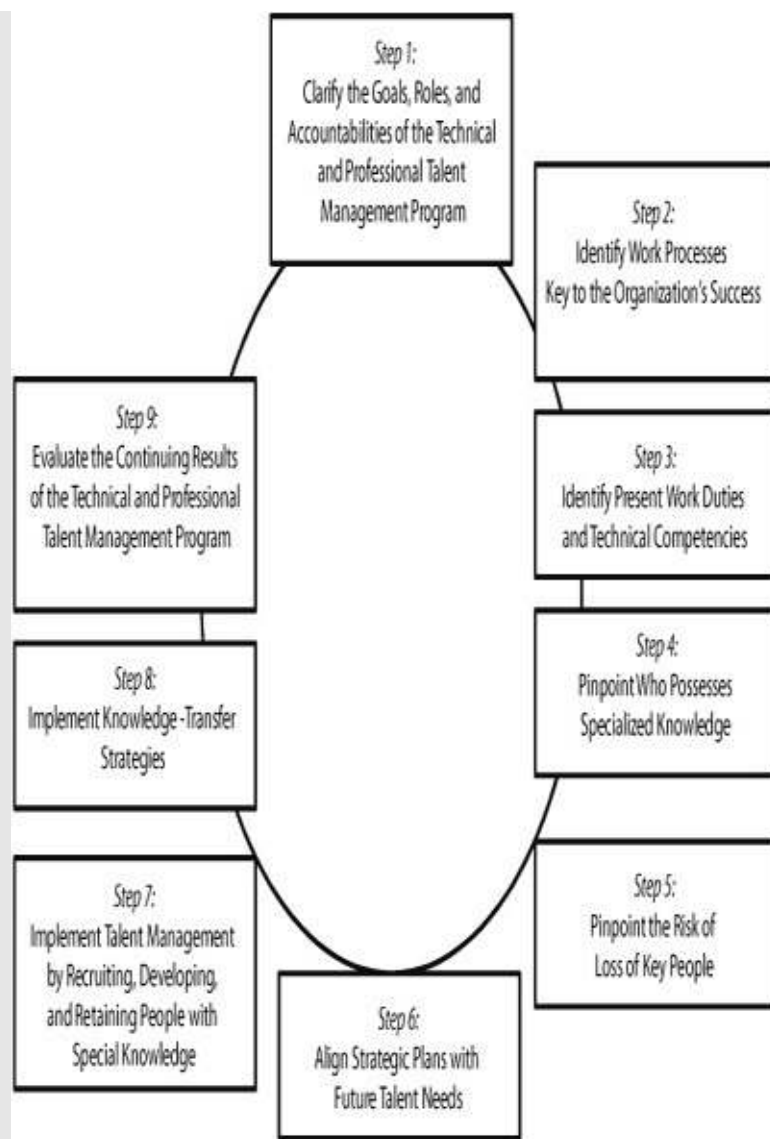
What is the business problem or challenge that the TTM program is intended to address? How can that be converted from a problem to one or more *measurable goals* that serve to guide the program? Clarifying the goals of the program is essential because top managers do not always share the same perspectives. Examples of general goals might include capturing:

- ◆ The institutional memory of those who are, or soon will be, retirement eligible
- ◆ Special knowledge of products, services, or customers from those who are, or soon will be, retirement eligible
- ◆ Special knowledge of work processes and workflow from those who are, or soon will be, retirement eligible

Each goal or target then should be converted to a factor that can be measured according to its quality, quantity, cost, time, or customer satisfaction level. Use the worksheet in [Exhibit 1-5](#) to help obtain agreement from decision makers on the key goals of the TTM program and then how to make those goals measurable. (If the goals are not made measurable, it is difficult to track results.) For example, these goals might be (1) transferring knowledge from those with more expertise to those with less; and (2) preparing for retirements of experienced workers who possess invaluable knowledge.

#### EXHIBIT 1-3 .

STRATEGIC MODEL FOR TECHNICAL AND PROFESSIONAL TALENT MANAGEMENT.



**EXHIBIT 1-4 .**

INTERVIEW GUIDE FOR IDENTIFYING VALUABLE KNOWLEDGE.

**Directions:** Ask managers in your organization each of the questions below. Take notes or (with permission) tape-record their responses. Then analyze the responses to identify what the managers consider the most valuable knowledge held by people in the organization.

**Introduction**

Thank you for agreeing to meet with me. The purpose of this interview is to gather your thoughts on the most valuable knowledge in the organization that may be at risk of loss owing to surprise resignations, pending retirements, or accidents such as sudden deaths or disabilities. Think for a moment not about people who are promotable but, rather, who have the most valuable knowledge of the business, its customers, the technology, work processes, machinery, and other components that are critical to the continuity of the business. Think of people who would be tough to replace because they possess unique knowledge gained from experience.

<i>Questions</i>	<i>Answers/Notes</i>
1. What do you believe is the single most important competitive advantage that this organization possesses that gives it a strategic advantage over its competitors? What do we do best? ( <i>Hint: This is something that should never be outsourced because then that uniqueness would be lost.</i> )	
2. Who knows the most about that competitive advantage you've just cited?	
3. Think of people in your area of responsibility whom you would	

<i>Questions</i>	<i>Answers/Notes</i>
regard as in-house experts, or individuals who possess critically important knowledge. What information do they possess that is so important? How do you know they possess that information?	
4. Which of these in-house experts do you believe might be at greatest risk of being lost? Why do you think so?	
5. What approaches have you already used to transfer the knowledge these in-house experts—those you would call High Professionals—to less knowledgeable, less expert, or less experienced people? How well have those attempts worked out?	
6. What other approaches do you believe would work to transfer this valuable knowledge? Why do you believe so?	
7. How should we evaluate and measure the success of these knowledge-transfer efforts?	

Each stakeholder group in the organization has a role to play, but often no one takes the time to define those roles. Each *role* should involve a list of expected behaviors and results. Examples of stakeholders include the CEO, the senior manager of each group reporting to the CEO, the HR department, the immediate supervisors of technical and professional workers, and the workers themselves. Use the worksheet in [Exhibit 1-6](#) to clarify the roles of each stakeholder group.



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