

## EXECUTIVE SUMMARY

For years, organizations have been pouring money into both knowledge management (KM) and organizational learning (OL) and development programs to help employees tap into knowledge resources. Unfortunately, this dual focus has often resulted in a confusing array of overlapping knowledge sources as well as time spent justifying the existence of both areas. How do employees know where the best knowledge is? Do they care which “brand” it falls under? When faced with a problem or issue at work, employees need answers or expertise, whether they come from communities of practice, learning management systems, expertise locator systems, best practices repositories, training courses, online learning, or mentors.

As APQC progressed through its study of the integration of KM and OL programs, I was reminded of what I saw on one of the ubiquitous late-night cooking shows. On these shows, the object is to create a wonderful gastronomic experience for the eater in the most efficient manner possible. What struck me is that during the episode, the chef puts together precisely measured ingredients that are close at hand and uses seemingly “perfect” tools and expertise to whip/grate/sear/broil them into a delicious result. When I try it at home my goals are the same—an efficient process that delivers a delightful dining experience—but my results rarely are. Why? Because I do not have all the right tools, have not pre-measured or prepared my ingredients, and jump from cabinet to cabinet looking for things. Similarly, many organizations have the best intentions with their KM and learning programs—an efficient process with positive business outcomes—but are not achieving them because the programs are not working together to combine the ingredients, tools, and expertise in one location for employees to use.

On the flip side, this study’s best-practice organizations have mimicked these expert chefs in creating their knowledge-rich environments. They started with a goal in mind—“the business of the business”—and put together the ingredients, tools, and recipes they needed to make it happen smoothly and successfully. With strategic planning, effective business partnerships, content management/learning management systems, communities of practice, marketing, and infrastructure support, these organizations have taken the time to prepare a truly wonderful knowledge-rich environment for their employees.

I hope you will find this report, which examines how seven best-practice organizations developed their integrated learning and knowledge environments, as useful and enlightening as we found it. Using their insights, coupled with APQC’s previous KM research, this benchmarking study offers suggestions, models, and tools for organizations that wish to improve the improved business performance of their organizations by integrating the KM and OL efforts.

*Wesley Vestal*  
*APQC KM practice leader and special adviser*  
*APQC*

## ORGANIZATION OF REPORT

The APQC study team discovered 17 overarching patterns and insights from the best-practice organizations that have integrated KM and organizational learning in support of their work force. These are discussed in the report chapters, which are summarized here.

**Chapter 1: A Convergence of Knowledge Management and Organizational Learning**—This chapter provides a brief background on the drivers to integrate KM and OL in the search to achieve the “next level.” Their paths as separate initiatives are described, and the strategic needs bringing them together today are discussed. To illustrate what the integration of KM and OL may look like, brief outlines of the KM/OL programs at each of the site visited partner organizations are reviewed.

### Chapter 1 Insights:

1. Regardless of whether integration is led by KM or by OL, the intent and expectation of the integrated initiative was enhanced performance in every case. This is underscored by the fact that even where formal OL is not emphasized in favor of individual learning, organizational performance is still the objective.
2. Individual learning, although important and sometimes a foundation of the learning within the organization, is not enough. Team learning through collaboration and experience sharing is considered a higher order learning that is also necessary for enhanced enterprise performance.
3. Learning is not defined simply as formal training. Instead, learning is any knowledge acquisition and transfer at any time that enables an individual to perform or to improve his or her performance at any time.
4. Individuals are held accountable and responsible for their own professional development, but only where the support infrastructure is in place to enable them to plan, execute, and manage those personal development plans.

**Chapter 2: Making the Case and Making It Happen—Blended Knowledge**—This chapter discusses how strategic vision plays a role in the integration of KM and OL, whether or not formal business cases are required or developed to support their integration. It also describes some critical characteristics and artifacts as evidence of how integrated, or emerging KM/OL strategies look when executed.

### Chapter 2 Insights:

1. Knowledge should be embedded into the work flow to increase the access and ease of transfer of learning.
2. Access to expertise, or simply connecting people to people, is highly valued in integrated KM/OL programs as an effective way to share knowledge as well as provide informal, “teachable moment” learning opportunities.
3. Formal business cases to justify the integration of KM and OL are helpful prior to the implementation of partner programs. But in many cases, leadership or philosophical changes were enough to justify going forward with the integration.
4. In the most integrated organizations, shared terminology, set of symbols, cultural values, and a shared understanding of the business strategy and vision is apparent,

- and this shared language and image serve as drivers and carriers of knowledge and learning throughout the organization.
5. The value of KM and OL is tied directly and or logically to business results that are already important to the business in the most integrated organizations. To ensure visibility and accountability of organizational learning, OL is often included in the enterprise strategy, and measures on the enterprise balanced scorecard or other performance management tool.

**Chapter 3: Integrating Toward a Knowledge-rich Environment**—This chapter provides a description of the five-stage road map and its key enablers. It lists key questions to address in each stage and implications for moving through the stages.

Chapter 3 Insights:

1. A coherent philosophy of what it means to be in the knowledge business, do knowledge work, and support and leverage knowledge workers is apparent in the most integrated companies. The degree of integration between KM and OL among partners leads to an observable pattern of cascading behavior from philosophy leading to specific organizational objectives and goals, driving strategy, determining leadership roles, and finally to allocating budgets.
2. The KM/OL infrastructure should own the process but not the content. That is, enabling technologies, human performance support through coaches, and other process-oriented tools are the domain of the KM/OL organizations, but instructional design, content development, content validation and vetting, and content management are all the responsibility of business or functional unit subject matter experts or leaders.
3. There is trend toward placing KM and OL under strategic senior vice president's of HR in organizations that have moved HR into a more strategic role and conceived of KM and OL as enterprise-wide activities. In organizations that conceive of KM and OL as more critical to a particular aspect of the business, those roles were located in that part of the business.

**Chapter 4: The Infrastructure**—This chapter examines the governance of integrated KM and organizational learning programs. It looks at executive sponsorship, support groups, and business partners as three groups playing pivotal roles in the governance of KM and organizational learning.

Chapter 4 Insights:

1. Strong senior leadership support is required for the successful integration of KM and organizational learning.
2. Partnering with other internal functions, such as IT, HR, leadership development, and so on, is important to the success of the integrated KM/OL program.

**Chapter 5: Knowledge Organization and Information Technology**—This chapter looks at how IT support for integration of KM and organizational evolves across the five stages of integration.

Chapter 5 Insights:

1. How knowledge is organized mirrors the business organization in integrated organizations.
2. An enterprise-wide taxonomy and common language promotes the “one face, one culture” aspect of integration.
3. Technologies need to be flexible enough to adapt to the changing needs of the knowledge worker.

Appendix materials include five case studies based on the organizations that hosted site visits and charts and tables from the detailed questionnaire.

**CONSORTIUM BENCHMARKING STUDY METHODOLOGY**

Developed in 1993, APQC’s consortium benchmarking study methodology (Figure E.1) serves as one of the premier methods for successful benchmarking in the world. It was recognized by the European Center for Total Quality Management in 1995 as first among 10 leading benchmarking organizations’ models. It is an extremely powerful tool for identifying best and innovative practices and for facilitating the actual transfer of these practices.



Figure E.1

**PHASE 1: PLAN**

The planning phase of the study began in the spring of 2004. During this phase, secondary research conducted by APQC was used to help identify innovative organizations to participate as best-practice organizations (the partners). In addition to this research, APQC staff members and the subject matter experts identified potential participants based on their own firsthand experiences, research, and sponsor recommendations. Each recognized organization was invited to participate in a screening process. Based on the results of the screening process, as well as organization capacity or willingness to participate in the study, a final list of 11 potential partner candidates was developed.

A kickoff meeting was held in August 2004, during which the sponsors refined the study scope, gave input on the data collection tools, and indicated their preferences for site visits to partner organizations. Five organizations were selected for site visits from the original list: Accenture, Aerotek Inc., Defense Acquisition University, IBM, and Turner Construction Co. Additionally, three other organizations were asked to participate as data partners, completing the detailed questionnaire but not hosting site visits. These organizations included Avanade, Corning Inc., and Rockwell Collins.

Finalizing the data collection tools and piloting it within the sponsor group concluded the planning phase.

## **PHASE 2: COLLECT**

Three tools were used to collect information for this study:

1. **screening questionnaire**—qualitative and quantitative questions designed to identify best practices within the partner organizations;
2. **detailed questionnaire**—quantitative questions designed to collect objective, quantitative data across all participating organizations; and
3. **site visit guide**—qualitative questions that parallel the areas of inquiry in the detailed questionnaire, which serves as the structured discussion framework for all site visits.

The eight partner organizations selected for continued participation in the study responded to the screening questionnaire as well as the detailed questionnaire. Eighteen of the 20 sponsors completed the detailed questionnaire. (Two sponsor organizations did not complete the detailed questionnaire. Quantitative data for the two organizations that participated as both sponsors and partners are reported along with other partners.) Additionally, the five partner organizations hosted day-long site visits attended by sponsors, other partners, and members of the study team. The APQC study team prepared written reports (case studies) of each site visit and submitted it to the partner organization for approval or clarification.

## **PHASE 3: ANALYZE**

The subject matter experts and APQC analyzed both the quantitative and qualitative information gained from the data collection tools. The analysis concentrated on examining the challenges organizations face in the five study focus areas.

1. Building the Business Case for Integration
2. Creating the Streamlined Knowledge Marketplace
3. Roles and Partnerships in Integration
4. Integrating Technology Enablers
5. Gauging the Success

The analysis of the data, as well as case examples based on the site visits, is contained in this report. Additionally, Appendix C at the end of the report includes aggregated responses to all questions in the detailed questionnaire.

#### PHASE 4: ADAPT

Adaptation and improvement, stemming from identified best practices, occur after the sponsors apply key findings to their own operations. APQC staff members are available to help sponsors create action plans appropriate for the organization based on the study.

#### PARTICIPANT INFORMATION

The following organizations participated in this consortium benchmarking study.

##### SPONSOR ORGANIZATIONS

\*Accenture  
Air Products and Chemicals, Inc.  
America Online, Inc.  
Baker Hughes Inc.  
Bristol-Myers Squibb Co.  
Canadian International Development Agency (CIDA)  
Department of National Defence, Canada  
ExxonMobil Corp.  
Halliburton Energy Services Group  
Houston Community College System  
\*IBM Corp.  
Intel Corp.  
KPMG LLP  
Lockheed Martin Aeronautics Co.  
Lucent Technologies Inc.  
Occidental Petroleum Corp.  
Raytheon Co.  
Union Pacific Railroad Co.  
U.S. Navy  
U.S. National Security Agency  
U.S. Social Security Administration  
Xerox Global Services  
*\*Accenture and IBM participated as both sponsors and best-practice partners.*

##### PARTNER ORGANIZATIONS

Accenture  
Aerotek, Inc.  
\*\*Avanade Inc.  
\*\*Corning, Inc.  
Defense Acquisition University

IBM Corp.  
 \*\*Rockwell Collins, Inc.  
 Turner Construction Co.  
 \*\**These organizations participated as data-partners only.*

**APQC STUDY TEAM**

Darcy Lemons, project manager

**SUBJECT MATTER EXPERTISE**

Jean Egmon, Ed.D.  
*director, Center for Learning and Organizational  
 Changed, Northwestern University*  
 Jim Lee, PMP  
*Senior KM adviser, APQC*  
 Wesley Vestal,  
*KM practice lead and Senior KM adviser, APQC*

**PARTICIPANT BACKGROUND**

Figure E.2 depicts the top five industries for the 28 organizations participating in this study.

Industry Categories	Industry Representation
Government	23%
Consulting/Professional Services	15%
Other	15%
Aerospace/Defense	12%
Chemicals/Petroleum	12%

**Figure E.2**

The “other” category listed in the table represents higher education, oil and gas services, media and computer networking, and staffing services. Additional categories included computer hardware/software, construction, healthcare/pharmaceutical, manufacturing, telecommunications, and transportation.

Sixty-seven percent of the partner organizations have global operations; the remaining 33 percent operate primarily in North America. Of the 17 sponsor organizations (1 sponsor did not answer the question), 57 percent have global operations and 36 percent operate primarily in North America. Seventy-eight percent of the sponsor organizations and 75 percent of the partner organizations responded to the detailed questionnaire on behalf of the entire organization, and the remaining organizations responded on behalf of a particular division or business unit.

Across the 16 sponsor organizations able to share annual revenue figures, the median annual revenue for 2003 was \$8.6 billion with a maximum of approximately \$24 billion and minimum of approximately \$230 million. The median annual revenue of the eight partner organizations was \$3.7 billion, with a maximum of approximately \$89 billion and a minimum of approximately \$260 million.

The sponsor organizations reported a median number of 39,400 employees per organization, with a maximum of 900,000 employees and a minimum of 1,800 employees. The partner organizations reported a median number of 14,000 employees per organization, with a maximum of 1,000,000 employees and a minimum of 2,100 employees.

### **ABOUT APQC**

A recognized leader in benchmarking, knowledge management, measurement, and quality programs, APQC helps organizations adapt to rapidly changing environments, build new and better ways to work, and succeed in a competitive marketplace. For more than 25 years, APQC has been identifying best practices, discovering effective methods of improvement, broadly disseminating findings, and connecting individuals with one another and with the knowledge, training, and tools they need to succeed. APQC is a member-based nonprofit serving more than 500 organizations around the world in all sectors of business, education, and government. Learn more about APQC by visiting [www.apqc.org](http://www.apqc.org) or calling 800-776-9676 or 713-681-4020.

### **SUBJECT MATTER EXPERTISE**

**Jean Egmon, Ed.D., director, Center for Learning and Organizational Change, Northwestern University**

Jean Egmon integrates her research, teaching, consulting, and leadership to focus on the role of learning and leadership in the transformation of workplace organizations. Her view of learning in the workplace extends beyond the training function and applies a more macro view of knowledge embedded in the organization's environment, practices, and tools. In this view, entire systems of people, processes, tools, and environmental changes are considered in the analysis and design of change for business improvement.

Egmon received her bachelor's degree in business administration and English from Monmouth College and her master's degree in labor and industrial relations from the University of Illinois at Urbana-Champaign. Her doctorate in education, focused on education organization and leadership, is from the University of Illinois at Urbana-Champaign.

**Jim Lee, senior KM adviser, APQC**

Jim Lee is a senior-level specialist with APQC. Lee's recent and current clients have included large organizations developing their enterprise knowledge management strategies. Lee has experience with a number of industries, including pharmaceutical, transportation, the military, manufacturing, retail, and professional services.



Prior to joining APQC, Lee was a global knowledge manager at Cap Gemini Ernst & Young, where he led the development of an integrated knowledge management system after the merger of two global management consulting firms.

Lee holds a master of business administration from Cleveland State University and a bachelor of industrial administration from Kettering University. He is currently pursuing a Ph.D. in knowledge management. Lee also holds certification as a project management professional from the Project Management Institute. He has spoken at numerous national and international conferences on project management and knowledge management. In 2003 he received an honored faculty award from the University of Phoenix, where he teaches graduate courses in project management, operations management, quality management, and statistics.

### **Wesley Vestal, KM practice lead and senior KM adviser, APQC**

Wesley Vestal is the KM practice leader and a senior KM consultant for the KM practice area at APQC. He is responsible for all KM products/services in APQC's custom work and KM benchmarking research agenda. He also works with APQC's members, creates new products and services, and grows the KM practice. In his role over the last six and half years, Wesley has worked extensively in designing and implementing knowledge management strategies, solutions, training courses, and measurement systems for diverse organizations such as Pfizer, Mattel, ExxonMobil Chemical, Best Buy, Schlumberger, U.S. Army Medical Division, and the American Red Cross.

Wesley speaks at knowledge management conferences across the world and is also an APQC-certified trainer on knowledge management and benchmarking skills. He is the co-author of the chapter "*Best Practices: Developing Communities That Provide Business Value*" in the book *Knowledge Networks: Innovation Through Communities Of Practice* and has published several articles, including "*Ten Traits of Successful Communities of Practice*" and "*Using Knowledge Management to Replicate the Gains of Process Improvement*" in the *KM Review*. He has also served as a subject matter expert and co-author in APQCs *Replicating the Gains from Six Sigma and Lean: Capturing and Transferring Knowledge and Best Practices*, "*Integrating Knowledge Management and Organizational Learning*" and "*Talent Management: From Competencies to Organizational Performance*" benchmarking studies.

### **ACKNOWLEDGMENTS**

The project team and APQC would like to thank the *Integrating Knowledge Management and Organizational Learning* consortium study participants. Throughout the study, the sponsor representatives provided valuable input into the data collection tool and site visit guide design, partner organization selection, and site visit participation. The enthusiasm and dedication of the sponsor group ensured a successful study.

A special thanks is extended to the partner company representatives who have taken time out of their busy schedules to participate in this study. The representatives receive no compensation or reimbursement for their time or travel. Each member of the partner group has gone out of his or her way to ensure the success of this study.

## APQC'S BACKGROUND AND RESOURCES IN KNOWLEDGE MANAGEMENT

APQC has developed an award-winning methodology for its consortium benchmarking studies. This study marks the 15th consortium benchmarking study on knowledge management conducted by APQC. Other APQC publications on knowledge management include:

1. *Facilitated Transfer of Best Practices* (2004)
2. *Virtual Collaboration: Enabling Project Teams and Communities* (2004)
3. *Expertise Locator Systems* (2003)
4. *Measuring the Impact of Knowledge Management* (2003)
5. *Using Knowledge Management to Drive Innovation* (2002)
6. *Retaining Valuable Knowledge: Proactive Strategies to Deal With a Shifting Work Force* (2002)
7. *Managing Content and Knowledge* (2001)
8. *Building and Sustaining Communities of Practice* (2000)
9. *Successfully Implementing Knowledge Management* (2000)
10. *Creating a Knowledge-Sharing Culture* (1999)
11. *Expanding Knowledge Management Externally: Putting Knowledge to Work for Customers* (1998)
12. *Knowledge Management and the Learning Organization: A European Perspective* (1998)
13. *Using Information Technology to Support Knowledge Management* (1997)
14. *Emerging Best Practices in Knowledge Management* (1996)

Other APQC resources in KM include conferences, trainings, and publications.

- **Annual knowledge management conferences**—Conducted at least once a year, APQC's knowledge management conferences present fresh cases and tools for knowledge management practitioners.
- **Training**—APQC offers knowledge management and other training and learning opportunities designed to increase your awareness of knowledge management issues and options. Knowledge management certification is available for completion of APQC's Connected Learning series, which is a CD-ROM collection geared to individual, when-you-need-it use. Knowledge management training courses include:
  - Knowledge Management 101: A Knowledge Management Overview,
  - Building and Sustaining Communities of Practice,
  - Knowledge Management Strategies and Tactics for Business Results,
  - Measuring Your Knowledge Management Initiatives,
  - Knowledge Management: Approaches to Implementation,
  - Knowledge Mapping, and
  - Content and Knowledge Management Systems.

- **Publications**—APQC offers a wide range of publications that can help organizations break out of conventional thinking and excel with best practices. Example publications follow.
  - APQC’s Passport to Success series: *Communities of Practice* (2001)
  - APQC’s Passport to Success series: *Content Management* (2003)
  - APQC’s Passport to Success series: *Knowledge Management* (2000)
  - APQC’s Passport to Success series: *Stages of Implementation* (2000)
  - *Capturing Critical Knowledge From a Shifting Work Force* (2003)
  - *Expertise Locator Systems: Finding the Answers* (2004)
  - *If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practice* (Free Press, 1998)
  - *Knowledge Management: Lessons from the Leading Edge* (1998)
  - *Next-generation Knowledge Management* (2001)
  - *Showcasing Successful Knowledge Management Implementation* (2000)
  - *Taking Knowledge and Best Practices to the Bottom Line* (2001)
  - *The World Bank Profile: Best Practices in Knowledge Management* (2003)