

The Central Role of Knowledge Technology in the Transformation of HR

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A transformation of the HR function is underway – a transformation from cost center to strategic weapon, from bulwark of bureaucratic inertia to spearhead of global responsiveness. Like prior transformations of functions such as inventory management and customer service, this transformation is enabled by technology. It is driven by the vision of HR as a knowledge organization – a hub for the flow of information throughout the enterprise. As such, knowledge systems take a central role in the IT infrastructure for the new HR.

In the early 1990's, much-maligned customer "Complaint Departments" were radically transformed. The groups that once passively collected customer gripes and defective merchandise have now become a part of their companies' strategic arsenal: a means to competitive advantage in customer service quality, customer relationship management, market intelligence, and new product introduction. These transformed customer support call centers employ a variety of new technologies for managing the calls, keeping track of callers, helping customer service representatives answer questions knowledgeably, and gathering intelligence on customers, products and competitors. As the world embraces e-commerce, they are well positioned, via systems already in place, to extend quality customer support to self-service on-line transactions.

The modern customer service call center is a familiar example of a technology-enabled transformation of an existing business function. Technology creates an opportunity for doing things quite differently, and in the end, for using the same functional organization to achieve new business objectives. Understanding this desired transformation, or "realignment," is important for designing new information systems and their underlying IT infrastructure. While the original investment may be justified by productivity increases and staff trimming, the long-term value of these systems arises from their capacity to support new and changing ideas about how the business function might contribute to sustained competitive advantage.

In the coming decade, Human Resources will be broadly acknowledged as a strategic business activity.¹ It will undergo a major transformation, just as customer service did in the past decade. Using the right combination of core technologies, re-engineering this staid business function will permanently change the way the best companies are run. Knowledge technology will be central to this transformation.

New Imperatives for Human Resources

The next decade will see firms completely change the way they manage their global workforce to achieve market success.² Time consuming administration, registration, reporting and paper processing tasks will be centralized, automated and outsourced. This change will allow the HR staff to undertake unprecedented innovation in the coordination of worldwide operations, decentralization of control of HR practices, speed of response to changing government regulations and company policies, and quality of service to employees.

The new HR will handle both existing administrative functions and new strategic functions more effectively with fewer people by re-thinking the way it accomplishes the two tasks that have come to dominate its activity in recent years: administration and information dissemination. (See sidebar: “What’s going on in HR”)

These administration and information dissemination tasks will be transformed via:

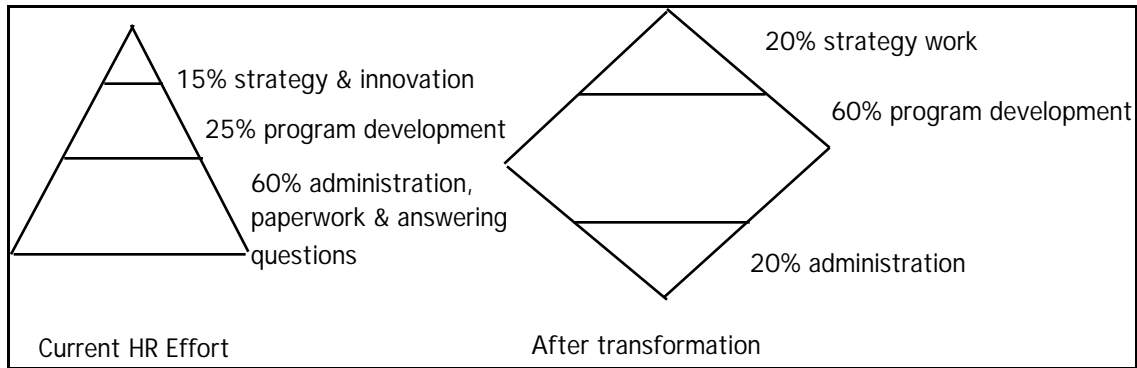
- Centralized service delivery, integrated across all HR activities, through modern call-center and information systems technology;
- Employee administration of benefits and policies, and self-service HR transactions;
- Information access via intranet pages, interactive voice response (IVR) and other new delivery technologies, giving employees, retirees, family members, and managers more timely access to more complete and up-to-date information about benefits and policies;
- Automated generation of standard manuals, bulletins, management reports, and data for government agencies.
- Effective use of available outsourcing services.

In a typical Global 2000 firm, total HR staffing can be significantly reduced or re-deployed, mostly through centralization and automation of activities like benefits transactions and answering employees’ questions. Most of HR’s effort is spent doing these clerical tasks. The new distribution of effort in HR is illustrated in Figure 1. Freed from its paperwork burden, HR will begin to add greater value to the enterprise by focusing on strategic issues in workforce management.

¹ See, for example, the description of HR in Homa Bahrami & Stewart Evans, *Human Resource Leadership in Knowledge-Based Entities: Shaping the Context of Work*, in Ulrich, D., Losey, M., & Lake, G., editors, *Tomorrow's HR Management*, John Wiley & Sons, 1997.

² See Dave Ulrich, *A New Mandate for Human Resources*, Harvard Business Review, January, 1998.

The widespread realization of the potential for massive improvements in both productivity and effectiveness of the HR function has resulted in growing investments in IT. IDC predicts that strategic HR will be one of the fastest-growing segments of the IT industry over the next few years, growing from \$360M in 1995 to \$1.2B in 2000. “Far from being a bureaucratic backwater, HR has now become the kind of place where IT can have an enormous positive impact on the effectiveness of an entire corporation.”³



³ G. James, IT helps HR become strategic. *Datamation*, April, 1997.

Figure 1. The redistribution of HR activities.

What is HR Knowledge?

Our thesis is that the transformation of HR is based on knowledge, and further, that knowledge systems are one of the core elements of the IT infrastructure that must be put in place. Before looking at the IT side of things, we should explain exactly what kinds of knowledge exist in HR.

Sidebar: What's Going On in HR?

HR has seen a variety of new demands and increasing pressures, which lead to the impression that it is not responsive, and even not delivering:

- Companies operating globally are faced with significant variations in employee expectations and HR customs, and are finding it difficult to respond quickly to new global opportunities.
- HR departments find themselves stressed by increased levels of bureaucratic, paper-pushing activity and data reporting requirements (from labor, environment and tax agencies in all operational locales). Failure to enforce a variety of regulations is associated with increasingly serious legal and financial consequences.
- Companies can grow and shrink by thousands of people every year, and in some industries the mean time between mergers is just a couple of years. This level of organizational upheaval creates tremendous HR work in advising employees and revising policies, procedures and benefits.
- An increasing number of mission-critical workers are not employees: they work for an outsourcer or are "on contract."
- The "family" mentality that once characterized the relationship between employer and employee has all but disappeared in the US, due to global competition, layoffs and mergers. Wall Street dictates a relationship based on productivity, not permanent employment.
- Companies are increasingly conscious of the "intellectual asset" represented by their employee's experience, tacit knowledge and training. Knowledge asset management is especially important in high-tech, for example, where innovation dominates business strategies.
- In some job categories, like IT workers, long-term labor shortages could re-shape the playing field. Demographic changes are also changing the workforce in some countries.
- Technology and sophisticated business strategies, like TQM, service excellence, customer relationship management, product complexity, rapid innovation and product-line diversity, are changing the nature of jobs and requirements of the workforce, again forcing HR to work harder to achieve its central staffing, recruiting and compensation functions.

Looking across all of these changes, the role of HR as knowledge disseminator becomes clear. In dealing with the complexities of today's business and regulatory environment and the diversity and independence of the modern workforce, HR needs tools to facilitate the flow of knowledge.

Table 1. An illustration of some of the types of HR knowledge.

Core HR knowledge	<ul style="list-style-type: none"> • The underlying structure & logic of common benefits & HR policies • How and why a company defines its various employee groups • Relevant government regulations (country, region and local), including reporting requirements and legal liabilities • Policies of other organizations that impact HR, like unions, in all localities
Knowledge about Employees	<ul style="list-style-type: none"> • Skills, contractual arrangements, benefits, vacation accrual, job history, current manager, patents held, family, etc. • Employee and retiree groups defined for a variety of reasons • Contracts with employees and unions
Knowledge about presentation and use of knowledge	<ul style="list-style-type: none"> • Different presentation for CSR's (experienced and inexperienced), employees, family members, managers, auditors, government agencies and healthcare providers. • How employees ask about things; what they then might need to know; and how to explain it to them. • Life events and company events • What needs to be in a Summary Plan Description (SPD) or a policy manual? How should the document be organized?
Company-specific benefits & policies	<ul style="list-style-type: none"> • A company's specific configuration of benefits & policies • Benefit plan design based on cost model (knowledge of how people utilize benefits plans), understanding of employee demographics, and awareness of competitors' benefits and plan utilizations • Employee groups, location of facilities, etc. • HR procedures, workflow • Presentation: terminology, format of SPD's, etc.
Benefit providers: Insurance carriers & financial institutions	<ul style="list-style-type: none"> • Product offerings • Geographical range • Financial soundness
Healthcare providers	<ul style="list-style-type: none"> • Ways to determine the coverage of an employee • Equivalent treatments, drugs
Outside Consultants and Specialty Firms	<ul style="list-style-type: none"> • Outsourcing firms • Temp agencies • Compensation specialists
IT Partners	<ul style="list-style-type: none"> • How to interface to employee data in ERP databases • How to drive HRIS processes from explicit knowledge (like eligibility rules) in the knowledge system • How to generate reports that are most useful for both administration and strategic decision-making

Underlying every aspect of HR, such as its employee database, its benefits administration, its work policies, its training programs, and its OSHA compliance reports, is a body of knowledge that is central to the design of the new IT infrastructure for HR. Upon close analysis, one sees how enormous and complex this body of knowledge has become (see Table 1).

Over the years, a fraction of this knowledge has been written down in memos, contracts, plan descriptions, or policy manuals. Some of it has been implicitly embedded in procedures, forms, or information systems. Some is kept solely in three-ring binders. But most of the knowledge remains unexpressed. Re-engineering HR provides the opportunity to think about what knowledge underlies HR operations and how it can be deployed more efficiently, conveniently,

accurately, and consistently, and at the same time, be more responsive to business and regulatory changes.

Knowledge is the key component of the re-engineered HR infrastructure. We are asking our new systems to do two kinds of things which require a central, systematic repository of explicit HR knowledge:

1. Answering employees' questions and assisting employees and managers during self-service transactions.

Much of the current work of the HR staff involves answering employees' questions, and much of the efficiency achieved in re-engineering comes from automating the process of getting employees the information they need (self-service, preemptive emails, interactive voice response, on-line help during self-service transactions, coaching managers while they are filling out forms, etc.). When knowledge such as "how to determine what employees need to know," is available in a central repository, it allows multiple service systems to work off of the same information: intranet pages, voice response, human customer service reps at a call center, printed bulletins, on-line help, etc. Furthermore, since this knowledge changes often, keeping it centrally facilitates keeping it up-to-date, which is an expensive but critical aspect of all knowledge work. If the advisor is not up-to-date, people stop using it.

2. Increasing the responsiveness of HR by decreasing the time required to deploy systems and revise work processes in response to business and regulatory changes.

HR knowledge is extensive and drives a number of different work processes. Often "small" changes, e.g., to a vacation policy or reporting requirement or medical plan, generate enormous amounts of work as HR staff details out the implications for other benefits and policies across all employee groups in all operational localities. The time it takes to respond (post employee bulletins, update manuals and forms, revise information systems, etc.) is one of the main frustrations aired about HR departments. The knowledge in the central repository can be linked to all the places where it is used, dramatically reducing the effort and time required to keep up with the business. Some of these processes, like generating revised plan descriptions, may be completely automated.

In addition to these immediate demands on our new systems, there are more strategic ways of aligning HR with management's needs that are possible once the information infrastructure is in place. For example, managing the firm's intellectual assets in the knowledge repository or using the HR data warehouse to better support tactical and strategic business decisions. There will be more ideas for how to use this infrastructure, once it is built. Like roads and bridges, IT infrastructure must be built with a vision of where people may want to go, not with their current itinerary.

The IT Infrastructure for the New HR

Corporations have put a great deal of new technology in place over the last decade to "enable" transformations like the one we're advocating. For example, the fact that almost all employees

are, by now, connected by computer or telephone permits the savings that will come from self-service transactions and inquiries. Networks, voice-response on the telephone, mobile computing, and home access to the Internet all come into play here, as they do with many new ideas for using IT competitively.

But there is a small set of technologies that is key to actually providing the functionality required to transform HR. The three “core” technologies that constitute the new infrastructure for HR systems are the HR Information Systems (HRIS), a special-purpose HR data warehouse, and an HR knowledge system (see Figure 2).

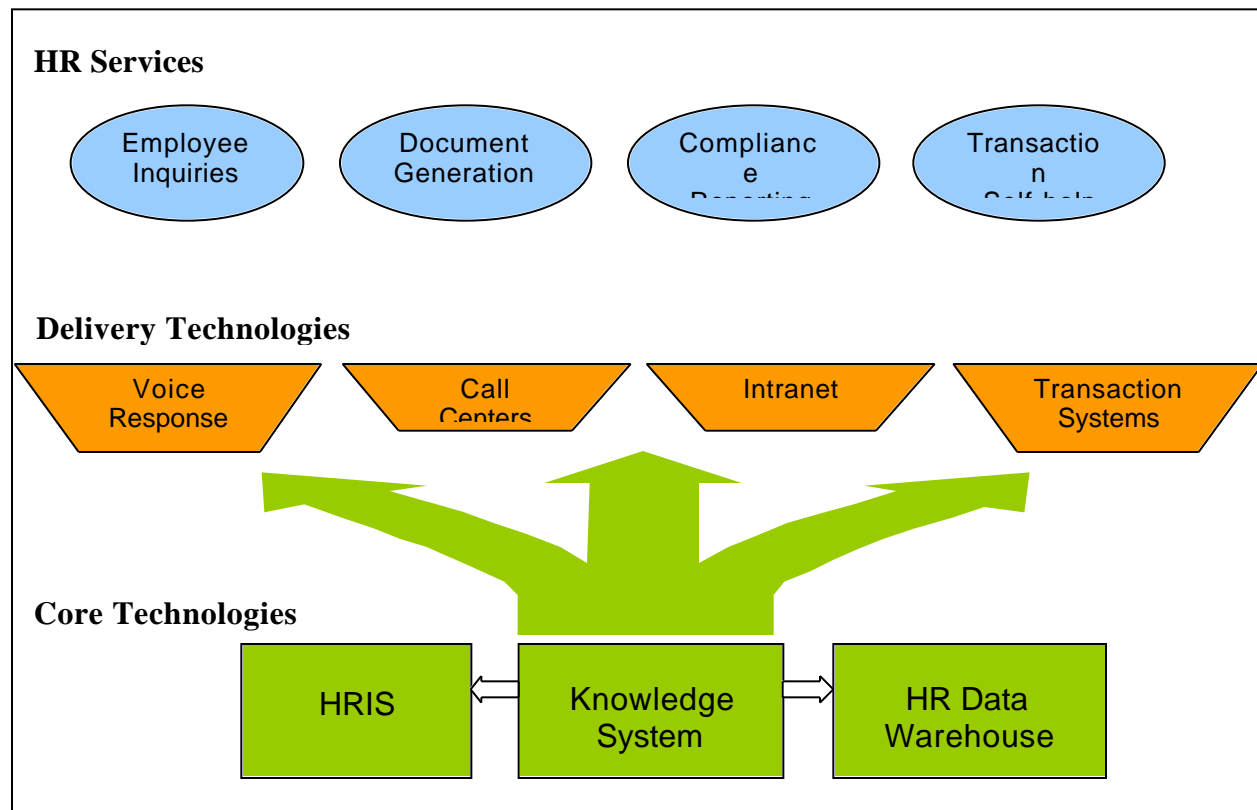


Figure 2. The three core technologies of the HR IT infrastructure.

The HRIS is a conventional database application platform, typically purchased from a vendor like PeopleSoft, SAP, Oracle, Baan, or Lawson. The HRIS is specifically designed to:

- offer automation for standard HR business processes, like benefits enrollment and other transactions, along with a repository of the data required for those transactions;
- integrate and share a common data model with other ERP modules, like payroll; and
- generate a broad array of standard reports for personnel management and government reporting.

Of course, the installation and customization of an HRIS for a multinational organization can itself be a daunting and expensive process. But, by itself, the HRIS is not enough — it is only the first component of an IT infrastructure to support the new HR organization. The HRIS products

on the market are designed to bring efficiency to current HR functions, but they are not designed for agility in response to business changes and they have not considered the new HR functions required to realign HR with business objectives.

In addition to the HRIS, an HR-specific **data warehousing** effort is needed. The goal for this piece of the system is to build a model of HR-related data, beyond the model implicit in each vendor's HRIS system. This model allows flexibility down the line for reports that not only satisfy the requirements of all those agencies and localities not covered by the HRIS product, but also support analysis and decision making about HR and about the employees themselves.

Finally, essential to the successful transformation of HR is a **knowledge system** that contains an encoding of knowledge about corporate policy, HR procedures, various types of benefits plans, and so on. The key technical feature of a knowledge system is that the knowledge is expressed *explicitly* in a special database, not embedded in the text of an on-line manual or in the set-up tables of a PeopleSoft implementation. In this explicit form, the knowledge can be used to drive many different HR systems. This knowledge system is central to achieving the kinds of efficiency gains we're describing, and to the future strength of the HR function.

A knowledge system is an information system that has been separated into three components:

1. A specialized database, called the knowledgebase, which is where knowledge is stored: eligibility constraints, taxonomies of benefits plans, rules on what must be in a simplified plan description, phrasing of a sex discrimination policy, etc. The knowledgebase houses knowledge in a standard, neutral representation that does not presuppose the systems with which it will integrate. Moreover, the HR knowledge system does not assume (implicitly or explicitly) the uses that might be made of the knowledge;
2. A set of editing tools for entering the knowledge and keeping it up to date; and
3. An algorithm for using the right knowledge in the right way at the right time. If some additional information is needed to answer a question or solve a problem, the system can determine what questions to ask to clarify the situation.

Compare the knowledgebase approach to traditional software systems, where the knowledge inherent in the system is implicit in the software code itself, and can only be understood and changed by programmers. In the knowledge system, the special editing tools allow a subject matter expert (SME) to make sure the right knowledge gets into the system, to correct the system's behavior by adding or changing its knowledge, and to keep the knowledge up to date.

Key to the value of knowledge systems is that the same piece of knowledge can be used in a variety of ways. The knowledge system might combine the knowledge it has about employees, medical benefits, and web screens, for example, with the data about a particular employee and his particular medical plan coverage, to generate a screen in response to his on-line query about co-payments. The same knowledge might be combined with a voice response unit to answer the employees questions over the phone, or with an on-screen forms generator to help the employee fill out an office visit claim form.

The very same knowledgebase could be used to print up a benefits manual, or to set up a PeopleSoft workflow process. When the rules are changed (by an insurance carrier or by corporate policy changes), the update need only be entered once, to the central knowledgebase, which is linked to all the places where that knowledge is used. Moreover, a knowledge system can reason about the knowledge in ways that a static web site or information retrieval system cannot. For example, the system can reason about “effective dates” and communicate the appropriate eligibility requirement for each situation: provide an answer to a retiree’s question about filing a claim under previous eligibility rules; offer information about future eligibility (e.g. at the next open enrollment period); or provide tailored eligibility information contingent upon a current or potential future life event. There are a variety of technologies used for building these knowledge systems. They are named after the type of reasoning they support. Rule-based, case-based, model-based, constraint-based, temporal, and probabilistic reasoning systems are the most common types available commercially. Many systems combine several paradigms, mimicking human ability to get to the answer using any of several alternative techniques.

Sidebar: Knowledge Systems vs. Information Retrieval

Many commonly available solutions for HR self-service are based on information retrieval. In this technology, the knowledge remains in text documents, which are catalogued and indexed so that users can either browse for them (through a multi-level index), or search for keywords. These systems are straightforward to build, because the text documents already exist, for the most part, or can be easily generated through standard word-processing. It’s just a matter of indexing the documents and “hooking them up” to a web-based, self-service front end.

The text-based approach can be very effective in helping people find answers to questions, if they have the patience to browse and to read the text that is presented to them. However, the answers they get from the system is canned text, written for a general class of people in their situation, but not taking into account their exact circumstances. As the corpus of knowledge grows, moreover, it becomes harder and harder for employees (or CSR’s) to find the exact information they need. Searching through the documents is especially difficult for employees, since they often don’t know the right words to use to describe their situation. These text-based systems are unable to ask users questions to help them find the correct information. Furthermore, all of that text needs to be kept up to date in separate documents! A final, but critical, contrast to knowledge systems lies in the fact that the knowledge in the text documents can be read by humans, but cannot be understood by other systems. Therefore, document-based systems cannot realize the efficiencies created by feeding their knowledge into other information systems.

The Power of the Knowledge-Centered Approach to HR Systems

What are the business benefits to building a knowledge repository as the center of the new HR IT infrastructure? One sees clear benefits to the purchase of a modern HRIS tool from PeopleSoft or others – integrating global HR data and transactions, off-the-shelf functionality, and conforming to the enterprise data model. However, if a company focuses only on its HRIS system, it will miss a great opportunity to organize the vast knowledge implicit within its current HR organization and systems.

HR knowledge itself is similar across companies at the descriptive level: health plans, government regulations, employee databases, and so on. In the details, however, one sees the opportunity. For example, valuable information about how the company is organized may only be available *implicitly* in the payroll system, in the lines of software code which determine different pay and benefits for different employee groups. If that information were explicit, decision-makers might

be able to discern and implement quickly a more effective organizational structure to support a change in strategic direction.

Answering questions, whether at the HR help desk or during a self-service transaction, can be qualitatively improved through a repository of explicit HR knowledge. A well-designed knowledgebase, say about family-related benefits and policies, might allow a CSR to go beyond just helping an employee add the new baby to his health insurance plan. Instead, the CSR can volunteer additional information that might be important for the new parent to know, such as a description of the company's day-care benefits, or the policy on telecommuting.

Another example of the value of explicit knowledge is a government compliance report generated from the employee database, which meets the minimum requirements but leaves valuable knowledge unused. Making explicit the links between government regulations and the policies and procedures that they spawn in the organization allows companies to keep the workflow processes related to reporting or compliance streamlined and up-to-date. Explicit compliance knowledge might even contribute more strongly to the organization by providing better peer group information to prospective employees, or supporting public relations, marketing or legal requirements.

The most immediate and direct benefit of building an HR knowledge repository, however, lies in the HRIS and the "workflow processes" or "applications" it supports. In a conventional HRIS, a piece of knowledge that is required by more than one application will be reproduced in its entirety in building each application. For example, the rules about employee eligibility for health and welfare benefits might be built into the health & welfare administration system, the vacation and leave policy systems, and many others.

The routine re-coding of the same knowledge is a significant contributor to the high cost of HR applications development – and to the time it takes to build them, which makes HR departments seem so sluggish and unresponsive. HR systems development outsourcers estimate that, typically, companies can spend four times as much to develop these applications as they spend on the HRIS software itself. Just by streamlining the process of bringing up applications within the HRIS framework, knowledge systems could have a dramatic impact on the costs of automation and the maintainability of systems over the years.

Making the knowledgebase central to a comprehensive redesign of HR systems architecture enhances an already powerful opportunity for renewal. The HRIS is, after all, only one of as many as 40 HR-related transaction and information systems in the average company.⁴ Each of these systems uses some HR knowledge, like organizational structure or eligibility, to execute effectively. One-off efforts to analyze a single function for a single application do not allow the architectural insight gained in the analysis to be shared across applications. Thus, stand-alone systems projects do not support a systematic analysis and improvement process for HR as a whole. The opportunity represented by the HRIS to build infrastructure to support a range of

⁴ Other major systems include administration of health & welfare plans and defined benefits and defined contribution pension plans, the employee skills & competencies inventory, training administration & certification, workers compensation, risk management, travel and entertainment policies, purchasing, and telephone directory and logs.

applications is wasted if one doesn't take the additional step of methodically engineer the knowledge that is common to all of these systems.

The benefits of creating a repository, a one-time formalization and explicit encoding of HR knowledge, as the center of the IT architecture range from efficiency to maintainability. We've mentioned some before. Table 2 is more complete.

Table 2. The benefits of a knowledge-based approach.

Cut cost and time for development and deployment of new information systems	<ul style="list-style-type: none"> • As much as 80% of the work in both developing custom systems and deploying off-the-shelf systems is in coding into each system the same knowledge about organizational structure, rules, constraints, and policies.
Make changes to knowledge once, centrally, automatically updating all systems (see Table 3)	<ul style="list-style-type: none"> • Improved operations, ease of maintenance, up-to-date information, and rapid response to business changes. • Management will have more freedom to experiment with policies and benefits, if the cost to implement them is not prohibitive.
Answer questions more effectively	<ul style="list-style-type: none"> • System uses the deep knowledge of the subject matter expert to analyze the situation and explain the options completely (perhaps volunteering information beyond the answer to the specific question posed), customized for the exact circumstances an employee or manager is faced with. • Gain consistency of answers and behavior across systems – the same answer each time an employee asks. • As with other self-service solutions, anonymity and 24x7 operation are possible.
Enable interactivity in interfaces to inquiry and transaction systems	<ul style="list-style-type: none"> • Delivery of customized (specific to employee and her situation), accurate and complete “content.” • Coaching someone who doesn't know how to ask a question or browse a website – who doesn't even know the right words to use or the right questions to ask. • Progressive refinement of queries – helping someone zero-in on the right information, like a librarian. • Intelligent forms – automatically checking for correctness and compliance eliminates paperwork re-routing.
Increase employee perception of value	<ul style="list-style-type: none"> • Studies have shown that employees estimate the value of their benefits at just one half of their true costs. Effective, timely communication of benefits leads to higher perception of their value and thus more employee satisfaction.
Enhance security and confidentiality	<ul style="list-style-type: none"> • As you bring a new level of automation to your relations with your employees, there is no avoiding the issues of keeping information confidential, and controlling who gets to see what knowledge. Access control to knowledge, and subsequently to data, can be enhanced by creating an explicit knowledge repository.

Key to the long-term benefits of the knowledge-based approach is the number of information systems that can use the knowledge in the repository. These systems include the many existing HR information systems, as well as types of systems that haven't yet been conceived, as illustrated in Table 3.

Table 3. Applications that use knowledge to streamline HR activities.

CSR workstations	Feed correct, concise and current responses to the desktops of those answering employee questions, even if they work for an outsourcer
Self-service inquiries, via intranet, telephone or email	Provide an appropriate interactive environment and access to the right information for self-service for all levels of the organization, not just employees, (for coaching managers in the appropriate application of policies within their groups, for example), and for all those affiliated with the company, including retirees, temporary workers, family members
Self-service transactions	Feed knowledge to the transaction processing and data warehousing systems
Publications	Generate Summary Plan Descriptions, manuals, bulletins and other communications for a multitude of purposes, from tailored employee communications to regulatory compliance reporting
HR tools for line managers	Hiring, promoting, performance review, compensation planning
Tools for HR managers and experts	Administering recruiting programs, designing benefit packages, planning for mergers and acquisitions, comparing various carriers' offerings, understanding foreign country HR environments

What's in a Commercial Knowledge System?

A few leading-edge vendors have begun to offer knowledge systems solutions for HR departments and related outsourcing firms. The idea of an explicit knowledge repository is central to their vision of HR systems – representing conveniently within the system the different types of knowledge people have about various HR subjects. For example, knowledge about how to explain a benefit to a particular employee or family member is a distinct and useful piece of knowledge, which is presented separately from knowledge about the benefit itself (eligibility, deductibles, etc.).

There are several components of an HR knowledgebase one should be looking for when evaluating different vendors' products:

- The **knowledge** itself – covering as much of the core of the HR function as possible. The knowledge is formally organized into a knowledge repository. The knowledge usually comes

in the form of **templates** for the wide range of benefits, policies, procedures, etc., which must be set up for a particular company, much like a PeopleSoft HRIS must be customized.

- A set of **knowledge editing tools** for defining how things work in a particular company and for keeping knowledge up-to-date as benefits and policies change. While vendors will insist that any subject matter expert can edit the knowledge, eventually some specialists will emerge – SME's with the aptitude for debugging knowledge who develop a "big picture" of the structure of the firm's HR knowledgebase.

The knowledgebase gets increasingly complex over time. The editing tools should include facilities for **testing** the knowledgebase and for culling old, unused knowledge, and should generate **reports** on how knowledge is being used in the organization.

- Part of the knowledge, the **company-specific content** (plans, policies, procedures, company-specific terminology and phrasing, screen-layouts, HR forms, on-line documents, etc.), must be gathered and organized in a systematic way. The vendor should be able to lay this **data gathering process** out in detail, in writing, since this information is required to make the system operational. The data gathering process includes procedures for examining company documents and information systems, and for interviewing subject matter experts to extract other needed information.
- A **methodology** for systems deployment, including set-up procedures for installing the knowledge system, populating it with the company-specific data, integrating with other information systems and documents, and **verifying** that it is complete and correct – giving the right answers to CSR's and employees. This part of the technology is often transferred with the help of the vendor's **services group** and through a set of **training** offerings for CSR's, knowledgebase editors, etc.
- Easy to set up **interfaces to the data** in your databases, including HRIS databases and homegrown relational databases. There should be no need to re-enter or replicate your core HR data.
- **Interfaces to common systems**, at least to the market leaders' products: call management, document retrieval, transaction processing, etc.
- The ability to **link to existing on-line documents**, forms, government regulations, etc., can save a great deal of time, both in set-up and in the convenience to the users.

Putting Knowledge to Work

The process of ferreting out and organizing HR's knowledge is not an easy one – it's like moving to a new home, sounds good till you have to pack all that stuff. Nevertheless, the massive re-engineering and automation that HR departments are now undergoing is an important opportunity. By setting goals on realistic first steps, companies can see payback for the extra effort very quickly.

As we said, the two most important immediate goals of getting knowledge organized are to reduce costs and improve quality in answering employee questions, as well as reduce the costs of bringing up transaction and HRIS systems. As shown in Figure 3, knowledge technology offers a

superior solution for answering employees' questions. And only knowledge technology offers hope of dramatically improving the way we bring up HR information systems and transactions systems.

There are some applications of knowledge technology that are more directly approachable than others, that will:

- produce returns most quickly,
- offer a place to learn about how the technology fits into a specific organization (who will maintain the knowledge, for instance)
- start the process of building a knowledgebase
- motivate and sustain enthusiasm for the entire, multi-year knowledge engineering effort by delivering value to employees, to management and to the HR staff.

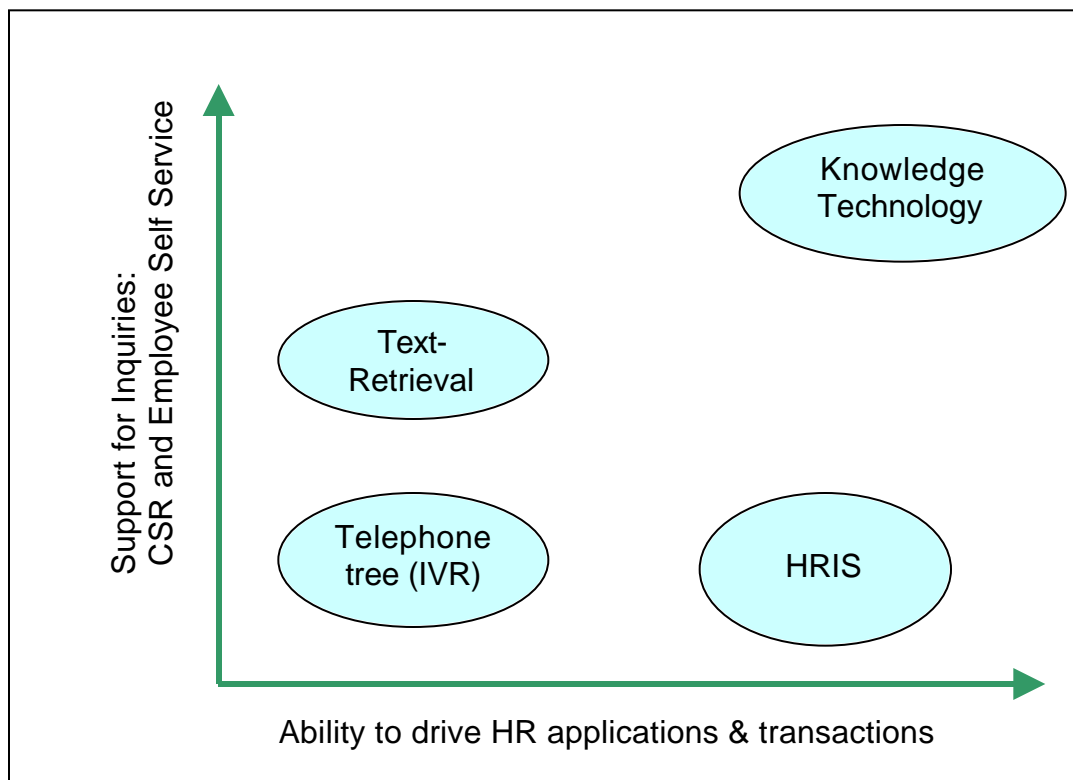


Figure 3. The two most immediate benefits of knowledge-centered HRIS: responding to inquiries and feeding knowledge to HR applications. Effective support for inquiries involves customizing information for each caller's situation, central maintenance of the knowledge, and keeping careful track of "effective dates" and other details of the knowledge.

Here are some ideas for results that can be achieved early in the process of transforming HR into a knowledge organization:

- Automatic generation of HR publications: summary plan descriptions, policy handbooks, procedures, bulletins, notices, etc.

- Automatic generation of more and better regulatory compliance reports
- Centralization of call center for efficiency, or even outsourcing the HR call center, and support CSR's with a well-tuned performance support system
- Answers to frequently asked questions and access to commonly sought material on the corporate intranet for self-service. Some information should even be internet-accessible by retirees and by family members at home.

To return to our opening comparison with call centers, in the course of just a few years, leading firms have transformed the way they use technology to manage customer interactions. Companies who can open a call center at will and support new CSR's with up-to-date knowledge about products, customers and problems, or who can offer really helpful 24x7 advice on the internet, stand to reap advantage from their success with knowledge technologies.

The time to start investing in making HR a strategic powerhouse is now. The transformation of HR will be the most interesting area of enterprise IT for the next decade, and the resulting organizations will be as different from the HR we know as the modern customer care center is different from the Complaint Department.