The New Challenges for Optimizing Talent: How HR Needs to Manage Emerging, Disruptive Technologies



Contents

Executive Summary

The shift from a primary focus on operational excellence to leveraging human assets is rapidly altering the way organizations – and their human resource departments – manage people. This set of changes represents a major transformation that will impact how people live and work together. HR should be a key leader in leveraging technologies to support these workforce changes.

To start the process of building new capabilities, this article focuses on answering three key questions:

- How are global human resource trends responses to and drivers of technologies impacting talent management?
- Which technologies present the most promise for improving the performance of organizational talent?
- What capabilities, roles, competencies, and practical steps should organizations and HR apply to define, design and execute technology strategies related to talent?

The exploration of these topics is meant to help HR on its journey to optimize organizational talent moving forward by applying technologies to shift talent management activities from specialized, backroom operations to core HR and business processes; from centralized control over talent decisions to a more distributed, virtual, self-directed form of work; from the tactical to the strategic use of data and expert knowledge; and from methods for eliminating work and jobs to methods for enhancing individual and collective human performance in organizations.

Introduction

While every company faces stiffening competition requiring much better execution of strategies and much more responsiveness to market forces, the methods organizations apply for acquiring, retaining, and leveraging talent are becoming an important competitive imperative.

All contemporary organizations need to maximize their human assets. In part, this is already occurring as today's organizations have increased productivity by applying technologies to automate, simplify, and accelerate critical work processes. The shift from a primary focus on operational excellence to leveraging human assets is a transformation that is rapidly altering the way organizations — and their human resource departments — manage people. The new opportunities for driving business value increasingly stem from intangible versus tangible assets, making the way people work and share information individually, in teams, and through networks the primary drivers of competitive advantage.

This shift in value creation is becoming more and more technology driven. But as the speed of technology changes, organizations are having trouble keeping pace. Disruptive technologies impacting talent utilization that used to require many years before reaching a critical number of mainstream adopters now may take only a few years or less. This transformation represents an opportunity — but also a critical challenge — for human resource professionals.

This paper is not meant to explore definitively either organizational trends or trends in emerging technologies. Instead, this article focuses on the following three factors:

- How human resource trends are related to talent management transformations;
- What opportunities emerging talent management technologies present for improving performance;
 and
- What practical steps organizations and HR can take to define, design and execute technology strategies related to talent.

Trends Driving Talent Management Technology Changes

While technology advances in and of themselves are clearly driving several trends impacting talent management, many global trends also represent challenges technologies are responding to (See Figure 1: Global Trends Impacting Human Resources).

All of these trends affect the way organizations manage talent. However, one universal truth emerges—the ways human resource activities are performed must change substantially to respond to business challenges and individual needs. New technology applications will be the most critical enabler.

Emerging Changes in Information Systems: Disruptive Forces for Transforming Talent Management

Ultimately, each organization's success stems from the demonstrated competence of its employees. The great promise of technology has always been in its ability to enable each person and collective groups of people to be more productive. This, however, was an elusive goal in the past. In the decades prior to the 1990's, investments in IT yielded few substantive productivity payoffs.

FIGURE 1:

Global Trends Impacting Human Resources				
Category	Trend			
Business/Economic	 Increased outsourcing and partnerships Increasing economic disparity, income inequality, wealth distribution Uneven economic growth Persistent structural (youth) unemployment Shifting economic power for global regions Changing dynamics for organizational supports and benefits (e.g., healthcare, pensions) 			
Customer/Markets	 Increasing worldwide purchasing power Shifting regional growth of markets and customer groups More informed, demanding customers Increasing segmentation/fractionalization of markets 			
Geopolitical	 Increasing regional political instability (e.g., Middle East, North Africa) Increasing security threats to infrastructure, businesses and individuals Challenges from climate instability Inconsistent economic policies locally and globally Population shift (e.g., urbanization; growth of megacities) 			
Workforce	 Slowing overall population growth Increasing population displacements and immigration Increasing global talent migration and mobility Aging workforce and redefinition of "retirement" Intergenerational conflicts around work and social values Changing workplace demographics (e.g., increasing number of women) Rapidly changing workforce values and preferences Shift to more flexible work schedules and lifestyles More part-time work positions 			
Technology and Distributed Information	 Increasing access to information and dis-information Increasing job losses from automation (including professional services positions) Key workforce skills deficits (e.g., increasing categories of "difficult to fill" jobs) Increased needs for ongoing learning and education Increasing access to distributed learning Virtualization of work activities (e.g., new collaborative technologies) Increased distribution of knowledge and production capabilities Increasing impact of social media Increasing impact of distributed computing (e.g., access to "cloud" data and applications) 			

Why? In most instances, technologies such as HRIS systems were really point solutions managed centrally by a few individuals with limited capabilities to impact decision-making by leaders, much less by individual employees. The available applications could not support more integrated, distributed solutions. In some cases, technology applications were not adequately linked to processes, did not resolve key work problems, or did not focus on critical success factors. In other instances, end-user skill with using the systems was inadequate to realize productivity gains. For example, some studies indicate that significant increases in productivity from IT applications requires mastery by at least a third of end-users in a population. In other words, organizations need a "critical mass" of power users to produce a technology payoff.

More recently, IT applications have achieved enough "penetration" in organizations to produce major efficiencies. During the 1990's, the productivity of corporations in all business sectors rose at rates not seen since the 1960's and early 1970's (2.1% for non-financial corporations; 3.6% for manufacturing organizations) as technology applications significantly impacted operational processes. Unfortunately, HR applications lagged in streamlining key activities. Most applications were still quite rudimentary—limited to focused activities such as:

- Static, one-way communication from company to employee. (e.g., on-line, e-mail employee communications, policies and procedures, etc.).
- Selective one-way communication-based on employee queries (e.g., benefits, access to resources such as job postings).
- Automation of HR transactions (e.g., payroll, course registration, access to benefits).

Early HRIS applications did result in significant downsizing of HR departments by enabling organizations to decrease staff, but they had limited impact on the most critical workforce effectiveness opportunities, such as:

- Day-to-day employee productivity;
- Talent management systems automation and integration (e.g., hiring, selection, employee onboarding and assimilation, assessment, performance management, continuous learning, succession planning, salary administration);
- Workforce planning; and
- Capturing and leveraging data and expertise.

Emerging technologies, however, are now starting to make practical impact in these areas. Technology changes of all types generally develop through stages of maturity such as:

- Technology-aided, in which the change augments human capabilities, but is limited to a specific set of specialized tasks, often managed by individuals outside an organization (like grain mills during the 19th century or salary or benefits administration in HRIS systems);
- Technology-supported, in which the new capability provides a substantive contribution for key work tasks (like word processing for an administrative assistant or candidate slates and back-up charts in succession planning applications);
- Technology-enhanced, in which applications add capabilities beyond what a person could do alone (like artificial intelligence or big data contributions identifying employee trends); or
- Technology-driven, in which human activities are replace by an application (like manufacturing robotics or ATMs or learning portals to access just-in-time training and learning aids).

The current range of technologies impacting talent management are in various stages of maturity. Their development has been very rapid over the past few years, but promises to accelerate remarkably moving forward. This reality will be a major challenge for organization leaders and HR departments. Some of the most important technology advances affecting talent management are outlined in *Figure 2* below.

FIGURE 2:

Technology Advances Impacting Human Resources				
Emerging Technologies	Positive Impact on Talent Management			
Integrated Talent Man- agement Systems	 Ability to deploy TM applications across multiple platforms/devices Ability to apply data and standards across linked TM applications Ability to provide individuals, managers and HR visibility about employee status in the whole TM life cycle 			
Cloud Computing (SaaS)	 Speed of deployment Flexible implementation options Cost containment Outsourced, state-of-the-art expertise Access to diverse apps and plug ins Ability to work from anywhere, anytime Optimized uptime/backup Access to latest technologies 			
Social Media	 Enhanced ability to network Increased access to expertise and information Improved level of self-direction around work Ability to give and receive "real time" feedback 			
Enhanced User Interfac- es and Experience	 Improved user experience and satisfaction Improved ability to deploy information and messaging clearly Improved user knowledge and skill acquisition through techniques such as "gamification" Enhanced visual capabilities such as 3-D vision in devices 			
Universal On-Line Access and Ubiquitous Com- puting	 Improved access to information Ability to gather and apply real time decision making data Ability to leverage and share the ideas of groups and network Ability to access specialty information sources, communities of interest, and portals Ability to apply technologies for work anytime, anywhere through mobile devices 			
Accessible Media and Telecommunications	 Ability to conduct virtual meetings and learning events Ability to provide just-in-time information and support to individuals Ability to provide media and group interaction support to mobile devices Enhanced telecommunications impact through conferencing features and functions Improved on demand ability to demonstrate concepts, ideas and skills Enhanced workforce connectivity and collaboration 			
Enhanced Data Access, Analytics, and Manage- ment	 Improved access to and impact of applying data for real time decision making Enhanced ability to collect meaningful data through "pervasive computing" Improved methods and tools for analyzing, reporting on, and applying information collected from various sources in business management 			

Best-in-class TM applications that automate the entire performance planning, tracking, and management process are helping companies improve performance significantly. Pre-structured models (e.g., competency and skills profiles) and other expert knowledge such as coaching aids, development directories, and goal dictionaries – embedded in applications – are improving the impact of key interventions such as goal-setting, assessment, and developing planning. Configurable workflow that enables easy and flexible set up for each key task in talent management processes removes a major barrier to getting started fast and changing how processes are executed based on feedback. Automation of the workflow, with tasks sent to managers and their employees just-in-time, replaces work that HR currently does and structures performance management activities to get done in a consistent, timely manner. Perhaps most importantly though, a highly integrated approach - linking various applications support the consistent application of best practices for managing performance, results in more engaged and motivated employees who can grow and change faster.

The core talent management application suites are becoming more integrated into a single overarching set of linked processes with providers adding applications for defining organization structure and planning for workforce needs on the front end of the talent life cycle and providing dashboards, reporting and data analytics functions on the back end of applications to improve the quality and timeliness of performance management decision making.

Supporting technologies (such as social media recruiting capabilities) are quickly augmenting the functionality of core TM applications and other emerging technologies, changing the very nature of work, are often overlooked as critical areas for HR to master.

Since these technology advances are all interconnected, HR needs to develop foundational expertise in all of them and deeper levels of mastery in a few. The next section of this paper will explore what HR capabilities must be developed for talent technology implementation.

The HR Readiness Gap: How HR Professionals Need to Change to Leverage Talent Management Technologies

Unfortunately HR as a discipline is relatively unprepared to meet the challenge of applying changing technologies to manage talent. Several factors contribute to this problem including the accelerating pace of technology innovation, limited HR competency capabilities around organization and work design, and the complexity of myriad changes impacting the workplace.

In practice, these factors often result in vendors or external experts driving application system or platform installations without proper preparation or analysis of potential positive and unintended negative consequences. To some degree the feature and functions of available technologies tend to drive how implementations occur versus following a logical, phased change management process that starts with business drivers and needs and progresses to a specific talent design phase focusing on workplace, workforce and work design prior to making technology commitments.

As highlighted earlier in this paper, technology changes well beyond HR talent management applications are impacting:

- The kind of activities that comprise day-to-day work;
- The nature of who is completing work in what location(s);
- The kinds of work that is being eliminated;
- The way work gets done; and
- The ways that TM applications are administered.

While HR is still playing catch up with individual and integrated suites of talent management applications, these other challenges represent critical opportunities HR must address to optimize talent. Moreover, advances in technologies impacting talent management have potential unintended consequences - downsides that HR should understand and be able to mitigate.

Figure 3 outlines a general change management framework to help HR drive technology decisions. Each HR capability, accompanying role and change management phase will be explored in the following section of the paper, including discussion of the issues outlined above.

FIGURE 3:

Technology Change Management Framework						
Capability Focus	HR Role	Key Competencies	Change Management Phase			
Business Requirements	Business Strategist	 Business Requirements Analysis Skills Business Value Proposition Development Business Strategy Development HR Strategy Development Political Savvy Collaboration and Networking Skills 	Define the Technology Road- map: Create Guiding Principles and Strategic Imperatives for Change			
Organization & Workforce Design	Talent Re-Engineer- ing Architect	 Cultural Readiness Assessment Workforce Trends Expertise Technology Trends Expertise Organization Structuring Work Redesign Expertise Virtual Teamwork & Collaboration 	Design the Technology Frame- work: Specify Requirements for Structure, Process and People Changes			
Process Design & Optimization	Talent Technology Specialist	 Vendor Selection and Management Talent Technology Applications Expertise Process Improvement Skills 	Develop Integrated Applications: Build the Technology Ecosystem			
End User Advice, Education & Support	Talent Management Advisor & Coach	 Analysis and Advisory Skills Communication and Influence Coaching and Feedback Skills Change Management 	Deliver Technologies to End Users: Provide Ongoing Sup- ports to Integrate Changes into Normative Practices			

Business Requirements

HR departments have evolved to become active business partners and strategists who are increasingly participating in critical business decisions and changing the function to run like a business. Among the most important outcomes of this transformation are business and HR strategies that fully incorporate human factors. As technology becomes a key driver of business success, HR needs to ensure that guiding principles related to talent, key drivers of a people strategy, and the value proposition for key work activities within the organization are all clearly articulated as part of the overall strategy.

Organization & Workforce Design

To some degree HR should act as structure, process and workforce design drivers. Emerging technologies complicate execution of these capabilities. For example, the primary purpose of organization structures is to communicate and collaborate around work activities. Technologies such as social media, hand-held devices, and teleconferencing enable organizations to design flatter reporting structures with more shared leadership responsibilities through distributed forms of communication. However, less-structured work settings can cause problems such as lack of clear direction, wasted time on non-productive activities, and limited ability to build trust and overcome relationship problems. In other words, not all technical "advances" produce uniformly positive outcomes. HR needs to understand how emerging technologies can streamline organization structures and develop methods for diagnosing and mitigating negative consequences

Designing and managing an organization's workforce presents similar challenges. Changing demographics enabled by technologies that support a more virtual workplace will result in more temporary workers, more outsourcing, more job sharing, more work at home, and more worker mobility. These trends will require signifi-

cant changes in the physical design of work spaces, new skills training and support for employees to optimize their use of new technologies, and better deployment of mobile computing and communications. HR will need to take the lead in determining which of the myriad capabilities should take priority to produce measurable performance improvement.

The internet transition toward Software as a Service, and the explosion of hand-held computing devices promise even more profound changes in the way people work. They are already helping organizations share information much more widely. But, in the future, they will be used to develop "electronic communities" and provide personal coaching and decision support. Websites will increasingly become destinations in which people will mine data, share information and interact creatively to produce new ideas, knowledge, and value for organizations. This information will be captured, refined, and distributed to help people work together more productively and access expertise on demand, any time.

Another inevitable change in the workforce will be new competency and technical skills requirement for workers to succeed. Entire professional niches will be eliminated as major work areas become completely automated (e.g., self-service applications for benefits or healthcare options in HR or hands on servicing of computers as these activities become more automated or delivered virtually by off-site vendors). New types of more value-added work will emerge, requiring new roles and accompanying competencies. HR again should drive, rather than just respond, to this trend - developing the criteria, training and supports for new workplace skills. For example, no matter what new roles are created by changing technologies all future employees will need to master a common set of competencies driven by new work demands. Some of the most important new or enhanced competencies, I believe will be required are outlined in Figure 4 below.

FIGURE 4:

Technology-Driven Workforce Competencies					
Changing Work Environment Drivers	Competencies	Key Characteristics			
Faster Pace of Change	Flexibility	Ability to change personal stance and behavior in response to dynamic workplace changes			
	Tolerance for Ambiguity	Ability to work in setting without clearly-defined roles, boundaries, tasks			
	Continuous, Self-Directed Learning	Ability to seek out and learn new concepts and skills on the fly			
	Technology and Data Aptitude	Ability to master new applications and new ways of analyzing and applying data quickly			
Global Psycho- social Changes	Collaboration and Networking	Ability to build and access advice and expertise in social networks			
	Diversity Mindset	Ability to work with individuals with differing perspectives, experiences and backgrounds			
	Virtual Teamwork	Ability to conduct productive work interactions in less structure synchronous and asynchronous settings			
	Communication and Influence	Ability to understand others' motive and needs without direct contact and communicate with impact through various media, work contexts, and platforms			
	Vendor/Service Provider Collaboration	Ability to identify, collaborate with and manage specialized external workers, consultants and service providers			
	Work Life Balance Skills	Ability to determine appropriate work boundaries and activities to optimize performance and meet personal and family values			
Business Opera- tional Changes	Work and Project Management Skills	Ability to prioritize critical activities and juggle work tradeoffs to get important activities fully completed, in an environment with competing demands and high levels of access to information			
	Data Affinity	Ability to access and analyze large amounts of information using tools and technology			
	Conceptual Analysis Skills	Ability to sort out, simplify and make sensible recommendations from complex data sets and inputs from others			
	Process Analysis Skills	Ability to maintain focus on key process requirements and potential improvements in own work environment without being distracted by intrusion of data and options presented by technologies			
	Change Management Skills	Ability to define, design and direct change initiatives in an increasing complex operating environment			

Beyond providing support for new competency development, HR will be challenged to define and execute differentiated talent management approaches for various workforce groups – vendors, temporary and part-time workers, contractors and consultants, and full-time workers.

Process Design and Optimization

For many years technology applications for the various HR sub-functions have improved capabilities in areas such as: organization structuring; HR Logistics (recruitment, planning, mobility, transfers, and termination); administration of compensation and benefits; talent management; and HR record keeping and administration. While the separate applications have helped streamline work, evidence clearly suggests that programs integrating the various HR sub-processes or disciplines into a single framework or employee life cycle process creates much greater individual and organizational impact. For instance, several talent management applications are starting to incorporate HR strategy, job descriptions, competency profiles, hiring, assessment, development planning, and performance appraisal and succession planning processes into a single integrated system using common standards, sharing data across sub-processes.

One emerging trend includes on-line performance monitoring and "coaches" developed to focus employees on key information, provide suggestions for action and decision-making, and capture data for analyzing performance. For example, workout trackers and health monitors are becoming increasingly sophisticated - now going beyond simple data tracking to making suggestions for health improvement. Similar technologies are emerging to support the performance of work activities. Some organizations are now using technology to provide more continuous support for self-directed learning. For example, organizations are providing web-based, performance development "toolkits" (for assessment and development planning) and self-directed training modules accessed just-in-time through learning portals. Some of these interactive systems offer significant improvement over traditional training, learning and coaching approaches. End-users can apply these web-enabled

systems for learning that fits their own learning style, level of need, and immediate work requirements.

For HR, mastery of core talent management applications is a key capability. This skill set should start with in-depth expertise in the processes that comprise each part of the employee life cycle. HR professionals must master the content or criteria, such as goals, hiring requirements or competencies, and the process variations required for each application. Too often technology or vendor requirements overshadow application process requirements. It is important to remember that the technology is the means to an end - the execution of critical workflow to get something important done - not the end itself. This means that HR should understand available technologies well enough to drive configuration options that support process excellence, including adds-ons or variations of core talent management capabilities such as the use of social media or multiple devices.

End User Advice, Education and Support

One of the most important roles HR must play in the future is talent management coach. As new technologies challenge both managers and team members, HR professionals will need to be able to provide advice, training and support for using technology tools to make work easier and more productive. HR uses four basic levers to improve performance – creating the right fit between workers and work; motivating and focusing workers on productive activities within a performance period; growing talent over time to expand capabilities; and rewarding people to improve performance. Talent management applications to support each of these performance drivers have been deployed for many years, but as applications become more integrated with the way people work day-to-day, ongoing coaching and real-time supports versus traditional training - will be at a premium.

No matter what new technology capabilities are required, HR must also be able to manage large-scale organizational change. One key reality about technology interventions is that they work best when a more sys-

temic approach is applied. Clear sponsorship, employee engagement and buy-in, and sustainability through communications, training, coaching and self-directed learning capabilities are each critical contributors to success.

Summary

In the past, more intangible factors related to talent have often been neglected in favor of more visible targets for information technology and although the use of technology to maximize human assets is still in early stages, this is changing quickly.

The convergence of more consistent HR practices and processes with new technology tools is radically shifting how organizations are managing talent:

- from specialized, backroom operations to core HR and business processes;
- from centralized control over talent management to a more distributed, virtual, self-directed forms of work;
- from the tactical to the strategic use of data and expert knowledge;
- from methods for eliminating work and jobs to methods for enhancing individual and collective human performance in organizations.

This paper explored the following three questions to help clarify how to support these transformations:

- How are global human resource trends responses to and drivers of technologies impacting talent management?
- Which technologies present the most promise for improving the performance of organizational talent?
 and
- What capabilities, roles, competencies, and practical steps should organizations and HR apply to define, design and execute technology strategies related to talent?

The answers will vary depending on each organization's vision, strategies, core capabilities, and level of leadership and technology maturity. However, the path forward is clear – technologies will become an increasingly important driver for talent optimization and HR should be a leader of these transformations, not just a bystander.

About the Author

Dr. Stephen C. Schoonover is currently the President of Schoonover Associates, LLC, an organization that focuses on leadership development and competency-based talent management solutions. Dr. Schoonover has been providing consulting services in this area for over 30 years with organizations in virtually all business sectors, specializing in leadership and executive development, strategic human resource consulting, competency model building, assessment capabilities, and creating integrated talent management systems.

Dr. Schoonover has developed both individual talent management applications for the entire range of interventions from hiring and selection to employee testing and assimilation; from assessment and development planning to career and succession planning; from culture and workforce assessment to leadership program development; from performance management applications to goal management approaches; from coaching and feedback programs to competency-based compensation. In many engagements, Dr. Schoonover and his team have designed and implemented entire TM systems over a period of years.

Contact Us

If you want to explore our products and services related to leadership, career planning, talent management or competencies, you can go to our website at www.schoonover.com, or if you want to set up a time to talk to Dr. Schoonover directly you complete the request form at our site, e-mail him at sschoonover@schoonover.com or call 434-259-1554.