CHAPTER 13

TECHNOLOGY AND PERFORMANCE MANAGEMENT

What Role Does Technology Play in Performance Management?

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Whereas other chapters in this book are focused on the *content* of performance management (for example, use of goals or competencies in performance management) or how performance management operates under specific organizational situations (for example, in a team-based work structure), this chapter is concerned more with the *process* of performance management and what role technology can play when developing and using a performance management system.

In particular, the chapter touches on the following issues: how technology can be used for performance management, how technology enables a performance management system to serve its central purposes and complete its primary activities, what challenges are associated with using a technology-based performance management system, and what practical issues must be considered when implementing an automated performance management

system. The chapter concludes with some best practices for how to optimally use technology to facilitate the performance management process.

As defined, performance management is "a continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning performance with the strategic goals of the organization" (Aguinis, 2007, p. 2). Correspondingly, a performance management *system* is the structure and procedures that are implemented in an organization to accomplish these performance management objectives. This chapter focuses on the empirical literature and practitioner resources that discuss how technology is used to automate some of the components of a performance management system (for example, performance assessment) or the system in its entirety. As an overview of what is to come, Exhibit 13.1 summarizes the top ways that technology can be used to assist in accomplishing each performance management activity that is outlined in Aguinis (2007). These and other recommendations will be discussed in more detail within later sections of this chapter.

By definition, a performance management system does not need to incorporate technology; however, recent surveys have suggested a growing interest in using technology for performance management purposes. Specifically, a survey in 2006 confirmed that performance management software functionality was ranked as the highest priority over other automated human resource systems (such as training), although approximately 66 percent of respondents also indicated that they did not currently use any technology solutions for performance management purposes (Lawson, 2006). Although these numbers suggest that interest in using technology for performance management is relatively high, this is a recent trend and adoption rates are still low. Also, the design of technology solutions for performance management has been driven by organizational challenges and practitioner needs, not based on a foundation of academic research. In reality, limited research has been conducted to examine the concept of performance management as a system and the implications of technology for performance management. The scant research related to this topic over the past decade has focused on two subjects, namely electronic performance monitoring and

Exhibit 13.1 Best Practice Recommendations for How Technology Can Be Used for Each Stage of the Performance Management Process.

Prerequisites

- Provide mapping tools so business units can visually articulate how their strategy aligns with the broader organization's priorities.
- Complete job analysis activities to identify the position's critical job tasks and KSAs.
- Collect quantitative or qualitative data on performance dimensions and rating formats before they are finalized.
- Offer access to performance management standards and processes as they are established and/or revised.

Performance Planning

- Use a shared electronic workspace to collaboratively create a performance plan.
- Incorporate automated messages to alert stakeholders when the performance plan is modified.
- Link the plan and associated performance competencies to an online database of organizational training and development opportunities.

Performance Execution

- Use EPM to report current performance status and performance status changes to managers for coaching and feedback opportunities.
- Track achievement of performance goals and revise prioritization of goals and projects over time.
- Submit electronic requests for performance feedback from stakeholders upon project completion.
- Store performance rater profiles in the form of connections within a professional networking structure.

Performance Assessment

- Track objective performance indicators (such as profitability) over the performance period.

(Continued)

Exhibit 13.1 (*Continued*)

- Collect subjective performance data using technology-enabled methodologies such as computerized adaptive rating scales.
- Create a managerial dashboard to aggregate performance data and provide a window into performance results.
- Provide analytics and reporting tools for managers to summarize performance and identify performance trends.

Performance Review

- Use data from an integrated performance portal to identify the appropriate time for a performance review, rather than basing it on the calendar year.
- Offer online managerial training of performance review and feedback best practices.
- Utilize technology services to conduct the performance review in the case of virtual manager-subordinate relationships.

Performance Renewal and Recontracting

- Use performance reports to revise the previous performance plan.
- Update performance goals at the individual and business unit level to reflect new performance initiatives and to align with new organizational strategic goals.
- Aggregate performance data over the employee lifecycle to create a graphical timeline of performance.

Succession Planning

- Use data from the performance management system to identify and track high-potential employees.
- Create a networking portal for employees to post professional profiles and review developmental and mentoring opportunities.
- Administer online developmental and promotional assessments to identify employee strengths and weaknesses.
- Offer tools for employees to map their anticipated career paths.

telework. These two areas of research and practice are briefly reviewed below to provide a historical context related to technology's role in performance management.

Technology of the Past: What Role Has Technology Previously Played in Performance Management?

Technology played a role in the performance management process well before the term "performance management" was popular and when performance management activities were conceptualized as separate human resource functions (for example, performance appraisal, succession planning, coaching). Historically, two major research streams relevant to technology and performance management existed in the industrial psychology literature: electronic performance monitoring (EPM) and performance management of telecommuting workers.

Electronic Performance Monitoring

EPM includes the surveillance, measurement, recording, and compilation of work-related activities of employees using electronic means (Bates & Holton, 1995; Stanton, 2000). Thus, EPM primarily contributes to the effort to measure performance, via indicators such as productivity, accuracy, speed, and errors. The ability to collect information continuously and in real time provides several benefits: objective measurement, continuous observational opportunity, immediate reporting, and assessment of physically distant employees. While EPM generally addresses the need to measure employee behavior and outputs, it may also contribute to other goals of performance management, such as the provision of feedback, by allowing managers to achieve the conditions of specificity, accuracy, and timeliness needed to provide effective feedback to subordinates (Stanton, 2000). EPM may also contribute to the development of performance standards by requiring managers to contemplate the content and frequency of assessment measures prior to requesting monitoring data.

The use of EPM has been questioned by some for invading employee privacy, and has been connected to increased stress and health complaints, lower-quality work relationships, and

lower employee control perceptions (Bates & Holton, 1995; Hawk, 1994). As a result, a stream of research has provided guidance on best practices for the development of EPM systems to yield the most positive employee response. The scope of tasks monitored has been related to employee reactions, such that EPM focused only on job-relevant activities is related to greater acceptance of EPM, reduced perceptions of invasion of privacy, and increased procedural justice perceptions (Alge, 2001; Grant & Higgins, 1991; McNall & Roch, 2007). Employee control also impacts reactions to EPM systems (Aiello & Svec, 1993; Amick & Smith, 1992), with individuals reporting more positive responses when given discretion as to when they are monitored or what types of tasks are monitored. Employees who are offered an opportunity to participate in the development of the EPM system or to voice their opinions about the system generally possess more positive attitudes and perceptions as well (Alge, 2001; Westin, 1992).

The purpose of the monitoring is also related to employee response. EPMs designed for employee development rather than prevention of undesirable behavior are viewed more positively, and those connected with feedback and appraisal systems are also favored (Amick & Smith, 1992; Chalykoff & Kochan, 1989; Wells, Moorman, & Werner, 2007). Monitoring at the group rather than individual level also has promise in terms of fostering positive employee reaction. This approach may mitigate the increased stress related to EPM and improve acceptance (Aiello & Kolb, 1995; Aiello & Svec, 1993). Use of a combination of individual and group monitoring may also lead to greater acceptance (Grant & Higgins, 1991). Other factors that warrant consideration include frequency of monitoring and the roles and number of people who receive monitoring results (Grant & Higgins, 1991; Hawk, 1994). Additional research suggesting current levels of performance and difficulty of standards affect reactions to EPM should be noted. Individuals or groups who are already performing well or who strive to meet easy standards may perform better and be more satisfied when monitored, while performance and satisfaction among those still learning the task or given difficult standards may decrease (Aiello & Kolb, 1995; Stanton, 2000).

These research findings and best practices regarding EPM have implications for using an automated system for broader performance management purposes. The incorporation of technology is likely to affect a variety of aspects of employee life, including job attitudes, social interactions, and work behavior. Thus, short- and long-term effects of technology across a spectrum of outcomes should be considered and assessed. Additionally, the inclusion of user input into the design of the technology system and procedures for its use, as well as the solicitation of user reactions to the technology system once implemented, have the potential to increase acceptance rates and justice perceptions. Finally, if an EPM system is already in place, the structure and processes should be leveraged and the data should be integrated when building out additional automated performance management tools.

Telecommuting and Performance Management

Insight into the performance management challenges and best practices for telecommuting workers should also be incorporated into the design and use of automated performance management systems, specifically systems that are meant to serve employees working in virtual, distributed, or global environments. For instance, researchers have noted the challenges of managing the performance of teleworkers (Cascio, 2000) and have primarily suggested a renewed focus on traditional performance management principles, with modifications for enhanced clarity in a virtual work environment. Cascio (2003) proposed that the essential components of defining, facilitating, and encouraging performance are even more critical in a virtual work environment than in a traditional one. The importance of developing clear, objective goals is promoted in the absence of frequent face-to-face communication between the subordinate and supervisor (Ellison, 1999; Illegems & Verbeke, 2004; Manoochehri & Pinkerton, 2003). Work agreements or contracts may be established to determine allocation of assignments, preferred communication methods, and specification of performance expectations and standards.

The need to monitor employee achievement of goals in an objective manner is also stressed. Managers should move from

assessing time or activities to measuring projects or results (Cascio, 2003; Grensing-Pophal, 1999). Such assessments may focus on quality, quantity, timeliness, and cost-effectiveness, among other dimensions, using electronic monitoring or more subjective assessments (USOPM, 2003). Managers must feel comfortable relinquishing control over details and may need to utilize more active project management techniques, including providing not only project deadlines but also timelines for completion of milestones, and requesting frequent updates on project status. Ongoing assessment of performance in relation to specified goals is likely to keep the focus of workers and managers on primary tasks, as well as reduce the delay in providing feedback to employees.

While frequent electronic performance feedback may assist in coaching and developing teleworkers, more direct methods are helpful but challenging to use. A study of managers experienced at supervising teleworkers indicated that regular face-to-face meetings or scheduled electronic visual communications via videoconferencing may be a useful addition to coaching efforts (McGraw & Kelly, 1995). Introducing new tasks or assignments and offering the same training opportunities available to in-office workers may also assist in building new skill sets among telecommuting workers.

These challenges associated with monitoring and supporting the performance of teleworkers are consistent with the issues that will arise when implementing a technology-based performance management system for employees working in virtual, distributed, or global environments. The suggestions offered for managing teleworkers from Cascio and others point to the importance placed on using sound research-based performance management principles, not to using a technology solution as a panacea when managing employees virtually. That being said, a technology solution that enables the use of proven performance management techniques offers many benefits when managing virtual employees, including easy access to consistent information across the employee base. This benefit, along with others associated with using technology to support various performance management purposes and processes, is elucidated further in the next two sections.

Technology As an Enabler: How Does Technology Support the Goals and Purposes of Performance Management?

When used appropriately, technology can facilitate the accomplishment of several performance management system goals and purposes. Aguinis (2007) identified the following six purposes of a performance management system: strategic, administrative, informational, developmental, organizational maintenance, and documentational. Below, examples are provided as to how technology can support a performance management system to serve each of these purposes.

Strategic Purposes

For a performance management system to serve a strategic purpose, the critical characteristic is for an individual employee's goals to be aligned with those of the overall organization (Aguinis, 2007). In the goal-setting literature, allowing employees insight into the broader goals of their departments, business lines, and companies and where their individual goals fit into these strategic objectives has been identified as an important source of motivation for employees (Locke & Latham, 1990). Regardless of whether goals are "cascaded down" from the organization's overall business initiatives to those of individual contributors or "rolled up" from teams to departments to business lines, a technology-based performance management system offers the opportunity to set these goals in a systematic way and allow the resulting goals to be accessible to all employees.

For instance, capabilities are available in automated systems to enter goals and alert the owners of relevant business units when goals have been entered. Managers should be using the goals of other business units that are closely aligned to inform their own unit's goal development. Mapping tools are also available to indicate how the goals across individuals or business units relate to each other (for example, how each goal of an individual team member relates to one or more goals of his or her overall team). After goals have been input and accepted by the goal owners and their supervisors through the system, it is critical that they

be available for public consumption across the organization, at least in a summarized form if not in their entirety. In the case of a distributed workforce where the goals of the corporate executive team or even regional management are not visibly present or readily communicated to line employees, knowledge of and access to these goals are imperative for a strong organizational culture across the enterprise (McAleese & Hargie, 2004). A technology-based performance management system can serve this need by allowing employees continual access to this information, not just when the executive team discusses it at an annual company meeting.

Administrative Purposes

For a performance management system to effectively serve an administrative purpose, data in the system must be available to inform administrative decisions made about employees (for example, salary adjustments, recognition of exemplary performance). There are two primary ways that automation of a performance management system can support this purpose. First, an automated system allows for easier data entry, data extraction, and summarization than a paper-based system does. For example, the employee can easily store commendations and favorable comments in the system; often, these data points are not stored with personnel files and annual performance reviews that are generally accessed when making decisions such as for merit increases and "performer of the year." Those responsible for the administrative decisions can easily access the data. These data could be available to responsible parties across the company without accessing a physical employee file. Finally, at least in the case of standard performance assessment forms and associated data, an automated system can offer reporting and metric tools that summarize and compare performance across employees for the purposes of making larger administrative decisions (such as layoffs). As an aside, if an automated system was implemented and employees were informed of their responsibility to enter performance-related information and correspondingly the process whereby the data would be used to make important administrative decisions, employees would be more motivated to input performance information in the system, and a more accurate picture of performance over time and from different perspectives would be available.

Second, automation allows the opportunity to integrate the performance management system with other human resource applications, most notably the payroll and compensation system for administrative purposes, which is likely automated as well. Integration of these automated solutions allows for the efficient sharing of information between the systems, which is important given that performance management data should be informing administrative decisions (for example, during annual performance reviews, compensation adjustments are entered into the performance management system and they are automatically reflected in the payroll system). The integration of a performance management system with other systems within the talent management suite is discussed in more detail later in this chapter.

Informational Purposes

The use of technology for a performance management system arguably supports the informational purpose the best. By nature, a technology-based performance management system allows for the continuous process of performance management and also the continuous communication of information collected through the performance management process. The motivation literature indicates that goals should be adjusted over time to remain relevant and shared with appropriate stakeholders to increase accountability (Donovan & Williams, 2003). Additionally, performance feedback should be provided in a timely fashion for it to effectively stimulate behavioral alterations (Locke & Latham, 1990). Technology can support these principles by creating an opportunity for employees to readily update performance goals over time, managers to provide just-in-time performance feedback to their reports, and employees to make performance goals as widely accessible as appropriate.

Finally, if the performance management system is used on a regular basis similar to the frequency of use for automated time and attendance systems that are prevalent across organizations, it

can serve as a vehicle for performance-focused communication blasts. These could be as basic as managers being notified when employees update their performance goals or as comprehensive as a notification to all those in a position across the entire enterprise when an update has been made to the performance competency model. These real-time updates are critical for the performance management process to remain relevant for each employee over time.

Although entering performance information into an automated system should not replace more direct forms of communicating about performance, it can offer a method for performance information to be communicated in an ongoing and consistent fashion. How many times do supervisors lose the opportunity to share performance feedback because they cannot immediately connect with the employee or do not want to send an email that will get buried in an inbox? How often would subordinates seek direction for a prioritization of performance goals if the request could be made efficiently and couched in the context of performance improvement instead of just another question in the midst of many? Assuming a user-friendly interface that allows for these communications to occur quickly and painlessly, an automated performance management system can serve the role of facilitating these communications—with the added benefit of documenting this dialogue for later performance conversations.

Those who are more technologically savvy might think that instant messaging (IM) meets the criterion of quick and painless, and note that this type of technology is surely being used to communicate performance information today. While appropriate for some conversations (such as clarification on an email, follow-up questions on a specific task, or requests for a status update), IM does not give the weight and priority to these communications that substantive performance conversations warrant and does not offer the opportunity for easy documentation and aggregation. By both differentiating these performance communications from other communications via IM and email and storing them in a specific location that houses other important performance data, these communications have been elevated in their importance and documented for future conversations.

Developmental Purposes

Another purpose of a performance management system is to provide developmental feedback to employees for both immediate short-term use as well as long-term career planning. In addition to an automated system supporting the provision of general performance feedback on an ongoing basis, it can also serve as a way to collect performance feedback on a project basis. Employees can specify their current projects and assignments along with the project stakeholders in the performance management system. When the employee updates the system when a project has been completed, the system solicits performance feedback from the project stakeholders. This feedback can be readily available to the employee and/or can be provided to the employee's manager to serve as the basis for a future coaching session.

As part of an annual performance review, a select number of competencies can be identified by a supervisor and his or her subordinate as the focus of development efforts for the next year. On a regular basis, managers can input performance feedback, even with a numerical rating on these specific competencies as the employee works over the course of the year to strengthen his or her behavior in these targeted areas. At year's end, system data can display changes in performance on these competencies over time, eliminating common errors that occur at review time (recency effect) (Lowe, 1986). Finally, a career path and a long-term developmental plan are critical for an employee to remain motivated in his or her role and committed to the organization (Arnold, 2002). Some examples of career paths that are relevant for an individual's specific position can be available in the system, the critical behavioral competencies for other positions within the organization can be accessed by the individual for review, and career pathing tools can be used by an individual to construct his or her own career path, insert a projected timeline, share the path with mentors, and adjust the path over time.

Organizational Maintenance Purposes

Organizational maintenance as a purpose of a performance management system refers to workforce planning activities that

require insight into the current status and future needs of an organization's human capital. Undoubtedly, an automated performance management solution offers the benefit of having performance data across the enterprise in an aggregated form and available for interpretation. For instance, a common workforce planning activity that leverages performance management information is a talent audit, whereby current stock is taken of the workforce's skills, abilities, and experiences for the purposes of forecasting future needs (such as recruitment or training) and making strategic business decisions (for example, adequate talent to move into a new vertical market, appropriateness of organizational restructuring) (Aguinis, 2007). Conducting a talent audit with an integrated electronic performance data repository is much easier than with performance data stored in paper form or in varying electronic sources (spreadsheets, databases, payroll systems), assuming that sufficient reporting and analytic tools are available through the system to summarize and analyze the data so that accurate conclusions can be drawn. More details with respect to performance management reporting and analytics tools are offered later in the chapter.

Documentation Purposes

Of all the purposes of a performance management system, the purpose of documentation is probably the primary use—or at least one of the central foci of many performance management systems (Aguinis, 2007). Surely, paper-based performance management systems serve this purpose through carefully maintained employee files. Can a technology-based system offer an advantage over a paper-based system to meeting this need? The benefit of automation here is consistent with the themes described above, namely the ease to access, enter, organize, and summarize information. A supplementary advantage is that, assuming integration with other systems, all performance-oriented data (such as goals, reviews, compensation, feedback, and objective metrics such as sales) can be stored in one location. At times when documentation is needed, it is often needed with some urgency. Access to aggregated information in one portal is an advantage of an automated system during these times.

As outlined above, technology can serve a role in accomplishing each of the purposes of a performance management system. Beyond these general purposes, there are several components that, taken together, encompass a performance management system. Guidelines and specific ideas for how technology can be used to support these components are discussed below.

Technology's Role in the Process: How Does Technology Facilitate the Different Components of the Performance Management Process?

Aguinis (2007) proposed that the process of performance management involves six steps: prerequisites, performance planning, performance execution, performance assessment, performance review, and performance renewal and recontracting. In general, technology offers opportunities to execute these steps in an efficient and effective manner. Existing human resource information technology (HRIT) systems may currently provide some of the options discussed below, although few would offer all. In general, it appears that managerial self-service programs, which allow managers access to databases of employee records and performance information as well as tools to analyze the data, are less common than portals allowing employees access to personal human resource information (Stone, Stone-Romero, & Lukaszewski, 2003). As is evident from the examples below, to be maximally effective when completing the six steps of the performance management process, managers and employees need to collaborate regularly and be shared owners of the process; because of this, a portal for both managers and employees to enter, access, and revise performance information is imperative.

Prerequisites

The prerequisites step includes the identification of a company's strategic goals and the completion of job analysis activities for the targeted positions. Technology may assist in developing and communicating the organization's mission and priorities as well as ensuring that unit-level missions and priorities are in alignment with the organization as a whole. Electronic integration of

performance management data with other human resource functions via an HRIT system can also assist in ensuring that performance goals created for an individual employee contribute to an organization's strategy.

A variety of technological means exist to identify a position's tasks and required knowledge, skills, and abilities (KSAs), to collect ratings on the frequency and criticality of tasks and KSAs, and to compile these data for the development of job descriptions. This topic is not the focus of this chapter, however. Readers may find useful information on this topic in Peterson, Mumford, Borman, Jeanneret, and Fleishman (1999) and McEntire, Dailey, Osburn, and Mumford (2006). During the prerequisites stage, consideration may also be given to issues regarding the implementation of new or revised performance management systems. Because user involvement in planning the system is related to subsequent support and acceptance of the system (Cawley, Keeping, & Levy, 1999; Roberts, 2003), technology can be used to invite employee participation in providing input about performance dimensions and rating formats and testing trial versions of an automated solution. Information such as comprehensiveness of performance dimensions, ease of use and interpretation of rating formats, and perceived system fairness and usefulness may be collected in an effort to maximize ratee positive reactions to the appraisal system (Ilgen, Fisher, & Taylor, 1979; Keeping & Levy, 2000). In addition, the input of supervisors, potential raters, and other stakeholders may be solicited. Communication about the standards and process of the performance management system, which is essential for a due-process approach to performance appraisal (Folger, Konovsky, & Cropanzano, 1992), can also be accomplished through online messages and resources posted on the company intranet.

Performance Planning

After identifying the organizational strategy and job requirements, performance planning entails developing a shared understanding of expected behaviors and results, which are then specified in a performance plan (Aguinis, 2007). Technology may be used to assist an employee and manager in virtually creating and storing a performance plan. By using shared electronic workspaces such as those available through Google Apps and Microsoft Office Live Workspace, the plan may be created, modified, and updated by either party while the other person at a different location actually watches in real time as the changes are made. See Figures 13.1 and 13.2 for standard examples of what shared electronic workspaces look like from Google Apps and Microsoft Office Live Workspace. Video demonstrations of these offerings are also available from these vendors online. This approach may promote employee commitment to goals through participatory goal setting processes (Roberts, 2003), as well as continuous awareness of goals, with both the manager and employee having constant access to the plan for review. These technological tools can be particularly helpful to complete the performance planning process when manager and employee do not work out of the same location, as is the case for many supervisor-subordinate dyads these days (MCIWorldCom, 2001).

The performance plan may include courses of action for improvement, suggestions for continued development and enrichment, and a timeline for completion. Versions of the plan could be stored in HRIT systems, with any changes over time digitally tracked. Automated messages could be sent to both the

Figure 13.1 Example of Shared Workspace with Google Apps.

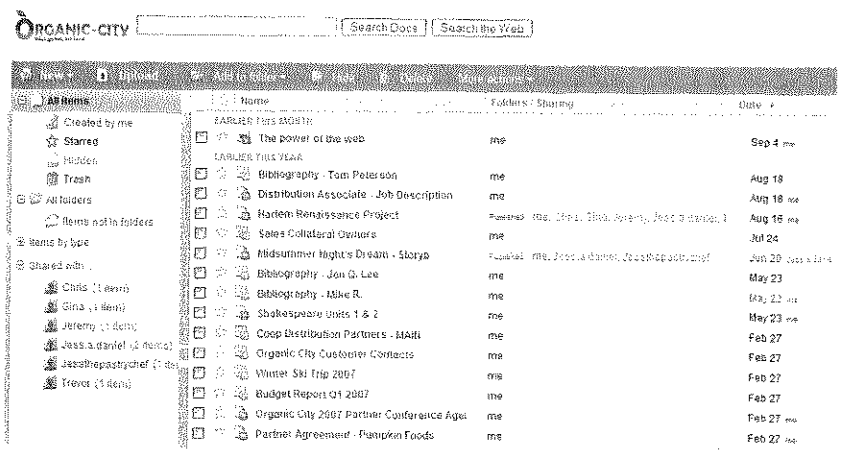
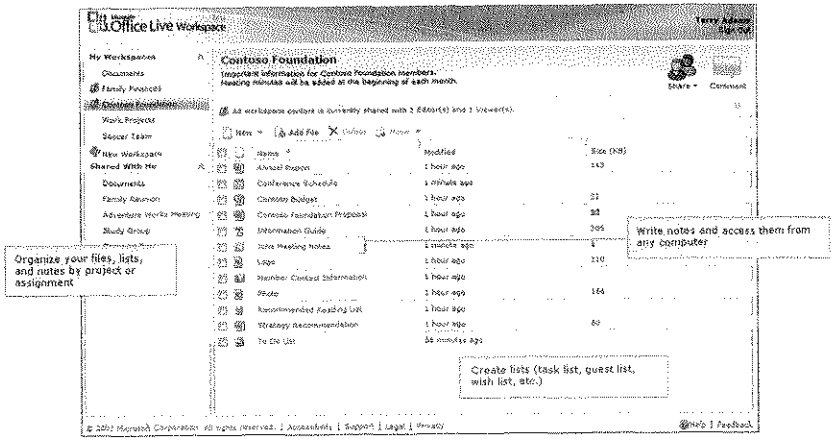


Figure 13.2 Example of Shared Workspace with Microsoft Office Live Workspace.



manager and employee when changes are made, such as recording the completion of a task. In addition, an online database of organizational training and development opportunities may be linked to the plan, providing suggestions for current and future development.

Performance Execution

The performance execution stage includes responsibilities for both managers and employees (Aguinis, 2007). Employees must show commitment to achieving goals, solicit performance feedback, communicate with the supervisor, share progress toward achieving goals, and prepare for performance reviews. Managers must observe and document performance, revise initial standards and objectives as necessary, provide regular feedback, ensure provision of required resources, and reinforce effective behavior. Many of these aspects of performance execution can be seamlessly integrated through the use of HRIT, providing real-time information with limited resource burden on either person. Electronic performance monitoring (EPM) based on objectives determined cooperatively by the employee and manager can report current performance status to both employee and manager portals. In addition, the prioritization of goals and projects can be frequently reviewed and updated if this information is available via an automated platform. These pieces of data can assist the employee in consistently tracking performance and achievement of goals, allowing regular review of performance, rather than waiting until performance review time to self-appraise, and maximizing opportunity to alter behavior (Latham, Mitchell, & Dossett, 1978). EPM tools can also be used to send automatic notification to the manager when performance status changes, offering the manager an opportunity to provide immediate coaching and feedback.

During performance execution, automated tools can provide employees with means to solicit feedback from sources other than their supervisors. On an ongoing basis and at the end of each performance deliverable, the employee can submit an electronic request to associated co-workers and customers for performance feedback using a standardized multi-source feedback tool incorporating relevant performance dimensions, which results in data for immediate feedback and future performance reviews (Stone, Stone-Romero, & Lukaszewski, 2003). Given research indicating the usefulness of peer and other feedback for development (Bettenhausen & Fedor, 1997; Farh, Cannella, & Bedeian, 1991), this functionality presents an opportunity to add richness to performance data with limited requirements from peer raters. Information relevant to the invited raters (for example, rater profile, connection to employee) could be stored in the system in a way similar to a connection in LinkedIn, a professional networking site. The compilation of a web of feedback providers for the employee offers both a simple means of reviewing possible raters and their relationships to the target employee and advantages in soliciting feedback by making requests to raters with maximal knowledge of the employee's performance in relevant areas.

Performance Assessment

Performance assessment as an ongoing technology-driven process eliminates the requirement of collecting performance information once or twice a year before the scheduled performance

review. EPM and goal-tracking software can collect a variety of metrics across time, avoiding the error of weighing recent performance more heavily on appraisals (Stone, Stone-Romero, & Lukaszewski, 2003). Essential personnel records, including absenteeism, disciplinary actions, and grievances against an employee, can be tracked and considered with other performance data. For positions with objectively measurable outcomes, indicators such as productivity, accuracy, speed, sales, and errors may be assessed, while for more subjective outcomes, quality of deliverables, use of available resources, and timeliness of meeting objectives may be of concern. The presence of situational constraints that impact performance outcomes should be considered and measured as well (Cardy & Miller, 2003).

Managerial self-service programs provide access to various types of integrated performance information, as well as tools for analyzing data and generating reports (Gueutal, 2003). Such programs may offer not only a view into historical information, but also mechanisms to collect current subjective performance evaluation data. Computerized adaptive rating scales, which use adaptive testing principles to estimate performance using an item response theory algorithm, assist managers in providing ratings with less error (Schneider, Goff, Anderson, & Borman, 2003). In this process, raters complete a paired-comparison of statements scaled to performance effectiveness levels (such as one statement reflecting above-average performance and one reflecting below-average performance), and the iterative process of choosing the statement most representative of the ratee's behavior leads to more precise, interval scale ratings of performance. Multi-source feedback ratings from supervisors, peers, subordinates, and customers may be solicited following important project milestones or at regular intervals. Databases of ratings arranged by ratee and rater provide opportunities to analyze the rating process, such as identifying common errors and providing feedback to raters about their performance during the rating process (Kavanagh, Gueutal, & Tannenbaum, 1990; Stone, Stone-Romero & Lukaszewski, 2003). For instance, the system may monitor ratings for severe leniency, such as a rater who provides the highest available rating for several ratees across multiple dimensions. This rater could be prompted with an automated message regarding the importance of providing accurate feedback that differentiates among ratees, without requiring a personal intervention from a supervisor that makes the rater uncomfortable. Alternately, identification of common biases across a group of raters may indicate the need for expanded rater training. An additional type of performance information, portfolios, may also be incorporated into performance databases (Johnson & Isenhour, 2003). In these databases, employees can house supporting documentation of their performance based on project management schedules and activity reports as timelines are met.

HRIT systems may assist not only in analyzing a variety of performance indicators, but also in generating the narrative that is included in individual feedback reports (Cardy & Miller, 2003). This option provides assistance, particularly for managers with little experience in providing feedback or who are lacking in writing skills, but should really only be used to establish a base draft of the feedback report. Software programs also provide review services to examine the potential for discriminatory language or legally problematic statements (Cardy & Miller, 2003).

Ideally for the performance assessment stage, technology is used to support the collection of both objective performance metrics and subjective performance ratings in a consistent and frequent manner from multiple sources throughout the performance period. These data are integrated and available to the supervisor via a performance dashboard with analytics and reporting tools that can be used to identify performance trends, which is the basis of the conversation come performance review time.

Performance Review

The process of conducting the performance review meeting is often considered the most difficult and unpleasant aspect of performance management (Aguinis, 2007; Geddes & Baron, 1997). In addition, evidence exists that feedback does not always result in performance improvement (Kluger & DeNisi, 1996). Thus, technology has ample opportunity to enhance the performance review meeting by fostering more positive attitudes and increasing the effectiveness of performance feedback. Performance data linked with workflow systems can alert managers to the optimal time

for reviewing performance, rather than relying on a standard schedule (Gueutal, 2003). Supervisors and others providing performance feedback should be trained via online technology in performance review best practices, such as focusing feedback on tasks, presenting solutions to problems, and offering an opportunity for employees to express their feelings (Kluger & DeNisi, 1996).

Technology, such as videoconferencing or web conferencing, may be used to conduct the actual appraisal review meeting in the case of telecommuters who are physically distant or for supervisors who are geographically separate from their subordinates. In addition, this format could allow for multiple stakeholders at different locations to be present at the meeting. Data from EPM or other performance assessment solutions should be available to support the performance review conversation, and technological support tools may be provided to assist supervisors in following the most effective steps to providing feedback. For instance, interactive online guides may be available in managerial self-service programs to assist managers in following a series of steps through a flow diagram, offering advice about interpreting numerical performance information and integrating subjective information, identifying areas of strength and weakness, and consolidating performance information into a structured and focused performance review.

Performance Renewal and Recontracting

Activities in the performance renewal and recontracting phase refer back to those in the performance planning stage (Aguinis, 2007). The manager collaborates with the employee to consider revision of the performance plan from the previous cycle, taking into account all available information collected in the intervening timeframe. Broader system data are used to identify necessary changes in individual performance goals based on the cascading of new organizational and departmental strategic priorities. Performance data should be stored in such a way that a graphical view of an employee's performance trends over time could be created. This view would represent performance over the employee's lifecycle and could be used to evaluate improvement over time, much better than independent reviews stored separately in a database. Assuming quantitative data are available from performance ratings every year (for example, numerical ratings on different competencies or an overall rating), the graph could not only show changes in an individual's performance ratings over time but also how the individual performed that year in relation to the average ratings for others in his or her workgroup or position in the company. These reference points would be particularly helpful during the performance renewal and recontracting stage when performance plans and goals are adjusted for the next performance cycle.

Succession Planning

In addition to the six steps of performance management proposed by Aguinis (2007), technology also has the potential to contribute to organizational succession planning. Data generated through the six performance management stages and stored in a performance management system can be used to identify and track high-potential employees, determine and offer developmental opportunities, and establish potential mentoring relationships (Stone, Stone-Romero, & Lukaszewski, 2003). Systems data could facilitate turnover analyses to identify areas of concern for the retention of promising employees. Portals may be developed for employees to post internal WebPages similar to social networking sites (for example, Facebook; Bersin, 2007) with their experiences and interests so that matches can be made across the enterprise with any developmental or mentoring opportunities (for example, short-term job assignments or permanent position openings). Interested employees could subscribe to notifications of new postings based on matches with keywords. Succession planning may also be facilitated through the use of technology solutions for the actual delivery of developmental and promotional assessments, simplifying the process of identifying and matching high performers to appropriate positions. Such technologies include online media-rich assessments, such as virtual reality simulation or video-based simulation, and computerized adaptive testing (Jones & Dages, 2003). Integrated personnel assessment platforms can assist in capturing and compiling all essential personnel information and support other

stages of assessment, such as scoring the assessment and generating the assessment results report.

Exhibit 13.2 expands on the discussion of technology's role in the process by describing a case study of the implementation of an enterprise-wide performance management system using a variety of technological tools. This case articulates specific examples of the integration of technology into each step in the process of performance management.

Exhibit 13.2 Case Study of Enterprise-Wide Performance Management System.

Prerequisites

A team of managers from various levels of the organization used groupware to review and revise the organization's mission and develop organizational goals and objectives relevant for the current strategic direction. This new mission and a model of core organizational competencies were shared with all employees to maximize employee involvement and support. Using mapping software, units generated specific unit-level performance goals and ensured continuity across units by maintaining focus on the organizational mission as well as incorporating the core organizational competencies across all jobs. Job descriptions were revised by managers and employees using shared electronic workspaces to ensure the descriptions were relevant for the updated organizational mission. An automated HRIT platform was configured to collect, store, analyze, and report performance-related information and to support integration with other HR functions. Employees were encouraged to view a beta version of the platform, and feedback on the new system was solicited from employees and management prior to official launch. Raters were required to complete online rater training before their first use of the performance management system.

Performance Planning

Employees and managers used online job-description-based templates to establish and revise individualized performance plans, which were stored on a shared platform in the HRIT system. Technology-based methods of measuring behaviors (online project-based multi-source feedback) and objective results (EPM related to quality, quantity, cost and/or time) were established. Specific goals for development were set and linked to organizational training and development opportunities when appropriate. Reminders of developmental goals and dates of milestones in the performance management process were automated.

Performance Execution

Subjective and objective performance data were collected regularly across the performance cycle and housed in the HRIT system. Minimum frequencies of EPM and multi-source feedback for observation and documentation of performance were established and users were prompted if standards were not met. EPM data were available in real time through manager and employee portals. Employees requested project-based behavioral assessment ratings from stakeholders and completed self-ratings.

Performance Assessment

Managers and employees were provided with automated monthly goal tracking reports in addition to the opportunity to view EPM data in real time. The HRIT system allowed managers or employees to leave messages for one another regarding the results of the monthly report. In addition to established subjective and objective metrics, employees compiled additional information in performance portfolios available on the platform for managers to view. Managers used automated reporting tools to integrate all available measures of performance and goal attainment.

Performance Review

The review meeting was framed around a competency-based feedback report used across the enterprise, as well as performance and goal-attainment analyses specific to the job and employee. An interactive best-practices strategy tool assisted managers in preparing for the meeting, while successful performance feedback provision and coaching were demonstrated by example via online role-play videos. Employees were permitted to make electronic notations on the final performance review report in order to provide an additional opportunity for voice.

(Continued)

Exhibit 13.2 (*Continued*)

Performance Renewal and Recontracting

A shared HRIT workspace was used to document changes in the performance plan agreed on in the review meeting. Any changes in the organizational or unit-level mission and objectives were incorporated into individual performance plans to ensure continuous relevance of all goals and performance metrics. Over the interim until the next appraisal, manager and employee viewed past and present performance and future goals on the platform in real time and via monthly reports, ensuring continual attention to relevant behaviors and results.

Succession Planning

Performance data and trends were mined to identify candidates for developmental opportunities and potential promotion. Employees were also given tools to pursue professional development. Online assessment activities provided an opportunity to identify weaknesses in core skills and suggested methods of development. Employees had access to information on career paths and associated requirements for promotion on the HRIT system.

These past two sections spoke largely to the myriad uses that technology can serve when working to accomplish the goals and carry out the primary components of performance management. It is worth discussing, however, the challenges that can arise when trying to utilize technology for performance management purposes. Some of these are described below.

Technology As a Challenge: What Complications Does Technology Create in the Performance Management Process?

As outlined above, automating a performance management system offers several benefits, most notably those related to the centralization of data, integration of performance data with information from other systems, and ease of data input and retrieval. Unfortunately, the same characteristics of technology that make these benefits possible can also create challenges if the technology does not function properly, is used inappropriately, or is relied on too heavily. Below, several challenges associated with using technology for performance management purposes are outlined. These challenges should be considered fully during the development of specifications for an automated solution and a model of the performance management process.

Information Overload

Technology allows for voluminous amounts of performance data to be continuously collected and instantaneously accessed, making information overload a real concern for both managers and employees. Although the concept has been discussed for some time (Schneider, 1987), it has been studied with increased focus within the past decade across disciplines such as organizational science, marketing, and education (Eppler & Mengis, 2004). In general, research has shown that information technologies exacerbate information overload and that information overload can have detrimental effects on the fulfillment of job responsibilities, experience of stress, and likelihood of working overtime and taking work home (Klausegger, Sinkovics, & Zou, 2007).

Across disciplines, strategies have been proposed to mitigate information overload. The following recommendations are of particular relevance for a technology-based performance management system: create a graphical display of how the system components are organized and where the user currently is located in reference to the system's broader structure (Chen, Kinshuk, Wei, & Chen, 2008); use branching logic to organize data around performance competencies instead of in a linear fashion based on time; offer searching functions based on key words; and incorporate a personal "clippings" area for particularly useful or frequently accessed performance information (Kear & Heap, 2007). Finally, provide tools for managers to organize, summarize, and analyze performance data, offering them assistance in turning the information into "intelligence" (Klausegger, Sinkovics, & Zou, 2007).

Overexposure

Making the collection and sharing of performance-related information through an automated system a frequent work behavior runs the risk of diluting the importance and value of the information due to overexposure. This challenge has been tackled in the area of surveys, where the phenomenon has been labeled "survey fatigue" and "over-surveying" (Porter, Whitcomb, & Weitzer, 2004; Saari, 1998). Recommendations on ways to avoid overexposure and more specifically develop effective electronic performance surveys can be leveraged from the employee survey literature (Thompson, Surface, Martin, & Sanders, 2003). For example, organizational owners of the performance management system should challenge themselves to develop novel ways to keep interaction with the system engaging and make sure that every request for data (for example, a request for performance feedback on a co-worker) is necessary and includes an explanation as to the reason for the request, whether anonymity is possible, and how the data will be used.

Time Requirements

Although automation of paperwork alleviates some time commitments on individuals responsible for the performance management process, particularly those in human resources, if the system is clunky or slow, it could require more time from others, particularly employees inputting information into the system or trying to access data through integrated portals. Couple the increased time commitment with a negative experience from user-interface inadequacies, and those utilizing the system will likely experience substantial computer frustration, resulting in decreased productivity and negative affective reactions (Lazar, Jones, & Schneiderman, 2006). Also, as indicated above, technology should facilitate the collection of performance data, the re-visitation of performance goals, and the provision of performance feedback on a more ongoing basis than what is feasible with a paper-based system. If these practices are adopted, an automated system could actually be more time-intensive, particularly for managers who were previously only approached annually for performance reviews.

This challenge underscores the importance of implementing a solution that is streamlined and offers efficient ways to work with the data. With respect to methods of data collection that minimize time commitments, similar to the challenge of overexposure, best practices can be gleaned from research and practice in surveys, where the "pulse survey" has been created to collect employee feedback often and with minimal intervention (Wells, 2006). A pulse survey includes a short set of questions that is administered more frequently than traditional annual employee surveys, often in an attempt to measure the "pulse" of an organization over time and with less intrusion on employees. Finally, as with all technological implementations, additional time will be needed until users are familiar with and feel comfortable with the solution. This expectation must be set across the organization to ensure that commitment to the system does not weaken shortly after implementation because of the additional time requirements.

Over-Reliance on Automation

Given the money and time required to develop and implement an automated performance management system, organizational leaders may be inclined to assume that the technology will now do the work of performance management, but this is not the case. Technology facilitates the process of performance management, but performance management is still largely a people process, meaning that every employee, in varying ways, must be accountable for performance management, and select individuals must be champions and owners of the performance management process.

Lessons can be learned from on-boarding, another important human resource function for which automated systems have been developed. Currently, the trend is for companies to automate their new-hire paperwork such that employees read and complete the paperwork online, even using an electronic signature to sign the forms (Tarquinio, 2006). Clearly, this is not a comprehensive on-boarding system, given that on-boarding also consists of orienting new employees to their specific job tasks and associated work expectations as well as socializing them into

the company's norms, culture, and team dynamics (Bauer, 2007). In the same way, companies may fall victim to thinking they have a comprehensive performance management system because they automate administrative/paperwork processes (for example, if on an annual basis, an employee uploads his self-evaluation and approves his review). The key here is to fully understand what performance management includes, as defined in the other chapters of this book, and then set the expectations of organizational members that the role of technology is to support these performance management components, not replace them.

Miscommunication

Technology can greatly support the communication of information during performance management; however, the use of technology to communicate information related to an important and emotionally charged topic such as job performance can also create opportunities for confusion and frustration. Two points are worth mentioning here with respect to communication challenges when using technology for performance management. First, this issue has been cited as a challenge for some time in the broader context of sharing any type of information via tools such as email and instant messaging. The ease of using these tools has resulted in information being shared without thorough consideration of the content by the sender, which also enhances the opportunity for misinterpretation by the receiver. While this issue may be relevant in the case of a performance management system, the use of a separate performance-specific system to enter and access this information will likely mitigate this problem. The act of entering a specific portal to provide performance feedback and the knowledge that the feedback will be available for future review and use should result in the sender providing more carefully considered feedback.

Second, similar to any system that offers individuals the opportunity to write reviews of some sort (think about writing reviews of submissions for the annual SIOP conference), capabilities can be built into the system to give the reviewee voice and protect the integrity of the system. For instance, feedback can be solicited from select individuals who possess adequate knowledge of the employee's performance, or exact timeframes can be specified for when performance feedback will be accepted. The target employee can add comments as a supplement to the feedback so that his or her perspective is documented, which is an opportunity for voice and may result in more favorable fairness perceptions (Erdogan, Kraimer, & Liden, 2001). Finally, similar to how some listserves and message boards function, a member of human resources could monitor the performance feedback and "approve" it for posting. Admittedly, the practicality of this last recommendation must be evaluated in light of internal resources and the likelihood of inappropriate postings.

Technology Literacy

By definition, an automated performance management system requires system users to possess certain knowledge and skill to use the technology. The extent to which this poses a challenge is dependent upon several factors, including who will be interacting with the system (for example, all employees or only human resource personnel), the nature of these interactions (for example, clicking a button to approve a performance review once a year or revising performance goals on an ongoing basis), and the current jobs and associated requirements for those who will be interacting with the system (for example, software engineers or retail clerks). In general, if the system is being used to the fullest extent possible and its capabilities are being maximized to meet the six purposes described above, all employees should be interacting with the system on a frequent basis, which will require a level of technology literacy.

Assuming the use of sound change management principles and the provision of adequate training when the system is implemented, using the automated system will not likely present a hindrance for most employees. For those workers who have little interaction with technology, such as in the case of many hourly employees, a larger-scale initiative that occurs well before the implementation of the system is needed to provide training with hands-on practice and an opportunity for workers to fully understand how the system will directly benefit them, which result in greater comfort with technology and better system adoption rates (Marler, Liang, & Dulebohn, 2006; Venkatesh, Morris, Davis, &

Davis, 2003). These types of workers might also not use or have access to a computer as part of their jobs. Obviously, this must be considered when determining what level of interaction will be required with the automated system. Novel ideas may also be considered, such as loading software onto technologies that these workers do use as part of their job, for instance, a point-of-sale system for a retail or food service worker.

Overall, the challenges outlined above can be largely mitigated both through careful planning of the technology requirements of the solution and through development of sound performance management practices, which are necessary for an effective system whether it uses technology or not. During this planning process, several practical decisions are made centering on the creation, implementation, and support of the system. It is these practical issues that we turn to next.

Taking Technology System-Wide: How Do You Implement a Technology-Based Performance Management System?

Although technology can be used to support the individual components of the performance management process such as in those ways described above, the trend is to use a technology solution to automate and incorporate all of the performance management activities that comprise the system. This section highlights some of the important practical points to consider when using this latter approach.

Decide Whether to Buy or Build

When planning to implement an automated performance management system, due diligence must occur early to decide whether building or buying a system is more appropriate, given organizational priorities, needs, and resources. The largest factors that will dictate whether building or buying a solution is the right choice are whether organizational resources are available internally to build the solution and how customized and complex the solution needs to be to meet organizational requirements. While the price tag for buying a solution may seem large, a comprehensive analysis to estimate the costs to build the solution must be undertaken. These costs for building the solution are not solely financial for purchases of technology software and hardware but also include the expertise and time of internal technology resources (Halogen, 2006). Many organizations might not have this type of talent internally and will need to contract some of the work to technology vendors anyway.

The second factor when considering whether to buy or build a solution is the complexity and uniqueness of the organization's performance management requirements. As system requirements increase, the likelihood of an "out-of-the-box" solution meeting these needs decreases. An intermediary option is to buy a standard technology solution that includes access to configuration tools, which offers the opportunity to further customize the solution to support the organization's specific needs. Regardless of whether an organization is initially leaning toward building or buying the solution, the first step is to develop an internal product requirements document (PRD) that specifies the required functionality for the solution and then engage with technology vendors to preview their capabilities. To identify vendors of performance management software and learn about their product offerings, readers are referred to the 2007 Gartner report *MarketScope for Employee Performance Management Software* (Holincheck, 2007), which includes a comprehensive evaluation of twenty-eight performance management software vendors by impartial industry analysts. By first developing system requirements and then reviewing what functionality is available in the marketplace, buyers can make an educated decision as to whether a current product offering can meet the organization's needs or whether a custom solution must be developed.

Use Change Management Strategies

The implementation of a technology-based performance management system should be viewed like any other large-scale organizational change. It has been acknowledged in the literature that enterprise-wide implementations of technology solutions do fail on a regular basis and that the failure is often attributed to

employee resistance (Kwahk & Kim, 2008). To reduce the likelihood of failure for this reason, change management techniques should be used to foster readiness for change (Armenakis, Harris, & Mossholder, 1993) by educating the organization about the rationale behind the change; gaining support for the solution from key stakeholders who are widely respected and can serve as internal change agents; offering sufficient training well in advance of implementation so that users feel competent in their ability to navigate the system; and providing substantial resources and support when the system goes live should users experience any challenges (Marler, Liang, & Dulebohn, 2006). Additionally, when developing the PRD, a committee should be formed that includes representatives from all business lines and organizational levels (both managers and individual contributors). This committee can provide input as to which feature functionalities are general requirements across business lines and levels and which should be open for variation across these vectors. This ensures that the system requirements and processes developed acknowledge the unique needs of different business units and constituencies, while still creating a level of consistency across the enterprise.

If both new performance management processes and new technology to support these processes are implemented at the same time, users run the risk of being overwhelmed and confused, and the technology may be blamed for challenges that are actually due to insufficient vetting of new processes (Sinangil & Avallone, 2001). For this reason, it is recommended that new performance management practices be introduced first, allowing for employees to work with these new processes, employee feedback to be solicited, and changes to be made to ensure optimal functioning prior to introducing the technological components. In essence, this represents a phased implementation approach whereby the content, process, and tools are introduced before the technological infrastructure is rolled out.

Remember That Content Is King

As was alluded to earlier when describing the challenges of relying too heavily on technology, it is imperative that, coinciding with the effort to create a viable technology solution, significant focus be placed on developing the content that will be housed within the solution and tools that will maximize the effectiveness of the content. This means applying research findings to create content such as relevant behavioral competencies and rating scales for performance assessment and tools such as training for supervisors on how to deliver effective performance feedback and provide effective coaching to subordinates (Latham, Almost, Mann, & Moore, 2005).

An easy analogy can be drawn to another area of human resources in which technology solutions are plenty but content is still king, namely, hiring employees using applicant tracking systems (ATS). An ATS enables applicants to apply online and hiring managers or recruiters to use an online portal to review their applications, administer selection assessments, initiate background checks, and move the applicants through the hiring workflow (ERE, 2007). While this solution ensures that the staffing process is efficient, it certainly does not ensure that the staffing process is effective. All the appropriate content (for example, job-relevant and valid assessments) and tools (for example, interview training for hiring managers) must still be in place, or the solution is only enabling the company to hire the wrong people faster. Also in the case of performance management, what is so great about more efficiently evaluating people against standards that are not relevant for their jobs or important for overall organizational strategy and success? The right content needs to be in place before performance management technology can offer any real advantages to an organization.

Keep Integration in Mind

It is fitting that the topic of integration is the last major area that is addressed in this chapter, given that it represents the long-term goal for virtually all efforts to automate a performance management system. Moreover, many of the benefits cited above with respect to using technology for performance management purposes can only be fully experienced if integration of the solution with other human resource applications is achieved. These other human resource applications generally refer to other talent management solutions such as an ATS for recruitment and selection,

a learning management system (LMS) for training, and solutions available for workforce planning and compensation (Levensaler, 2007). Depending on an organization's industry and priorities, it might also make sense to integrate the performance management solution with software used for operational purposes such as time and attendance, scheduling, and sales.

Practically speaking, integration of technology solutions can mean different things. In reality, there is a continuum of integration capabilities, and an organization must determine which level of integration is a "must have" as compared to a "nice to have." This integration continuum can run from completely separate systems that are housed in different places and do not share information to solutions that share data behind the scenes but still function as separate systems to systems that are integrated such that an employee can use a single sign-on to access all the systems and reporting tools can pull data across systems for analysis. For instance, integration may allow human resource personnel to search by employee and have access to all relevant data across multiple systems (for example, application and assessment data from the ATS, training classes taken from the LMS, performance reviews and developmental plans from the performance management system, time and attendance from the scheduling software, and compensation history pulled from a separate system). With any type of integration along this continuum, it is important to plan for ongoing support needs from the vendor(s) of the system(s). This ongoing support includes initial design, implementation, training, and integration as well as regular system maintenance and upgrades. Planning for this support means both having the expectation that there will be a reliance on a third party to service the system needs and earmarking dollars in the system budget for this ongoing support.

The importance of solution integration and the frequency of integrating performance management solutions with other human resource applications can be observed from reports and surveys completed by industry analysts. Research by Bersin and associates showed that buyers of talent management suites (for example, a system that includes more than one human resource application, including performance management) are looking to achieve benefits such as consolidating systems, standardizing on one vendor, and minimizing manual data transfer (Levensaler, 2007). Additionally, survey results showed that human resource managers will sacrifice depth of feature functionality in any specific talent management application to have breadth and integration of multiple solutions including performance management. Finally, the top two integration priorities indicated by survey respondents both involved performance management (performance management with learning management and performance management with succession planning), and the most common current integrations were performance management with succession planning and compensation management.

The 2007 Gartner MarketScope report expanded its focus beyond performance management to include compensation management and succession planning solutions because there was significant industry focus on the integration amongst these three applications (Holincheck, 2007). The report showed that, while integration is recognized as important, vendors have not currently integrated solutions for many clients and no vendor is strong across all of these applications, reflecting that the use of integrated performance management solutions is still in its infancy. Whatever a company's objectives for an automated performance management system, some level of integration should be one of them, and efforts should be made early on in the planning and implementation phases to ensure infrastructure is built that will support integration in the future.

Technology Best Practices: What Are the Best Practice Recommendations for Using Technology for Performance Management Purposes?

This purpose of this chapter was to address the role that technology can play in performance management, the benefits that are offered and the challenges experienced if technology is used to support performance management processes, and the practical issues that should be considered when implementing an automated performance management solution. The last section offered some best practice recommendations for using technology for performance management purposes.

Substantial information was provided about the potential benefits and challenges related to the incorporation of technology into a performance management process. Based on this information, recommendations are put forth in Exhibit 13.3 with respect to how to ensure that the use of technology will make a positive contribution to a performance management system.

Exhibit 13.3 Best Practice Recommendations Associated with Using Technology for Performance Management.

Capitalizing on the Benefits

- Use technology capabilities to allow ready access to performance management information across the enterprise.
- Use technological capabilities to disseminate performance management information to a wide group of stakeholders and alert those stakeholders when the information is updated.
- Use technology capabilities to aggregate performance data and integrate performance information with data housed in other human resource applications.
- Use technology capabilities to facilitate the continuous process of performance management whereby performance data are consistently entered, accessed, updated, and used for performance management purposes (for example, providing performance feedback).
- Use technology capabilities to document performance-related conversations and actions.
- Use technology capabilities to automate requests for performance feedback on a project basis.
- Use technology capabilities to support the summarization, analysis, and interpretation of performance data.
- Use technology capabilities to offer access to positions' competencies and provide career pathing tools that allow employees to specify career paths in alignment with development plans and targeted positions' competencies.

Avoiding the Complications

- Consider system requirements (hardware and software) to ensure system performance is optimal and not characterized by slow response times.
- Create a user-friendly interface that offers employees an opportunity for efficient and effective interaction with the performance management system.
- Incorporate feature functionality that will rely on visual display as much as possible to show performance data, use branching logic that is consistent with business processes, allow for user customization to support common actions in the system (for example, a favorite reports tab), and offer intuitive searching capabilities.
- Consider the resource burden on individuals when requesting performance information by providing a context for the request and using a short form to structure the request.
- Set appropriate expectations about the increased time requirements to use the system until sufficient expertise is developed and the important role that people will still play in the performance management process after the technological solution is introduced.
- Ensure the appropriateness and integrity of performance data entered into the system by offering the employees an opportunity to respond to performance feedback and creating a role in human resources that will monitor the information as it is entered.
- Provide adequate training on the system, including technical training, especially if computer literacy is not a central job requirement for the people who will be interacting with the system.
- Execute a communication campaign to ensure that all those who will utilize the system are familiar and comfortable with the technology prior to its implementation.

Additionally, in the optimal situation, technology is not solely used to automate individual performance management components but instead to automate the entire performance management

system in an integrated fashion. Exhibit 13.4 provides a list of the important practical points for consideration when implementing a system-wide technology solution.

Exhibit 13.4 Best Practice Recommendations for How to Implement an Automated Performance Management System.

- Ensure a clear performance management process has been established and quality performance management content (for example, performance competencies) has been created prior to implementing a technology solution.
- Form a committee of stakeholders across business units and organizational levels that will manage the internal effort.
- Prepare a comprehensive estimate of the internal costs of building a solution, including people resources if this option is being considered.
- Determine the complexity of the solution needed based on the organization's performance management process and the extent to which the process differs across business units and organizational levels.
- Prepare a PRD that outlines required functionality prior to engaging with technology vendors.
- Consider the solution implementation as a large-scale change management initiative and utilize change management strategies to increase user readiness for change.
- Provide users with a user acceptance testing (UAT) environment prior to the system going live so that users can experiment with the solution and notify the project team of any deficiencies they identified.
- Establish a comprehensive internal (and external, if applicable) support system for users after the system goes live.
- Ensure that technology specifications allow for integration with other human resource applications.
- Create a long-term implementation plan for integration across human resource and operational applications so that the maximum benefits of an automated performance management solution can be achieved.

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CHAPTER 14

AUTHENTIC PERFORMANCE

The Valuation of Behavior as a Negotiated Business Outcome

Thomas Diamante

"The greatest deception men suffer is from their own opinions."
LEONARDO DA VINCI

The Valuation of Work Behavior: An Overview

The act of "valuing" performance is complex, interactive, and, to the extent the organization allows, it is negotiated (or created) by an exchange between the observer and the object being observed. In the work context, the observer (supervising manager) and the observed (the employee) interact to arrive at the "valuation" of job behavior. I suggest that *performance negotiation is the on-going process by which a supervisor and employee arrive at an agreement about the value of an employee's contribution to business.* The end result is the delivery of a performance review that yields value to both the recipient and the employing organization.