HR Technology Disruptions for 2017: Nine Trends Reinventing the HR Software Market

The HR technology market is undergoing one of the most disruptive years it has seen this decade. As I described in my recent article in Forbes, “The HR Software Market Reinvents Itself,” the HR technology industry is on the precipice of a total reinvention.1 In this report, I detail the major trends driving this change, discuss some exciting new players, and leave you with guidance and thoughts for planning ahead.

Introduction: A Hot Market for Investment, Innovation, and Change

According to CB Insights, investors plunged $2.4 billion into HR tech vendors during 2015, a 60 percent increase from the prior year (see Figure 1).2 This amazing investment growth—much of which went into new integrated human resource management system (HRMS) platforms for the mid-market—illustrates the level of disruption and change hitting the industry.

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As an analyst who has been following the market for nearly 20 years, I talk with many of these investors and understand the rationale for such growth. Driven by massive technological change—the shift from cloud to mobile; the explosion in analytics and artificial intelligence; and the emergence of video, social systems, behavioral economics, and wearables—HR platforms are changing. The types of technology used, the experiences they deliver, and the underlying designs are new. And even more importantly, the way we manage people in companies has changed, making many of the traditional HR systems purchased only a decade ago seem out of date.³

It goes without saying that no organization of any size can operate without some type of HR function (whether it is called “people operations,” “people and culture,” or any other catchy name). Organizations have to source, hire, onboard, pay, train, manage, reward, and lead people every day. Decisions about how to best implement these people-related processes are complex, uncertain, and

neither perfect. It follows that tools that can make these decisions easier, more data-driven, and more measurable are indispensable.

Remember also that managing people effectively takes a tremendous amount of administration. Staffing, payroll, training, benefits administration, retirement programs, time-tracking, and programs such as employee relocation and expense management are enormously important—and bureaucratic. Tools that do these things well can pay for themselves many times over. All of these factors contribute to the huge market for HR technology, which impacts the lives of countless working people around the world.

Right now, with the industry poised at a shift in management philosophies and technologies, there is a great deal of opportunity for disruption. And as you’ll read in this report, the entire marketplace is shifting from tools that automate traditional HR practices to platforms and apps that make life at work better. This fundamental shift is profound in its implications, and I believe we will see new winners and some losers as a result.

The Evolution of Core HR: From Talent Management to People Management

To understand this year’s disruptions, it is important to realize that the changes taking place today are another chapter in a story that has been unfolding for several decades.

As Figure 2 illustrates, the evolution of HR technology has mirrored the evolution of management and HR philosophies. During the 1980s and 1990s, HR organizations were focused on traditional HR approaches: creating standards for compensation and rewards, hiring and staffing in a legal and appropriate way, evaluating performance fairly, promoting affirmative action, and, of course, globalizing the movement and progression of people through the company. The HR technology used for these purposes was mainframe-based and focused primarily on creating a system of record, tracking all employees on the balance sheet, and providing reliable payroll processing. Most payroll was run in-house and companies tasked fairly large teams with building and installing their HR software.
During the 1990s, vendors shifted to PC technology and built client/server HR software, leading companies to replace their mainframe systems (many of which has been built using proprietary IBM databases) with new vendor products. These systems (created by PeopleSoft, Baan, Oracle, and others) were primarily designed to deliver core HR applications including hiring, payroll, and some training management. (As anyone who follows the industry knows, PeopleSoft grew rapidly, acquired Vantive and JD Edwards, and was eventually acquired by Oracle.)

Following the 2000 recession, competition for talent became fierce, creating what we now refer to as the “war for talent.” This new business focus enabled a market for talent management software, and that sector quickly exploded with innovation. Companies such as Taleo and BrassRing (recruiting), Saba and SumTotal (learning), SuccessFactors and Softscape (performance management), and dozens of others began to offer software to automate and integrate talent management. These disruptive new vendors (whose offerings are shown in dark blue in Figure 2) designed a new generation of applications for
talent management and started to use a new technology architecture: software-as-a-service (SaaS) or on-demand software. At first, this technology was not referred to as “the cloud” (it was called “hosted” or “on-demand”); but whatever it was called, as these vendors convinced companies to use their hosted solutions, organizations began to shift their HR technology away from on-premise systems.

By the mid-2000s, led by providers such as SuccessFactors and Cornerstone OnDemand, the new world of talent management applications and vendors truly started to take shape. Companies grew tired of owning products from seven or eight different vendors (since many still had PeopleSoft, Oracle, or SAP running core HR and payroll on top of three to five other talent applications). So the talent management vendors started to acquire each other. There was a rapid period of consolidation: SuccessFactors acquired Plateau Systems, Taleo acquired Learn.com, and Kenexa acquired BrassRing. Finally, during 2011, the big shoe dropped: SAP acquired SuccessFactors. This quickly led to the enterprise resource planning (ERP) vendors—financial software companies—jumping into the talent market. Oracle acquired Taleo, IBM acquired Kenexa, ADP acquired Workscape, Ceridian acquired Dayforce HCM, and virtually every major payroll or HRMS company built or acquired talent management software.

While all this was going on, the entire computing world was moving to the cloud. Companies such as Google, Facebook, LinkedIn, and others served as clear examples to HR departments that running their own software was no longer necessary—connecting cloud-based HR systems to social networks was the future. “Built from the cloud” solutions such as Workday (followed by many others) looked quite appealing as a total replacement for the tower of babel most companies had built over the prior two decades.

Since 2010, the market has been steadily racing to the cloud. Many major corporations have put plans in place to replace their legacy systems with one of the major cloud vendors (Oracle, SAP, and Workday being the top three). Meanwhile, many of the talent management vendors have survived and grown—Cornerstone OnDemand continues to grow rapidly, SumTotal is now owned by Skillsoft, Saba is now private, and vendors such as PeopleFluent (formerly Authoria), Lumesse, and others continue to grow.

**KEY POINT**
The market has been steadily racing to the cloud since 2010.
As the talent market has consolidated, a new breed of “built for the cloud” mid-market vendors has emerged (including companies such as Ultimate Software, Namely, Gusto, BambooHR, and Zenefits). These are among the fastest growing vendors in the market, offering the demonstrated benefits of integrated cloud HR software to midsized companies. Meanwhile, many large companies continue to rapidly consolidate to one of the major cloud-based ERP systems.

During this latest period of consolidation, several other technology shifts have occurred, once again creating a market expansion:

**People analytics.** People analytics have now truly arrived. HR departments realize that their future is dependent on their ability to harness people data and build predictive analytics models. This has led to a huge investment in analytics by HR vendors (Workday has recently acquired Platfora, Cornerstone OnDemand acquired Evolve, ADP launched a major analytics service, IBM introduced Talent Insights powered by Watson, Workday acquired Platfora, and Ultimate Software acquired Vestrics). Today, many companies are spending millions of dollars to consolidate HR platforms simply to better understand their people data.

**Mobile platforms.** The use of mobile platforms has exploded, and I would argue that the HR software of the future will be built entirely on mobile architectures, with cloud technology becoming invisible behind the scenes (leading, of course, to more disruption). Witness the rapid growth of the Pokémon GO mobile game app, an innovative mobile-architected game. In only three weeks of usage, it attracted more than 30 million users. Applications that rethink the very way in which applications work can quickly tap into people’s behaviors in a whole new way.

A mobile app is not just a “rehosting” of a cloud app. It is an entirely different experience designed in a different way. The experience of using mobile messaging, information apps, games, and tools is obviously quite different than similar functions on PCs. We swipe, pinch, and expect to be able to use sensors for location, proximity, acceleration,

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and even temperature. Many mobile apps can now listen to our voices, understand our speech, and even sense our moods. Mobile apps have become a much more personal and intimate part of our lives than anything ever invented for a PC. Not surprisingly, vendors that study and understand how to build highly engaging, addictive mobile apps have different skills from those that build cascading menus and lots of screens for cloud-based apps.

The HR marketplace has been slow to truly adopt mobile technology (even though most vendors have mobile versions of their products), but this is now coming. I believe this ongoing shift will disrupt the market and open the door for new vendors. American workers check their mobile phones approximately 8 billion times a day\(^6\)—in other words, that is where employees spend their time. These new applications are always-on; location-aware; and can leverage wearables, camera, and video in ways that make them useful, interesting, and entertaining. New HR technology vendors that can build compelling, mobile-by-design apps will disrupt those that can’t.

**Platform as a service (PaaS).** In an effort to build sustainable platform businesses, cloud application vendors have shifted toward PaaS strategies. PaaS technologies let vendors create an array of partner applications that leverage and extend their core offerings—a family of exciting, intimate apps connected to the platform. Today vendors such as ADP (ADP Marketplace), SAP (HANA Marketplace), IBM (IBM Bluemix), and Cornerstone OnDemand (Cornerstone Edge) have all created app stores to enable nimble, innovative software developers to build applications that take advantage of their services. One leading example of this is the Salesforce Appexchange program, which offers thousands of tools for Salesforce customers. If the ERP-cloud vendors don’t move in this direction, they will likely face the threat of disruption by more exciting mobile apps that will take over part of their market.

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A Shift in Business Focus: Changing the Way We Manage People

While all this technological change has been occurring—taking us to the precipice of a major change in platforms (from cloud to mobile)—there has also been a major shift in business focus. Today, companies are far less focused on automating and integrating their talent practices. Instead, they are worried about employee engagement, teamwork, innovation, and collaboration. They want HR tech solutions that are engaging, useful, and productivity-oriented. Integrated talent management is still important, but it has become a “hygiene” problem. The real focus is on reinventing how people work; creating team-based tools for goal alignment and coaching; putting in place systems to provide feedback and measure engagement; and rethinking the way we measure performance, manage careers, and enable individual learning. Overall, we see this as a shift from the integrated talent management practices of the early 2000s to the people management concerns of today (see Figure 3).

Figure 3: From Talent Management to People Management

Source: Bersin by Deloitte, 2016.

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One of the biggest parts of this shift has been the reinvention of performance management. In 2015, our research found that 82 percent of companies believed the process they had in place was “not worth the time put into it.” Deloitte, for example, discovered that employees were spending more than 1 million hours a year on the old process—so the company revamped the whole thing. Companies such as GE, IBM, Adobe, Microsoft, NY Life, Goldman Sachs, Morgan Stanley, and many others are doing the same.

Regardless of the brand-new core systems numerous organizations have purchased in recent years, many say they also need a brand-new set of tools for performance management. A group of quickly growing and highly disruptive vendors (some of which we have listed at the end of this report) are threatening to take over this space. Of course, some of these companies will thrive, some will be acquired, and some will fail—but the disruption will be present in the market regardless of the fate of any individual player.

Another major shift in the people management market is a new understanding that feedback and always-on engagement measurement are critical to business success. In the past, HR tools didn’t offer feedback as a feature. Today, there are dozens of creative new companies selling products that allow companies to deploy pulse surveys; provide feedback to teams and managers; create open, anonymous networks; and analyze employees’ comments and free form text. Companies tell me that these tools are transformational: They are identifying management problems, leadership gaps, safety and compliance issues, and fraud and theft problems never before made visible. Building engagement and feedback tools into larger HR products is a new category in this space, and I believe this functionality will soon be offered by the core HR / ERP vendors as well.

A third change is the revolution of corporate learning and the shift toward employee-empowered learning. Bersin by Deloitte has been researching this area for many years, and we believe that in 2017 (and beyond), this

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market is likely to be blown wide open. There are now dozens of major content providers offering high-fidelity, video-based training online (often for free), and new courses and MOOCs are appearing every day. Corporate training systems, which are generally built around the e-learning online course catalog model, are old and clunky; employees simply turn to the Internet to learn instead. The entire marketplace of corporate learning tools is being turned on its head, with a group of very creative new vendors threatening to reinvent it.

A fourth change I see coming is the explosion of growth in wearables; that is, fitness, health, and general solutions worn on the body to help improve employees’ experiences at work. Fitbit, one of the pioneers in online fitness gear and software, is increasingly selling their wearables to HR departments looking to encourage their employees to exercise. With employees feeling overworked and overwhelmed, wellness and emotional fitness are now becoming issues of employee engagement and performance. Companies cannot expect to engage their people if they’re tired, unhealthy, or under heavy amounts of stress.

The Nine Disruptive Trends Ahead

With these changes and more reshaping the very foundations of HR, companies would be wise to stay aware of the transformational changes that will shape the year ahead. Nine of the most influential are explored in the remainder of this report.

1. The Accelerating Revolution of Performance Management

Almost every company has some process in place to decide who is promoted; who gets a raise; and who deserves more development, benefits, or other rewards each year. The traditional approach—pioneered during the 1960s and automated by companies such as SuccessFactors during the early 2000s—is to develop aligned goals from the top down, perform annual reviews of performance on those goals, rank and rate people based on that performance, and develop written performance and development plans for improvement.

However, as many companies have discovered—and as we have been arguing for some time—this process, which has been propagated through hundreds of books and software systems, doesn’t effectively measure or improve performance. While it was a useful process for HR (since it makes compensation decisions seem fair), it falls short of actually achieving the goal it was intended to meet. Figure 4 illustrates how the philosophy of management itself has evolved.

**Figure 4: The Evolution of Management Thinking**

<table>
<thead>
<tr>
<th>The Industrial Corporation</th>
<th>Hierarchical Leadership</th>
<th>Collaborative Management</th>
<th>Networks of Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Efficiency</td>
<td>Profit, Growth &amp; Financial Engineering</td>
<td>Customer Service, Employees as Leaders</td>
<td>Mission, Purpose &amp; Sustainability</td>
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<tr>
<td>Industrial Age</td>
<td>Management by Objective</td>
<td>Servant Leadership</td>
<td>Empower the Team</td>
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<td>People as Workers</td>
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<tr>
<td>Andrew Carnegie, Henry Ford</td>
<td>Jack Welch, Peter Drucker</td>
<td>Howard Schulz, Steve Jobs</td>
<td>Netflix, Google, Facebook &amp; Amazon</td>
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<tr>
<td>“The corporation is king.”</td>
<td>“The executives are king.”</td>
<td>“The people are king.”</td>
<td>“Teams &amp; team leaders are king.”</td>
</tr>
</tbody>
</table>

**Pre 1950s** | **1960s–1980s** | **1990s** | **Today** | **2020**

During the 1960s and 1970s, companies were very hierarchical. Top leaders set goals; midlevel leaders were tasked with responsibility for profit and loss (P&L) and operations; and individuals were given goals and objectives based on these strategies. The concept of “management by objectives” gave people a few important goals each year; they then received a performance rating at the end of the year and were paid based on achieving those designated goals.

At some point during the 1990s and early 2000s, this approach changed. With the war for talent forcing companies to compete for top hires, suddenly companies such as Google (among others) realized that...
performance can actually improve when companies empower people, let them contribute to goal-setting, and even give them free time to be creative on their own. In short, organizational performance typically improves when employees are paid well, given coaching and development, and are motivated to innovate. This led to ideas such as OKRs (objectives and key results, a goal-management process pioneered at Intel)\(^{11}\), 20 percent time\(^{12}\), and concepts such as servant leadership\(^{13}\). All these new ideas forced businesses to rethink how they coach, evaluate, and measure employees—resulting in a complete reinvention of the process we call performance management.

This shift in thinking continues. Organizations today are highly networked; employees work in teams, while projects and goals change quite frequently. In fact, our new research with MIT\(^{14}\) shows that “digital organizations”—and every company is trying to become digital—have distinctly different management practices than more traditional businesses (see Figure 5). As Deloitte’s “Digital DNA” description states:

*Like human DNA, “digital DNA” carries 23 underlying “instructions” for development, functioning, and replication. These “instructions” are expressed as digital traits and characteristics. They are present in all areas of the organization, including business models, operating models, customer interaction, organization structure, talent, technology, cybersecurity, culture, etc. There are four levels of digital maturity: exploring, doing, becoming, and being.*


\(^{13}\) “Servant leadership” is a leadership philosophy and set of leadership practices in which “servant-leaders” share power, put the needs of others first, and help people develop and perform as highly as possible.

High-performing digital companies (and by this we mean companies that behave as a digital organization, not only those that produce digital products or services) tend to focus on iterative improvement. They build collaboration and teamwork into the culture, move people from team to team as necessary, and spend more time with customers (see Figure 6). And, of course, they reinvent and recreate their products and services using new digital tools. Our 2016 Deloitte Human Resource Technology Disruptions for 2017: Nine Trends Reinventing the HR Software Market.
Capital Trends data shows that 92 percent of companies are trying to reorganize in a way that allows them to build this new digital culture, yet only 14 percent are sure they know how—and one of the critical parts of this shift is changing the way the organization approaches performance management.

Leading companies are now reinventing the way they manage and measure performance, creating a more agile approach built around periodic check-ins; shared goals that are developed from the bottom up and transparent to the entire team; regular developmental conversations; and feedback that goes from employee to employee, employee to manager, and manager to employee. This new breed of feedback-rich, agile performance processes is sweeping across the business world, and over and over again we hear organizations ask, “Where are the tools to make this scale?”

Not surprisingly, this demand is spurring the growth of a set of innovative new performance management vendors (many run by young entrepreneurs rather than traditional HR product people) that are building systems to help manage and automate this process. I have

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**Figure 6: Organizations of the Future—A Network of Teams**

Source: Bersin by Deloitte, 2016.
listed many of them at the end of this report (it is not possible to list them all, as new businesses enter the market regularly).

The tools being created to help manage this new approach to performance management tend to have many of the following distinctive (and disruptive) features:

- They manage performance by team, rather than only by hierarchy.
- Team management is dynamic; that is, teams can be created and changed easily, and people can be part of multiple teams.
- Goals are transparent, easy to change, and have simple tracking mechanisms to measure progress.
- Check-ins are easy and simple.
- Feedback mechanisms are built in via simple pulse surveys, end-of-period surveys, and ad hoc feedback presented via tags and word clouds.
- Development plans are prepopulated and easy to build, and are also often data-driven based on the experiences of other people in the role.
- Online assessments, help, and tools for managers are built in (e.g., tools to help with difficult conversations, personality assessments, leadership tips).
- Systems are as easy to use as a simple mobile app. They have activity streams and other gamification features that make them engaging and easy to browse.
- Applications are integrated with employee directories and other HR tools to make them a part of everyday work—rather than something you only do at the end of the year.

I believe that over time, these tools will also be integrated with personal time management, wellness, engagement, and other performance-improvement apps (as discussed later in the report).

As these new tools start to enter the market, companies are looking for ways to connect them to their existing (although often new) cloud HR platforms, as well as ways to mine the data these tools collect and
load it into their analytics systems. They are also starting to consider the role of customer feedback. For example, one company is redesigning its performance management process so that customer feedback can be directly included in end-of-year performance discussions.

Along with all these changes, companies are also rethinking the way they give ratings (and even perhaps doing away with them altogether), the way they make compensation decisions, and how they perform periodic talent reviews. One research study found that 61 percent of all employee ratings were attributable to manager bias, implying that even when companies do use a rating system, those systems rarely provide a reliable or fair accounting of performance. More and more companies are realizing that rating people with a number can be perceived as demeaning, not particularly motivational, and even unfair.

Most of the companies we talk with are now using some kind of annual evaluation process, often a set of qualitative criteria or other measures that go beyond one manager's “number” placed on an employee's forehead. A leading technology company, for example, evaluates people based on performance (achievement of goals), capabilities (how they built their skills), career (how well they are progressing in their chosen role), and connections (how well they are respected and connected within the company). Using these evaluation criteria, the company places people in one of three categories: “well-aligned and performing,” “adequate,” or “inadequate.” This is enough to give people the feedback they need to improve.

When the time comes for compensation reviews and other talent decisions, people get in a room and discuss the feedback, performance data, and anecdotal information they have in order to make decisions about compensation and promotions. The new breed of apps will give decision-makers more detailed data than ever before, helping these important decisions become more open and data-driven. Compensation decisions, for example, should be driven by factors far beyond individual

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performance, including how well the person contributed to the team, financial and operational achievements, external demand and labor market changes, and the person’s relative contribution as compared to their peers. The expanded use of data to make compensation decisions enhances the process. All told, moving away from a single rating is a positive change in a variety of ways.

Most companies still use nine-box grids (which compare performance versus potential) because they are so useful in creating a visual view of a team’s performance. But today, the way these tools are built, the inputs they use, and the outputs they are used for are more flexible and developmental. A large automobile company, for example, has separate high-potential (HiPo) programs for managers, technical specialists, and functional and process experts. Each program uses different inputs and related evaluation criteria based on the type of role, resulting in many different nine-box grids.

As organizations increase their focus on teams and cross-functional collaboration, they need people to move from project to project and function to function as the business demands (instead of always being focused on promotion and upward mobility). This increases the need to evaluate potential in terms of technical, collaborative, and professional abilities, not just managerial growth. Bottom line: We need tools that expand the traditional nine-box grid to look at new sources of data and changing talent needs in the company.

While these changes are positive, they also create disruption for software developers. The old forms-based performance and goal management tools now seem archaic and unproductive. Some of the new tools look like games; some look like personality assessments; others look like online check-in systems. While there’s no way to predict which one will be the next billion-dollar company, I can guarantee that this shift in the way companies manage performance will continue to disrupt HR technology vendors in a massive way.

2. An Explosion in Real-Time Engagement Evaluation—And Its Intersection with Performance and Feedback

The second big shift in talent and people management is the explosive growth in always-on, pulse-based survey and feedback systems.
Customer and marketing teams have been developing innovative ways to gather and measure customer input for decades. Today, companies are finally starting to do the same with their employees.

We have recently published major research regarding the market for employee engagement assessment technologies, and we found more than 120 vendors now providing pulse survey tools, employee mood monitoring systems, culture and engagement assessments, and other forms of Yelp-like feedback tools that enable employees to provide anonymous or confidential feedback to others. Many of these tools now use open text fields that allow employees to simply type what’s on their minds; the system then categorizes those comments so managers and HR departments can see the trends.

Historically, the employee engagement market has been a standalone space, often run by I/O psychologists who take responsibility for client companies’ massive, once-a-year “climate” surveys. While we don’t see this going away overnight, more and more companies now realize that this type of annual survey is of limited use; the real action takes place on a real-time, local level. Some companies now survey employees quarterly, others monthly or weekly, and many offer the opportunity to provide event-based feedback whenever a major organizational change occurs.

As these tools begin to grow in popularity, employees will feel more comfortable sharing their feelings and observations, and companies will become better and better at gathering and using that feedback. In many cases, employee feedback is operational in nature (involving safety, process, or customer value issues, for example). In other words, these new systems are useful for much more than just “people issues”: They also create opportunities for business process improvement.

Designed differently from the start, these new feedback products are

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unlike traditional surveys: Not only can they support mobile pulse surveys, but as “smart” systems, they can also algorithmically decide who to survey and when. Further, they often have analytics capabilities built in that can instantly identify trends and outliers worthy of further exploration.

This new “always-on” engagement market is also starting to converge with other parts of the HR landscape. Most performance management systems are now built around regular team assessments and surveys; team management tools often have surveys built in (products such as Trello, Slack, and Skype). Events such as hackathons and product innovation sessions are built around always-on feedback as well. Indeed, the whole marketplace for feedback-based tools and feedback systems has become a major theme in the HR platforms of the coming years.21

3. The Explosion of Growth in People Analytics

We can’t really talk about disruptive technology changes without discussing the enormous growth that has recently taken place in the field of people analytics. Over the years we’ve researched this market, companies have moved from back-office HR data warehouses to advanced analytics and reporting dashboards to predictive models and more.

While this market has taken a long time to mature—most of the conferences I have gone to over the last decade were filled with technical experts begging for more investment from their leaders—today it has truly taken off. As the data from our Global Human Capital Trends research shows, analytics expertise and maturity has grown in every area (see Figure 7).22


For many years, companies were quite concerned about the lack of “data scientists” available and the need to build analytics skills within HR. While this is still an issue for many companies, most HR departments are now finding analytics people in finance, marketing, and operations who want to join the team. Online and classroom-based education in analytics has expanded rapidly and young people now realize they can build an exciting career in this area.

There are quite a few disruptive changes taking place in this marketplace. First, as illustrated in Figure 8, the idea of creating predictive models is becoming more widespread within HR. In fact, the percentage of companies doing predictive modelling has almost doubled over the past three years. It has now become commonplace for companies to build predictive models for retention (specifically, using data to try to understand precisely why some high-performing people leave).
While the problem of retention is not always the most important thing to study via data analysis (I would suggest that sales productivity, quality, and fraud might be more worthwhile areas), performing these analyses can teach HR and leadership a lot about a company's culture.

Facebook, for example, recently announced that it would offer employees $10,000 or more if they moved closer to the company's headquarters office. This decision came from a detailed analysis of turnover and performance that clearly showed commute time was a major factor in the productivity and retention of their people. Other companies are now using tools like HiQ Analytics to look at the “pull” drivers that encourage key people to leave to work for competitors. This kind of data helps organizations decide where to locate new facilities (away from competitors or close to them?), who should be receiving above-average pay, when people should change jobs to create career growth, and more.

As analytics models become more prevalent, we see companies slowly moving away from building their own solutions to buying them from vendors. Oracle, SAP, SuccessFactors, Workday, ADP, Cornerstone, Visier, and Ultimate Software all have built-in retention predictors (among many other modeling features) embedded in their software. Workday can recommend employee job changes that are more likely to result in high-performance outcomes (as well as what job moves not to make). Oracle and SuccessFactors can recommend what training employees should make use of based on their roles and activities at work (and Workday will soon have this functionality as well). And Cornerstone can predict who is likely to become noncompliant or lapse in their mandatory training and certification. While these embedded models are continuing to mature, they aren’t perfect just yet—so HR departments have to hire teams that know how to understand, apply, and use them effectively.

As new ways of using feedback and new models of performance management emerge, many new types of data and vendors have entered the scene. One vendor, Starling Trust, can analyze patterns of email and other communication to build “trust networks”24—and can actually predict where a security leak or fraud is likely to occur. Another (Humanyze) sells smart employee badges that monitor location and voice tenor to understand when and where stress occurs. This data can help companies reorganize facilities, change meeting times and formats, and learn how to drive engagement in new ways. A third vendor (recently acquired by Microsoft) analyzes all email communications to understand how people’s communications and time management practices differ. They can find, for example, that high-performing sales people spend more time with certain groups and customers than their peers—and that data can be used to coach and help nudge others to change their behavior.

So what makes this change disruptive? The reality is, companies should double down on their investments in analytics and pay serious attention to this area. Most big companies tell me it takes a few years—and

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24 A “trust network” is a network of people who share substantial interests in common, and who have a high level of trust in one another that permits them to undertake risky joint activities. For more information, see “Trust networks,” understandingsociety.blogspot.com/Daniel Little, April 9, 2010, http://understandingsociety.blogspot.com/2010/04/trust-networks.html.
often a big budget—to clean up their HR data, bring it together into a consolidated environment, and hire an analytics team to start doing the work. Companies that don’t make this investment are likely to be disrupted by competitors that do—and those companies might be able to recruit their competitors’ people, reorganize their sales forces, and improve their engagement and culture in ways you have never even imagined.

For vendors in the HR technology market, analytics is becoming a core part of every single system. All tools—whether operational tools, assessments, or learning tools—should have built-in analytics dashboards. Most applications also include recommendations, suggestions, or other kinds of “nudges” for users. It’s no longer enough to sell companies a tool for peer-to-peer social recognition, for example, unless the tool includes a set of dashboards to show who the highly recommended people are, why and how they are exceeding the average, and what others can do to become more like that group.

As the market matures, the areas of focus are expanding as well. Here are just a few of the improvements we’ve seen companies make via the use of analytics, often using off-the-shelf tools:

- **Reduced unplanned absences.** Companies can now identify the drivers of unplanned absences among manufacturing staff, resulting in radical changes in shift schedules, managerial activities, vacation times, and other surprising transformations.

- **Increased innovation.** An automobile company analyzed what drives innovation and discovered that its most innovative and successful project teams are more connected and meet more often than others. This led to a redesign of the company’s entire innovation strategy.

- **Increased retention.** After analyzing employee retention in a variety of countries around the world, one company identified the need to radically change its compensation models in Asia and its career trajectories in Europe.

- **Reduced fraud and compliance violations.** An analysis at one organization identified certain “trusted agents” who were more likely to create fraud. A similar analysis at the same company found that “toxic employees” (those who lie or cheat) are actually contagious to others on their floor; further, it was found that these
individuals can be identified during the interview process via the use of certain specially worded questions.

- **Increased collaboration and performance.** For one company, a look at employee engagement and feedback data at a detailed and day-to-day level led to a redesign of office space and meeting rooms in order to improve collaboration and performance—all based on data.

- **Reduced accidents.** An historic analysis of email data, performance management data, and employee comments using text analytics helped one company identify accident risks and understand the causes of high-risk behavior, leading to interventions to reduce accidents.

- **Increased diversity.** A variety of companies in healthcare, financial services, and technology have used analytics to uncover the reasons behind certain diversity challenges, identify areas of bias, understand how recruiting and interviewing were creating bias, and build an enterprisewide focus on diversity and inclusion by clearly identifying the drivers of bias across the talent cycle.

For companies shopping for core HR software (ERPs or talent management platforms), I think it’s important to look at the vendor’s level of investment in and experience with analytics tools and models. This market is slowly but surely moving from one in which companies build to one in which they buy; just as companies such as Salesforce now offer integrated analytics for sales and marketing, so too will HR platform providers. Buyers should also make sure their selected vendor has tools that are easy to use and a platform that can easily integrate external data. The future of analytics will likely involve correlating HR data with sales, operations, and financial data, so companies should look for vendors that have experience in this area. Workday’s recent acquisition of Platfora, for example, is focused on expanding this capability.25

Finally, there are some exciting trends on the horizon. IBM is investing heavily in the development of the Watson-based Talent Insights platform, a tool set designed to make workforce analytics almost a

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26 Watson is a computer system capable of answering questions posed in natural language developed as part of IBM’s DeepQA project.
drag-and-drop experience. Cognitive processing and natural language systems are now coming together with analytics—meaning you will soon be able to ask your HR system, “How many contractors do we have in the marketing department” and the answer will appear. Further, Google, Amazon, Microsoft, and many other vendors focused on building artificial intelligence and process automation tools are working to make analytics easier. Analytics teams should watch that market closely as well.

4. The Continuing Explosion and Evolution of the Learning Market

The corporate learning marketplace is ready for a revolution. Never before have I seen so much frustration, innovation, and change in the corporate L&D world.

First, let’s discuss the drivers of change. The world is struggling to deal with the problem of income inequality. Following the 2008 global recession, most of the economic and income growth has gone to highly educated workers, many of whom already have a high level of assets and income. As the following quote shows, this political issue has driven tremendous demand for skills building:

> Over 300 years of economic history, the principal and most enduring mechanism for distribution of wealth and reduction in inequality is the diffusion of skills and knowledge.

—Thomas Piketty, Capital in the Twenty-First Century

Beyond this political issue, the rate of job change is now faster than ever before. Individuals who do not have the opportunity to learn and advance their skills at work are likely to fall behind in their chosen careers. This is particularly true for Millennials. Software engineers must stay abreast of ever-evolving technology if they want to stay current. Automobile engineers have to continuously educate themselves about battery and electric drive train technology, which itself is advancing at a rapid rate. Designers have to stay current on new tools and how to use social media and video. Marketers have to learn about dozens of new tools for customer

segmentation, social media advertising, and the use of analytics. And the list goes on and on. Millennials now tell us that their ability to learn on the job is their top driver when looking for a new position (see Figure 9). If we as employers can’t create an effective learning experience at work, we won’t even be able to attract good people.

Figure 9: Millennials Rate Their Top Job Benefit

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training &amp; development</td>
<td>22%</td>
</tr>
<tr>
<td>Flexible working hours</td>
<td>19%</td>
</tr>
<tr>
<td>Cash bonuses</td>
<td>14%</td>
</tr>
<tr>
<td>Free private healthcare</td>
<td>8%</td>
</tr>
<tr>
<td>Retirement funding</td>
<td>6%</td>
</tr>
<tr>
<td>Greater vacation allowance</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: KPCB, 2015.

In addition to these drivers, the definition of what learning is has changed. I started studying corporate training during the late 1990s, when companies were first experimenting with e-learning. Since then, we have seen the rise of blended learning, social learning, mobile learning, and 70-20-10 learning. While all of these approaches helped us make sense of how people learn, the reality is that today, people learn in a more dynamic and self-directed way than ever before.

Consider the huge shift in learning content. Since 2009, only seven years ago, companies have shifted from 77 percent instructor-led training (ILT) to only 32 percent (see Figure 10). The use of collaborative learning, virtual learning, and apprenticeship and on-the-job learning have exploded. People at work simply don’t have the time, budget, or patience to sit in classes the way they did a few years ago.

This is not to say that traditional, face-to-face learning is dead—not at all. Rather, corporate L&D departments are realizing they should focus their time on high-value face-to-face experiences and radically redesign their content systems to accommodate the huge demand for high-quality, high-fidelity learning online. As they do so, they also push the organization and its management to focus on coaching, apprenticeship, and expert support.

Mirroring these changes, the content marketplace has exploded. CB Insights believes that more than $5 billion in venture money has been spent in the educational technology market during 2015 and 2016. Many vendors tell me their businesses are growing at double- (or triple-) digit rates.

Companies such as Coursera, EdX, Udacity, Udemy, Lynda.com, NovoEd, Skillsoft (which has acquired several digital learning companies), iversity, CrossKnowledge (owned by Wiley), and specialized technical providers such as General Academy and Pluralsight all offer high-fidelity learning.

Source: Bersin by Deloitte, 2015.

*Numbers may not total 100% due to rounding.*

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programs. And now, thanks to the ease of video production, courses are appearing across the vendor marketplace. There is no lack of great content; the difficulty now lies in building a great integrated experience.

These new sources of content, video, and expert-led programs are powerful. Today, 26 percent of companies tell us they are “expert” or “advanced” at providing MOOC-like learning experiences to their employees—up from only 12 percent a year earlier—and 13 percent are now “expert” at developing their own high-quality video, up from only 6 percent a year before.\(^{30}\)

Corporate training buyers are now allocating budget for tools to integrate, consolidate, measure, and curate all this content for employees. Remember that the global L&D marketplace is over $130 billion in size (taking only corporate training into account), so there is at least a $10–$15 billion market for technologies and tools to help organize, administer, manage, and track all this training.\(^{31}\) We see four big disruptive trends shaping this market in the coming year:

**Learning experience platforms.** The products in this emerging market look like curation systems but may actually replace the current breed of learning management systems (LMSs). Vendors such as Pathgather, Degreed, EdCast, and others are now building content aggregation and curation platforms to bring various kinds of content together into an integrated experience. Because they gather a variety of disparate offerings in a single place for users to find, recommend, arrange, and comment on, these platforms are becoming nearly indispensable. These platforms may very well evolve into fully fledged LMS systems—and the incumbent LMS vendors will likely build or buy this kind of technology as well.

**LMS for video.** A new breed of LMS systems is emerging that is focused on video-based learning. These systems are designed to operate like YouTube rather than as a course catalog. Workday is launching their new LMS this year, built and architected around digital learning, recommendations, mobile learning, and self-authored content. Oracle has rebuilt its LMS platform around video learning while still

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incorporating all the features and functionality Oracle has built over the years. SAP-SuccessFactors continues to evolve Jam, its video and social learning platform, and Cornerstone OnDemand has expanded its LMS into predictive analytics, video content distribution, and many other integrated talent features. Smaller companies such as Fuse Universal, Wisetail, and others are creating new platforms centered entirely on video-based learning. And LinkedIn is also looking at extending its Lynda.com learning platform to open it up to this new model of content distribution. Finally, one cannot ignore the impact of Workday's new video learning solution, which could push this market faster than ever.

Despite all the consolidation in the talent management market, the LMS market is still alive and well. There are more than 200 LMS companies, many of which are finding new clients among small businesses or vertical markets. Over my 20 years as an analyst, I have continuously seen consolidation in this space, yet small emerging vendors continue to grow. I recommend that buyers look at the big ERP-like LMS platforms first, and then evaluate smaller vendors that specialize in their industry. For small and midsized companies, smaller vendors’ products are often easier to use, faster to implement, and more modern in their design (Instructure, coming from the education market, is a good example).

Cognitive learning tools, recommendation systems, and microlearning platforms. With so much content now available, intelligent learning systems that can recommend and push learning at the right time, bring small learning pieces together in a cohesive whole, and help companies author microlearning so it can be spaced out as needed are now seeing slow but steady growth. These platforms help people use content in more powerful and useful ways. Companies such as Axonify (microlearning and spaced-learning platform), Knolskape (knowledge management and embedded-learning platform), Grovo (microlearning platform), and Qstream (spaced learning) are now offering these solutions. LinkedIn is even starting to look at ways to deconstruct and expose all the video learning available on Lynda.com.

Embedding learning into business processes through design thinking. With video learning, mobile learning, and microlearning content now so available, it’s more important than ever to build an entire designed experience that uses and embeds this content into work. A great example of this is onboarding. Two major companies (a large
telecommunications company and a major sports equipment provider) saw a need to revamp their onboarding and new employee transition programs. These programs, which were considered to be one-day cultural introductions, were not effectively bringing people into the companies in a complete way. After a series of design-thinking efforts, both companies revamped their onboarding into three- to six-month new-hire orientation solutions that include embedded learning, collaboration, formal training, and many on-the-job assignments. In both cases, the results were significant.\(^\text{32}\)

Another example is the offerings of Jhana, a small, fast-growing company that provides tools, videos, articles, and online support for new frontline managers. The employees of Jhana’s customers (which are often technology companies with many new managers being promoted each year) don’t necessarily want to take a course—they want to learn on the job and as needed. They use the company’s tools to quickly find what they need, get a checklist or tool, and then go back to work. This type of embedded learning is becoming more and more important as workers’ lives continue to be flooded with too many emails and meetings.

**The Continuous Learning Technology Stack**

In the past, we wrote research reports focused on the LMS market or the learning platform market. Today, the world of corporate learning has evolved into a much more heterogeneous set of practices, all of which we believe fall into four areas we call the “four Es”: education (formal training), exposure (meeting and knowing the right people), experience (on-the job learning, apprenticeships, projects), and environment (tools, support, job-aids, and on-the-job assistance) (see Figure 11).

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\(^{32}\) This information is based on our ongoing research on the topic of onboarding.
This model creates a need for a range of disruptive technologies to support each of the four areas. For example, does your collaboration software (Slack, Skype, Yammer, etc.) support embedded content- and video-sharing? Does your webcasting tool support replay, video, and text synchronization; tagging; and instructional editing? Do your software applications include simulation tools to help people learn to use them on the job (as opposed to taking a course)? Do your survey and engagement tools include embedded help and support? Does your performance and talent management software include libraries of tips and techniques?

If companies want to build a truly compelling, self-directed learning experience at work, they should think way beyond the realm of the corporate LMS. They have to imagine a set of tools, information, support systems, and self-authored content (often in video) that anybody can find as needed. This helps open the door to a much wider range of technology and tools to embed into the corporate infrastructure—what we refer to as the continuous learning technology stack (see Figure 12).
Another example of a disruptive provider is Everwise, a company focused on providing coaches and mentors to professionals at all levels. You can offer your employees “exposure” through Everwise; they can meet and interact with peers or senior professionals as expert coaches, and the company itself gains valuable outside insights—all without using an internal LMS or system.
5. A New Landscape for Talent Acquisition

Today's recruitment and talent acquisition market is enormous: We estimate that over $240 billion is spent each year on this area in the United States alone—**not surprising, given that the U.S. Bureau of Labor Statistics reports that quit levels have been holding steady around 2% throughout 2016.**

This massive market focuses on tools to help find people (sourcing), market and brand your company (employment branding and advertising), post and distribute job postings (job ads and ad networks), manage and interact with job boards, assess candidates (prehire assessment and testing), perform background testing and psychological testing, interview (interview management and video interviewing), and, of course, manage the entire complex process end to end (applicant tracking and recruitment management systems).

This market is not only large, it is also highly strategic for many companies. Fast-growing technology companies, for example, can make or break their business plans based on how quickly they can find the right engineers, marketing, and sales people. Retailers and seasonal manufacturers have to hire hundreds to thousands of people at critical times during the year, so it is key that they be able to hire quickly and as effectively as possible at scale. And companies that compete for senior technical and executive talent are always struggling to find new ways to source candidates, attract people, and convince them to join.

Added to these pressures is the enormous transparency of brand. Today, a company's employment brand is available for all to see: Glassdoor (and its competitors around the world), LinkedIn, FORTUNE magazine, and many other media companies survey employees and publish ratings, rankings, and data-driven assessments of companies’ employment experiences. And many studies have shown that organizations can no longer hide the way they treat people: If a company is not a positive

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33. This information is based on our ongoing research on the topic of talent acquisition.

34. The “quits rate” is the number of quits during the entire month as a percent of total employment. For more information, see “Economic News Release,” United States Department of Labor / Bureau of Labor Statistics, September 7, 2016, [www.bls.gov/news.release/jolts.t04.htm#jolts_table4.f.1](http://www.bls.gov/news.release/jolts.t04.htm#jolts_table4.f.1).
place to work, they will attract lower-quality candidates and end up spending much more money to hire.

This global market is driving a large number of new and disruptive changes. First, the growth of LinkedIn and the company’s recent sale to Microsoft have the potential to disrupt the market.\(^{35}\) Over the last three years, LinkedIn’s recruitment business had grown to $1.9 billion by year-end 2015\(^ {36}\) (a 41 percent growth rate) and has rapidly become a standard toolset for recruiters at midsize and large companies. The company has expanded into learning (Lynda.com) and a variety of other markets (sales, marketing, publishing), and now has announced its plan to help support Microsoft’s cloud efforts. One can imagine a scenario in which LinkedIn continues on its current path and grows even faster with the help of Microsoft’s sales force—but what would happen if LinkedIn was deeply integrated into Outlook? I won’t try to speculate, but in 2017, LinkedIn’s product plan will likely change, possibly disrupting the markets for sourcing, assessment, or other parts of the landscape.

Second, the applicant tracking market is ripe for change. The incumbent vendor products (Taleo / Oracle, IBM / Kenexa, Jobvite, ADP, and tools from Cornerstone OnDemand, PeopleFluent, StepStone, and dozens of others) were all architected and built in the early days of the Internet. Most were designed as applicant tracking systems (ATSs), so they are very efficient at capturing resumes; posting ads; and managing the process of collecting, assessing, and storing candidates’ information.

Today, a new breed of platforms, including vendors such as SmartRecruiters, Lever, Greenhouse, Gild, and others, have simply started from scratch, building end-to-end recruitment management systems that handle everything from sourcing, ad management, analytics, online interviewing, interview management, candidate scoring, ongoing candidate relationship management, and onboarding. These new tools were designed to directly connect to LinkedIn and other job boards, and they can store candidates’ information to be


revisited year after year. These systems no longer simply manage applicants; they manage candidates and even alumni. Further, these new offerings focus on building tools that are easy for hiring managers and candidates to use, not just recruiters and HR.

While most of these newer companies are still small compared to others such as Oracle / Taleo, IBM, and Workday (which is now in its third year selling its new recruitment platform), their functionality and ease of use is quite advanced. This has helped them to grow quickly, reach into larger companies, and disrupt the market.

One of the most prominent recruitment analysts in our industry told me that among the 300 to 400 large companies he meets with each year, almost two-thirds are now shopping for a new ATS. While it may take a few more years for these newer companies to reach the level of functionality of the incumbents, the trend is here. This is not to say that incumbents such as Oracle are standing still; but in recruiting software—just as in performance management and learning—often original designs and architecture hold development back. We can expect many of these new vendors to reach enterprise class this year, and many will disrupt the market in new ways.

Why would a company throw away an old ATS to buy a fancy new one? There are many potential reasons: Perhaps the old one is hard to use, expensive to operate, and / or unable to score and assess candidates or manage the candidate pipeline well. This will likely lead buyers to consider the next disruptive trend: the application of artificial intelligence and advanced analytics to recruitment. HireVue, a pioneer in online video, can now score a candidate’s self-published video to give recruiters a sense of how well a candidate fits a given job.

The company Good&Co, which was recently acquired by StepStone, can score a candidate’s personality and match him or her against peers and other high performers in the company for fit—all long before the candidate is interviewed. The new tools from Pymetrics let candidates play games that give both the candidate and the employer insight into whether the candidate would be a good fit for the job. The vendor Entelo can reach out into the network of technical and design candidates and score them based on their social interactions on various professional websites. And the vendor FirstJob is now applying artificial intelligence and advanced analytics to recruitment...
intelligence to the entire process of candidate management, potentially reducing recruiter workload dramatically.\textsuperscript{37} Many such cognitive tools are now entering the market, so we can expect cognitive technology to start to differentiate core recruitment platforms.

The continued evolution of job boards is another factor disrupting this complex market. This year, Monster.com was acquired by Randstad.\textsuperscript{38} One might believe that job boards are finally dead (an idea that has been floating around this marketplace for a decade). But nothing could be further from the truth. Companies such as Indeed, Glassdoor (one of the faster growing job boards because the company rates employers), StepStone, CareerBuilder, and others around the world continue to play a vital role in distributing job postings to places people can find them. Each of these large companies is trying to find new ways to make their platforms more sticky and differentiated—so we can expect to see much more innovation in this space.

6. Growth in Contingent Workforce Management, Gig Work, and Part-Time Work Environments

The area of contingent workforce management is also growing rapidly this year. The U.S. government believes that around 40 percent of workers in the United States are contingent in some fashion\textsuperscript{39}, and many of them look for part-time or contingent jobs on special job networks. Employers of course use those same networks to post jobs and find people with specialized skills.

There are two emerging markets that support this new way of working. The first is contingent workforce management systems, such as Fieldglass from SAP, Kronos, Beeline, PeopleFluent, Workday, and many others. This market, which includes software for vendor management (VMSs), as well as time tracking and scheduling systems, is highly fragmented with only a few large market leaders. As the

\textsuperscript{37} For more information, see \url{http://trymya.io/}.
\textsuperscript{38} “Randstad buys Microsoft for $429M as recruitment consolidation continues,” techcrunch.com / Ingrid Lunden, August 2016, \url{https://techcrunch.com/2016/08/08/randstad-buys-monster-for-429m-as-recruitment-consolidation-continues/}.
percentage of employees who work part-time or on a contingent basis goes up, the growth in this market is expected to continue.

The second market is the growth of gig work networks: that is, vendors who try to match workers to “gigs” or projects. There are dozens of such sites, including Upwork.com (formerly eLance and oDesk), Freelancer.com, Fiverr, Workpop, Textbroker (writers), and many others. These sites now serve as job networks and work productivity systems, providing tools to help workers get things done, as well as enabling workers to find jobs and employers to find workers. They have morphed from job networks to recruiting and skills management sites, and they store data about professional activities from gig workers. Companies such as GitHub (for software engineers), Pixelapse, and others are building similar community work and job sites for technical domains. Large companies should start to monitor these affinity work sites to help build a network of technical experts for contract work.

The third exploding market is companies such as WeWork that have built out real estate and local work management systems for contractors looking for work. WeWork now has a $16-billion\(^{40}\) valuation based on its rapid growth; outside the United States, there are similar gig work location and services providers sprouting up. Over time, these vendors are likely to offer productivity tools and other services to help large employers find and collaborate with gig economy professionals.

While these companies do not directly compete in the HR technology market as we have described it, they now represent a very large percentage of the workforce—so they may soon become both markets for HR technology and potential providers of platforms for collaboration and workforce management for large companies. This leads us to the next disruptive trend: the merger of team management tools and HR tools.

7. The Growth of Team Management Tools and Their Merger with HR Tools

There is a wide variety of software tools (Slack, Workboard, Trello, Asana, Wrike, BetterWorks, 15Five, Basecamp, Rallyteam and others) designed to help people collaborate, share and set goals, and work together as teams. While we don’t necessarily categorize them all as HR technology tools (BetterWorks, for instance, is actually an enterprise-class goal management platform), most are starting to enter the HR technology market.

Why? Because traditional talent management software (Oracle, Workday, SuccessFactors, Cornerstone, and all the others) was designed for use by HR, and later adapted for employees. The biggest trend taking place in the HR software market is the steady shift away from tools to help HR toward tools that help employees and managers do their jobs. Yes, of course companies still have to set goals, onboard new employees, train people, and figure out how much to pay them. But all those HR tasks can now be seen as optional unless they are embedded in the flow of work.

For example, Workday’s new LMS and talent system is designed to help employees use Workday to “find the next position” in their company, and to then locate and view training and video learning that is appropriate for that job. If that’s the only reason someone logs into Workday, employees might log in only a few times a year to see what’s new. On the other hand, if this type of functionality appeared in Outlook or the workflow management tools employees use every day (such as Slack or Asana), they will be more likely to use it frequently—and that is exactly what is starting to happen. While these work-management vendors are not necessarily turning into HR software companies, they are beginning to support integrations and partnerships with traditional HR providers. BetterWorks, for example, can integrate its goal management software with Slack, Workday, Salesforce, and Jira. The functionality the company has built (an agile, easy-to-use, OKR-based goal management system) can easily share data with all these work management systems and be easy for users.

The company Axonify (spaced and prescriptive learning), for example, integrates its predictive and prescriptive learning platform with cash registers and point-of-purchase terminals. This enables retailers and manufacturers to deliver training right in the flow of work, just as it is needed. Cornerstone’s product CyberU is designed to do the same for sales
people within Salesforce. Reflektive, one of the fast-growing new tools for agile performance management, includes a feedback module that plugs into Outlook and Gmail, enabling people to provide feedback to any person attached to any activity without logging into a different system.

This trend is accelerating, enabling almost every HR-centric tool to be integrated with or used in conjunction with other tools employees already use to get things done. As the work world shifts away from hierarchical organizations toward using networks of teams, this trend will likely accelerate.

8. The Explosion of Wellness and Fitness Apps—and Their Potential Merger with Employee Engagement

The next major area of disruption we can expect to see in 2017 is the accelerated growth of tools, systems, and platform features to manage wellness, work-life balance, employee activity, and—ultimately—personal performance (see Figure 13).
At the most basic level, companies provide medical services, health insurance, first aid, and other employee assistance programs to help their people stay healthy. These services are typically purchased by the employee benefits department, and the company manages them to maintain a moderate cost and provide competitive benefits in the marketplace. They are not considered performance or engagement programs; rather, they are considered benefits.

As the work environment becomes more complex and overwhelming (two-thirds of companies tell us their employees are “overwhelmed” by the level of activity and messages at work41), companies are now realizing that they should also provide services to help employees manage their workloads. These typically include programs such as mindfulness (one of the most popular classes at Google, for example), yoga, time management, work-life balance counseling, dietary support, and exercise. Many modern corporate facilities now have a gym, an exercise facility, showers, day care, on-site medical exams, and a variety of other wellness services. While most of these were originally built as benefits, they have now become a way of developing the organization’s employment brand and are often used to attract Millennials and drive employee engagement.

In Silicon Valley, where I work, it is quite common for employers to provide lavish food, beer, and cocktail hours; ping pong and pool tables; as well as exercise classes, free snacks, and a variety of other services aimed to make work more enjoyable. Many companies offer free dinner (encouraging their younger workers to stay late), free breakfast (encouraging workers to come to work at the same time), and gourmet chefs. All these expensive benefits have been justified because they help improve employment brand, attract high-performing workers, and enhance employee performance by enabling people to work longer hours at higher levels of productivity.

Those of us who have worked in leadership and management know that the stress and pace of work can have a tremendous impact on our personal health, our family lives, and our ability to perform. Another level of wellness services has emerged to address these issues: coaching,

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sports psychology, competitions (e.g., walking, exercise, and other activities to bring people together), and of course fitness devices that monitor and report our activity.

Deloitte is piloting a new app-based program that captures employees’ travel, hours worked, and other pertinent information to give them a sense of their “vitals” at work. The goal is not to force people to work less or reduce travel but rather to give them information that might “nudge” them to take it easy now and then, slow down, and pace themselves better as compared against their peers.

As Figure 14 illustrates, all these services have moved from the original goal of safeguarding employees’ health to providing benefits and programs that can increase human performance; improve employee engagement; and ultimately bring people together to create a stronger culture, build leadership, and improve the performance of the entire organization.
Over the last 12 months, I have had the opportunity to meet with a variety of these vendors and can report that their marketplace is growing rapidly. Vendors such as Fitbit, Limeaide, Virgin Pulse, HighGround, LifeWorks (Ceridian), Oracle, and dozens of others are now providing employee apps that let people create fitness challenges, recognize and share their achievements with others, view videos and education on health and diet, and collect and manage data from fitness wearable devices. This new market is growing rapidly; further, many of these vendors are now starting to show their products to senior HR leaders and position their solutions as performance improvement tools.

Over the next year, I believe the application areas of wellness, engagement, recognition, and performance management could converge. Each of these areas collects information on employee feedback, keeps track of employee activity and goals, and tries to improve the work environment. While today these market segments are all separate, one can imagine a scenario in which they could start to converge. Oracle, for example, implemented their competition features in Oracle HCM Cloud, enabling all employees to participate in fitness contests or other forms of competition directly from their core HR applications. Limeaide, one of the leaders in fitness tools and software, has just integrated its product with TINYPulse, a fast-growing provider of employee engagement surveys. The integrated product lets companies send out quick surveys, collect points after surveys, and integrate their employee wellness and engagement programs in one suite of applications.

One can clearly see these worlds coming together:

- The new generation of performance management tools automate and measure how much work we get done.
- The new generation of engagement software measures what motivates us and gives us insights into work practices that get in the way.
- The new generation of learning software delivers microlearning and gives us insight into what learning is useful and most likely to help us in our current role or career.
- The new generation of wellness and fitness software helps us see how well we take care of ourselves as well as how productive and healthy we are at work.
The new generation of analytics tools helps us pull all these systems together to understand the true drivers of productivity, sales growth, or leadership progression.

Think about the way this data could come together in the next few years: Core platform providers (such as Oracle, SAP, Workday, SuccessFactors, Ultimate Software, or others) have a built-in analytics engine that correlates data from many sources to a global employee database. These new tools help inform the company about what people are doing, how happy they are, and how well they are taking care of themselves. Soon we could have a truly integrated view of employee wellness and be able to give workers insights, nudges, and advice on ways to make work better, improve productivity, and develop to improve their careers.


The final disruptive trend I want to highlight is the fast-growing area of artificial intelligence, natural language processing, and robotic process automation. This huge area of technology—which covers products that can listen to our voices (such as Amazon Echo, Siri™ voice recognition software, and Viv), products that augment and automate call center work (software that can record keystrokes into an ERP system and then immediately automate it for repetitive transactions), and software that brings transactions together from many systems and makes it easy to implement the new workflow on a screen or device (tools such as ConnectMe from Deloitte)—is now coming to HR.

The result of these technologies, including the obvious software development tools for mobile devices, is that most HR transactions and processes can now be automated. HR service centers, which are now generally filled with people who perform “swivel chair support” (i.e., taking a call and then swiveling from one back-end system to another to process an employee request), can now automate nearly every employee process.

What this means is that HR organizations should now use design thinking to redesign what they do as not a series of transactions or processes that people have to perform but rather a series of “journey maps” and experiences that can be automated:
• Instead of automating hiring, HR should automate the entire employee joining process. That process may include prehire assessment; interviewing; onboarding; new-hire orientation; and the first six months of training, meeting people, and learning about the job. One of our clients has done this and now gives all candidates an app that helps them apply for a job, accept a job, and learn their job, all as part of an integrated experience.

• Instead of automating job changes, HR should automate and design processes for employee career and job transitions and include assessment, internal job search, job recommendations, interviews, job offers and acceptances, employee moves, level or compensation changes, and orientation and onboarding. (Our case study on CBA’s new mobile employee experience app describes this in detail.42)

• Instead of automating employee retirement, HR can automate exploration of retirement options, decisions about retirement plans, exit processes, joining the alumni network, and creating an ongoing relationship between the company and the employee after the worker’s departure.

• Instead of automating new manager training, HR can automate assessment of leadership potential; leadership development, education, networking, and coaching; and ongoing performance management practices for new supervisors.

The tools of AI, robotic process automation, and self-service transaction integration can enable a total redesign of the employee experience, dramatically reducing costs and improving the value of HR itself. And these tools obviously also reduce the number of administrative workers needed, helping HR professionals work instead as consultants, improving employee engagement, and preventing HR from becoming a bloated operation.

42 Fostering Change and Driving Productivity: How the Commonwealth Bank of Australia Leveraged Analytics and Mobile Technology to Spur Efficiency, Bersin by Deloitte / Katherine Jones, PhD, 2015.
The Bottom Line: Every Market for HR Technology Is Being Disrupted

Almost every existing HR technology market will face disruption in 2017. Growth in mobile computing, video, sensors, and artificial intelligence is taking place simultaneously with a new intense focus on employee engagement, culture, wellness, and productivity. These colliding forces are enabling a new breed of vendors that will totally rethink what HR technology does, creating exciting opportunity and disruption in the existing markets. (See Figure 15 for examples of representative vendors—this is by no means a complete list.)

Figure 15: Disruptive New Vendors—Example Listing

<table>
<thead>
<tr>
<th>Employee Engagement &amp; Feedback</th>
<th>Contingent Workforce Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BetterCompany</td>
<td>Beeline</td>
</tr>
<tr>
<td>Blackbook HR</td>
<td>Upwork</td>
</tr>
<tr>
<td>CultureAmp</td>
<td></td>
</tr>
<tr>
<td>CultureIQ</td>
<td></td>
</tr>
<tr>
<td>Glint</td>
<td></td>
</tr>
<tr>
<td>Hyphen</td>
<td></td>
</tr>
<tr>
<td>Kanjoya</td>
<td></td>
</tr>
<tr>
<td>Niko Niko</td>
<td></td>
</tr>
<tr>
<td>OfficeVibe</td>
<td></td>
</tr>
<tr>
<td>Qualtrics</td>
<td></td>
</tr>
<tr>
<td>RoundPegg</td>
<td></td>
</tr>
<tr>
<td>Thymometrics</td>
<td></td>
</tr>
<tr>
<td>TinyPulse</td>
<td></td>
</tr>
<tr>
<td>Waggl.It</td>
<td></td>
</tr>
</tbody>
</table>

| Performance Management        |                               |
| BetterWorks                   |                               |
| HighGround                    |                               |
| Impraise                      |                               |
| Reflektive                    |                               |
| Small Improvements            |                               |
| StandOut (TMBC)               |                               |

| Social Recognition            |                               |
| Achievers                     |                               |
| Globoforce                    |                               |
| O.C. Tanner                   |                               |
| TemboSocial                   |                               |

Source: Bersin by Deloitte, 2016.
### Learning Marketplaces

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BigThink</td>
<td>Expert-led learning marketplace</td>
</tr>
<tr>
<td>lynda.com</td>
<td>Video-based content provider</td>
</tr>
<tr>
<td>NovoEd</td>
<td>MOOC platform &amp; content system</td>
</tr>
<tr>
<td>Skillsoft</td>
<td>Video &amp; e-learning content provider</td>
</tr>
<tr>
<td>Udemy</td>
<td>Learning marketplace</td>
</tr>
</tbody>
</table>

### Learning Platforms & Tools

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axonify</td>
<td>Intelligent microlearning platform</td>
</tr>
<tr>
<td>Cornerstone OnDemand</td>
<td>LMS &amp; talent management platform</td>
</tr>
<tr>
<td>Degreed</td>
<td>Content integration &amp; collaboration platform</td>
</tr>
<tr>
<td>EdCast</td>
<td>Social learning platform</td>
</tr>
<tr>
<td>Everwise</td>
<td>Coaching &amp; mentoring platform</td>
</tr>
<tr>
<td>EdCast</td>
<td>Social learning platform</td>
</tr>
<tr>
<td>Fuse</td>
<td>Video learning platform</td>
</tr>
<tr>
<td>Grovo</td>
<td>Microlearning content &amp; platform</td>
</tr>
<tr>
<td>Knolskape</td>
<td>Simulation- &amp; gamification-based learning platforms</td>
</tr>
<tr>
<td>Oracle</td>
<td>LMS &amp; video learning platform</td>
</tr>
<tr>
<td>Pathgather</td>
<td>Content curation &amp; collaboration platform</td>
</tr>
<tr>
<td>Saba</td>
<td>Learning &amp; talent management platform</td>
</tr>
<tr>
<td>SAP Jam</td>
<td>LMS &amp; video learning platform</td>
</tr>
<tr>
<td>SumTotal</td>
<td>LMS &amp; talent management platform</td>
</tr>
<tr>
<td>Wisetail</td>
<td>Video learning platform</td>
</tr>
<tr>
<td>Workday</td>
<td>Video-optimized enterprise LMS</td>
</tr>
</tbody>
</table>

### Work Management

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-5</td>
<td>Team project &amp; process system</td>
</tr>
<tr>
<td>Asana</td>
<td>Team project management system</td>
</tr>
<tr>
<td>Basecamp</td>
<td>Team project &amp; document management system</td>
</tr>
<tr>
<td>HipChat</td>
<td>Team collaboration system</td>
</tr>
<tr>
<td>Slack</td>
<td>Team collaboration system</td>
</tr>
<tr>
<td>Trello</td>
<td>Team work-sharing &amp; project system</td>
</tr>
<tr>
<td>Workboard</td>
<td>Work, goal &amp; feedback management system</td>
</tr>
<tr>
<td>Wrike</td>
<td>Online project management software</td>
</tr>
</tbody>
</table>

### Recruitment Tools

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entelo</td>
<td>Next-gen recruitment platform</td>
</tr>
<tr>
<td>Gild</td>
<td>Next-gen recruitment platform</td>
</tr>
<tr>
<td>Glassdoor</td>
<td>Next-gen recruitment platform</td>
</tr>
<tr>
<td>Greenhouse.io</td>
<td>Next-gen recruitment platform</td>
</tr>
<tr>
<td>HireVue</td>
<td>Video job interviewing combined with recruitment screening &amp; evaluation tools</td>
</tr>
<tr>
<td>Lever</td>
<td>Next-gen recruitment platform</td>
</tr>
<tr>
<td>Pymetrics</td>
<td>Next-gen recruitment platform</td>
</tr>
<tr>
<td>SmartRecruiters</td>
<td>Next-gen recruitment platform</td>
</tr>
</tbody>
</table>

### Leadership Development

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jhana</td>
<td>Frontline managerial support and development</td>
</tr>
</tbody>
</table>

### Well-Being / Fitness

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceridian LifeWorks</td>
<td>Wellness, fitness &amp; employee recognition</td>
</tr>
<tr>
<td>Fitbit</td>
<td>Fitness apps and wearables</td>
</tr>
<tr>
<td>Limeaid</td>
<td>Wellness &amp; fitness system &amp; app</td>
</tr>
<tr>
<td>VirginPulse</td>
<td>Wellness &amp; fitness solution &amp; app</td>
</tr>
</tbody>
</table>

Source: Bersin by Deloitte, 2016.
Bersin by Deloitte will continue to research and study these changes, and I personally look forward to talking with you and helping you make sense of these disruptions for your own business as a corporate HR buyer, vendor, or investor. As always, we welcome your experiences and input, and look forward to helping you enhance and leverage your own HR technology strategy in the exciting year ahead.
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- **Bersin Blueprints**—Designed to provide actionable approaches to help talent leaders address their most pressing talent challenges, Blueprints offer convenient access to research, performance support materials, tools, and member advisory services to tackle key challenges.
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- **Maturity Diagnostics**—Research-based maturity assessments, integrated with business feedback, deliver actionable custom analysis, relevant research resources, and guidance from member advisors. These assessments help members develop a plan to progress in maturity.
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