



# **Sierra-Cedar**

## **2017–2018 HR Systems Survey 20<sup>th</sup> Annual Edition**



***Conducted by***

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# **The Sierra-Cedar 2017–2018 HR Systems Survey White Paper 20<sup>th</sup> Annual Edition**

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and  
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# Executive Summary

The *Sierra-Cedar 2017–2018 HR Systems Survey White Paper, 20<sup>th</sup> Annual Edition* is the latest research installment of the longest running, most widely distributed, and most highly participative research effort in the Human Resources (HR) industry. Since 1997, this invaluable resource has been a catalyst for the HR technology community, providing insight and guidance to practitioners around the world. The Sierra-Cedar HR Systems Survey stands alone as a Global benchmark of HR technology adoption and the value achieved from the use of these technologies, seen through the eyes of HR Information Technologists (HRIT) and Information Technologists (IT).

This year's White Paper covers adoption and trends for applications, deployment options, vendor solution outlook, expenditures, and value achieved for the categories of applications listed below. Throughout the report, we suggest implications and recommendations for both practitioners and vendors.

- Administrative applications:
  - Core Human Resource Management System (HRMS)
  - Payroll
  - Benefits
- Service Delivery applications:
  - Employee Self Service (ESS)
  - Manager Self Service (MSS)
  - Help Desk
  - Portals
- Workforce Management (WFM) applications
- Talent Management (TM) applications
- Social- and Mobile-enabled applications
- Business Intelligence (BI)/Analytics solutions
- Emerging Technologies

Additionally, we cover insights on supporting HR practices:

- HR Systems Strategy
- Adoption blueprints
- Integration practices
- Implementation practices
- Change Management practices
- Expenditure and Resource strategies
- Culture
- Innovation

## Breakout Legend

### Organization Sizes

Large  
10,000+



Medium  
2,500–10,000



Small  
<2,500



Aggregate



### Outcome Driven Organizations



Top Performers



Data Driven



Talent Driven



Socially  
Responsible

The Survey was conducted from May 4<sup>th</sup> through July 7<sup>th</sup>, 2017. The *Sierra-Cedar 2017–2018 HR Systems Survey White Paper* is based on 1,312 unique organizations representing a total workforce of 17.7 million employees and contingent workers.

# 2017–2018 HR Systems Survey Key Themes

## Strategy

- Enterprise HR Systems Strategy shifts to leadership; 40% of organizations still have a major HR Systems Strategy initiative; however, 20% of organizations are evaluating a Cloud-based Financial solution, giving HR an opportunity to lead from experience.
- Only 17% of organizations have a strategy for integrating HR applications, with 47% handling them on a case-by-case basis. Implementing an Integration Strategy could impact business outcomes by 20%.
- Data Security and IT Risks are hot topics in the news this year—but what role does HR Technology play in risk reduction? We see that 70% of the organizations with the highest HR Talent and Business outcomes have a Risk and Security Strategy that includes HR Systems.

### HR Tech as a Leader



### Integration Strategies



### Risk and Security



## Culture

- Once again, HR organizations achieve higher levels of HR, Talent, and Business outcomes by embracing their unique cultures. Data Driven, Talent Driven, and Top Performing organizations provide statistically significant insights into their unique approach to HR systems.
- Social Responsibility—how does it influence outcomes? We've added Socially Responsible organizations to our Outcome Driven organizations, and Business outcomes are 17% higher for this group.
- As Employees and Leaders come of age in the world of Big Data, they expect a level of personalization and customization which HR Technology is beginning to address. 30% of organizations are increasing Learning, Recruiting, and HR Data Analytics roles to meet this need.

### Outcome-Focused HR



### Social Responsibility



### Personalization



## Technology

- Currently, 50% of organizations have at least one major HR system in a Cloud environment—what comes next? Major HR technology transformations are on the decline, so where will organizations shift their focus?
- HR Technology buyers have been the beneficiaries of a highly competitive HRMS market and, as the gaps begin to close on User Experience (UX), what will the next battleground be for HR technology?
- Next generation technology is designed to inform our decisions and simplify our activities; it's meant to be invisible and ubiquitous in our lives. The line between what organizations want and what they can do may come down to Intelligent Platforms.

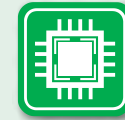
### Beyond the Cloud



### Competition vs. Culture



### Intelligent Platforms





# Strategy

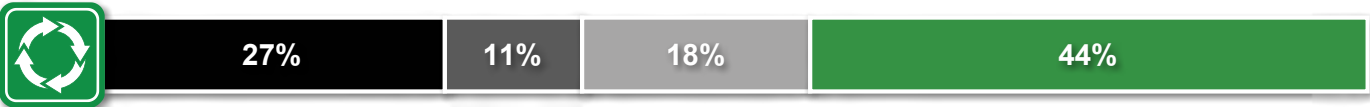
Without an Enterprise Strategy for the HR technology stack, organizations continue to spend more on total HR technology expenditures per employee, reduce the overall number of employees they can serve per HR resource, and more importantly are viewed as having a less strategic HR function when compared to organizations with an Enterprise Strategy. Strategy can be both a key component when it comes to a technology environment and a significant opportunity for many organizations, and more than 40% of organizations are working to improve or develop a new Enterprise HR Systems Strategy this year. Strategy has become a key issue for Top Performing organizations, as well as those organizations evaluating their HR Technology environments.

Figure 1: Organizations with Enterprise Systems Strategies in these Areas

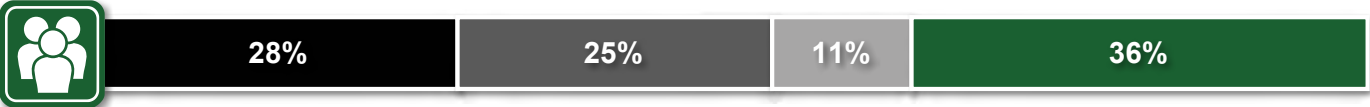
## ENTERPRISE FINANCE SYSTEMS STRATEGY



## ENTERPRISE SUPPLY CHAIN SYSTEMS STRATEGY



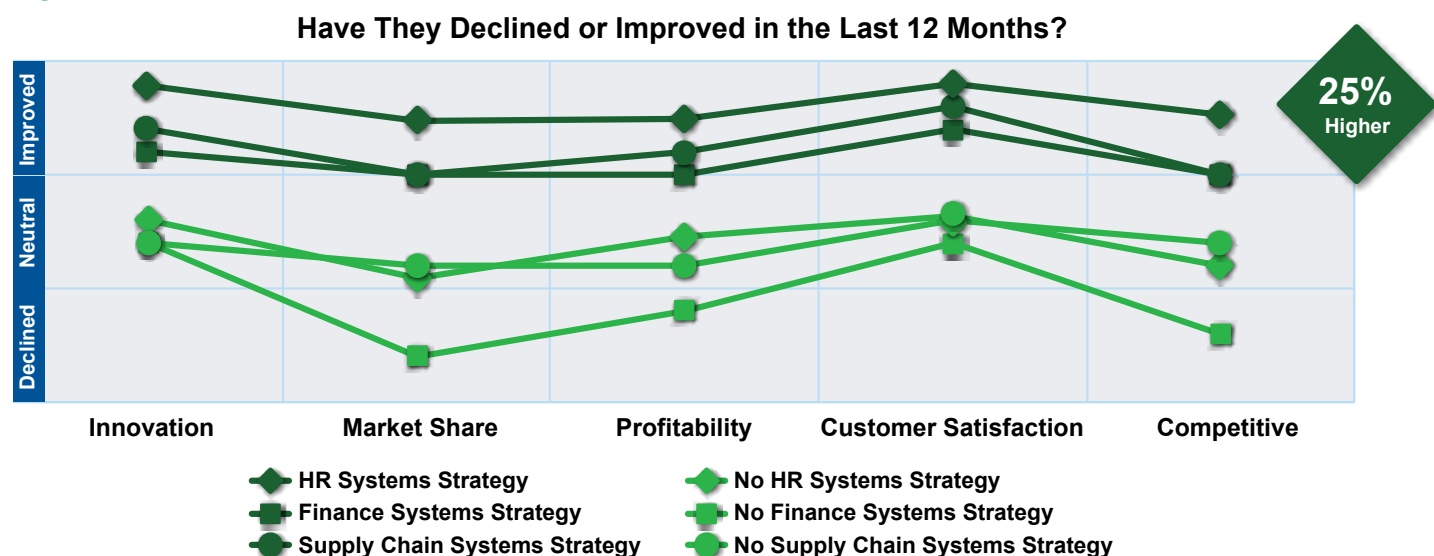
## ENTERPRISE HUMAN RESOURCES SYSTEMS STRATEGY



No Plans    Developing    Rarely Updated    Updated Regularly

When compared with other support functions such as Finance and Supply Chain, HR Systems Strategies are the least likely to be adopted, but our data shows that when strategies are in place they are highly correlated with business outcomes. Strategies, including standards and guidelines for HR System integrations, as well as data risk and security management efforts, garner even greater outcomes. HR has a real opportunity as it is often the first enterprise function to deploy consumer-based Cloud technology within an organization. As Finance and Supply Chain functions begin to take their own journey into the Cloud, HR can provide guidance and leadership in this area.

**Figure 2: Business Outcomes Assessed**



## Culture

From a cultural perspective, organizations spend large amounts of time focusing on the desired outcomes achievable using HR processes and technology. We've identified four specific HR outcome models this year—Talent Driven, Data Driven, Socially Responsible, and Top Performing organizations—to offer insight into how focusing on outcomes can change an organization's decisions concerning HR processes, people, and technology. In a world of constant digital change, organizations may need to completely rethink their perception of technology investments. Historically, technology was viewed as a capital investment that would increase efficiencies and reduce total HR costs, with implementations viewed as temporary setbacks with fixed project timelines. In today's Cloud-based environments many organizations have removed overall capital investments and changed finite projects into continuous Change Management models. Organizations may pay more for their new Cloud-based technologies; however, they also reap greater talent and business outcomes from improved decision making.

Cloud-based technologies also assist organizations in the development of valuable relationships with their workforces by clearly defining expectations and value propositions within a personalized employee experience. Employees and contingent workers around the globe have higher expectations of employers and expect constant access to their own employee data and personalized benefits provided by the organization. The increasing focus on initiatives such as Diversity, Pay Equity, Employee Engagement, and Leave Policies requires organizations to take both a technical and human approach. Today's employees value Social Responsibility, trustworthiness, and transparency, and HR technology and processes can play a major role in helping organizations navigate this new era of openness and personalization.



# Technology

Now that we've crossed the threshold with more than 50% of HR technology environments deployed in Cloud/ Software-as-a-Service (SaaS) environments, foundational technology questions are refocusing on the Enterprise Cloud conversation. Major HR technology transformations are on the decline by 26% this year, as organizations begin to shift strategies from basic HR technology functions to tools that will differentiate the experience of employees and provide greater insight to leaders.

The vendor communities continue to increase investments in Cloud architecture, with the goal of building up data repositories to support benchmarking—and eventually intelligent platform capabilities. This year's Survey data shows a 40% increase in plans for organizations moving non-HR Technology to Cloud environments. The key questions for many organizations come down to cost, security, and long-term value propositions weighed against executive expectations for better data, mobile access, and more automated efforts which a full Cloud solution might bring.

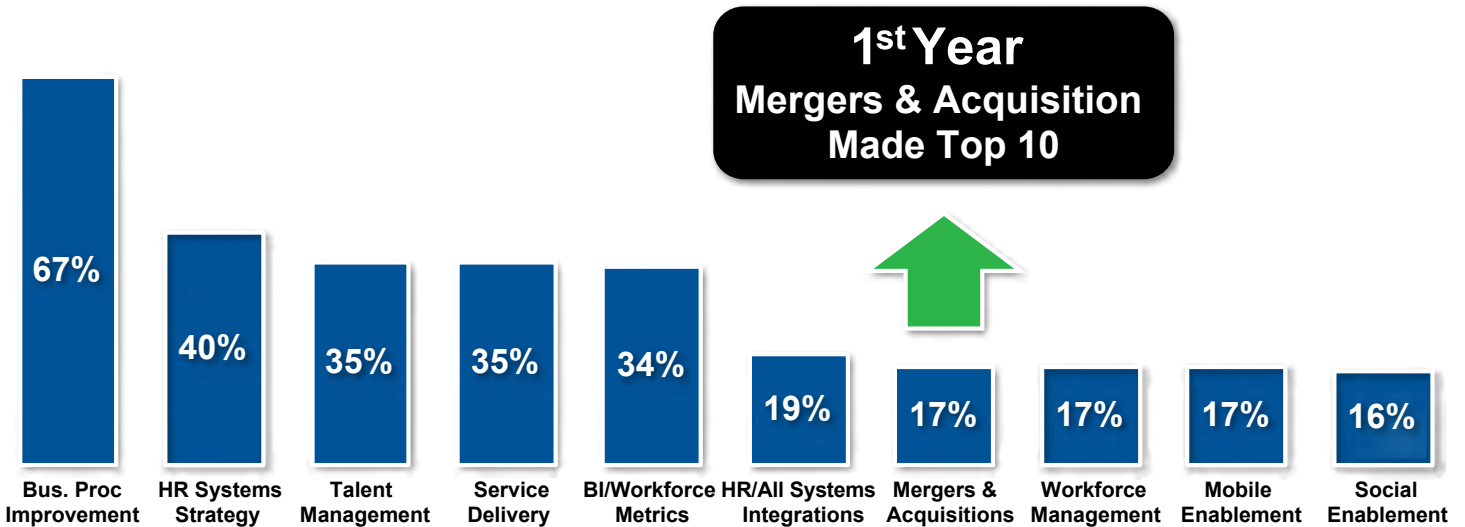
HR Technology buyers have been the beneficiaries of a highly competitive HRMS market and, as the gaps begin to close on UX, what are the next areas of focus for organizations looking to optimize their HR investments? Cost was reported to be the most frequent reason organizations gave Low Vendor Satisfaction scores this year, while Service and Support was the most frequent reason for High Vendor Satisfaction ratings. Employees are becoming consumers of HR services and HR is seeing a shift in its role from administrator to service provider. For organizations looking to improve UX, increase employees served, and add value to their HR technology investments, adoption of HR technology is key.

Innovation comes in many formats, the least of which is simply **new and bigger** technology. The next generation of technology is being designed to inform our decisions and simplify our activities; it is meant to be invisible and ubiquitous in our lives and expected to perform as an intelligent system. 76% of organizations see the value in Predictive Analytics, but only 30% are doing anything related to Predictive analytics. The line between what organizations want and what they can do may come down to Intelligent Platforms. The concepts underpinning these technologies—social individualism and perceptive technology can provide some level of intelligent decision-making support, these technologies are here to stay and are worth the conversation.

# Holding Steady Through Change

Each year, we ask organizations about top HR Technology initiatives—the areas in which they plan to spend 25% or more of their time and resources in the coming year. Business Process Improvement continues to be the number one area in which organizations invest. Today, 67% of organizations are planning a major Business Process Improvement initiative. The focus and time organizations plan to spend on Business Process Improvement efforts has continued to expand over the last four years.

Figure 3: Top 10 HR Technology Initiatives



We might question why two-thirds of the 1,300 organizations we analyzed are vested in making changes in their processes; however, our research shows that organizations with higher-than-average levels of overall Process Maturity see several benefits over time. These organizations report higher overall Vendor Satisfaction (VS) and technology UX scores, improved HR and Talent outcomes, and higher levels of technology adoption.

For the last five years, the following top initiatives have remained the same. This initiative set has proven to be at least a 50% higher priority than the next nearest set of initiatives:

- **Business Process Improvements** and innovations
- **HR Systems Strategy** establishes or refines an HR application strategy that supports business strategy
- **Talent Management Applications** implement or change applications including Recruiting, Performance, Learning, Compensation, or Succession Planning
- **Service Delivery Improvements** improve the UX through ESS/MSS or implement portals or Help Desk solutions
- **Business Intelligence/Workforce Metrics** initiatives

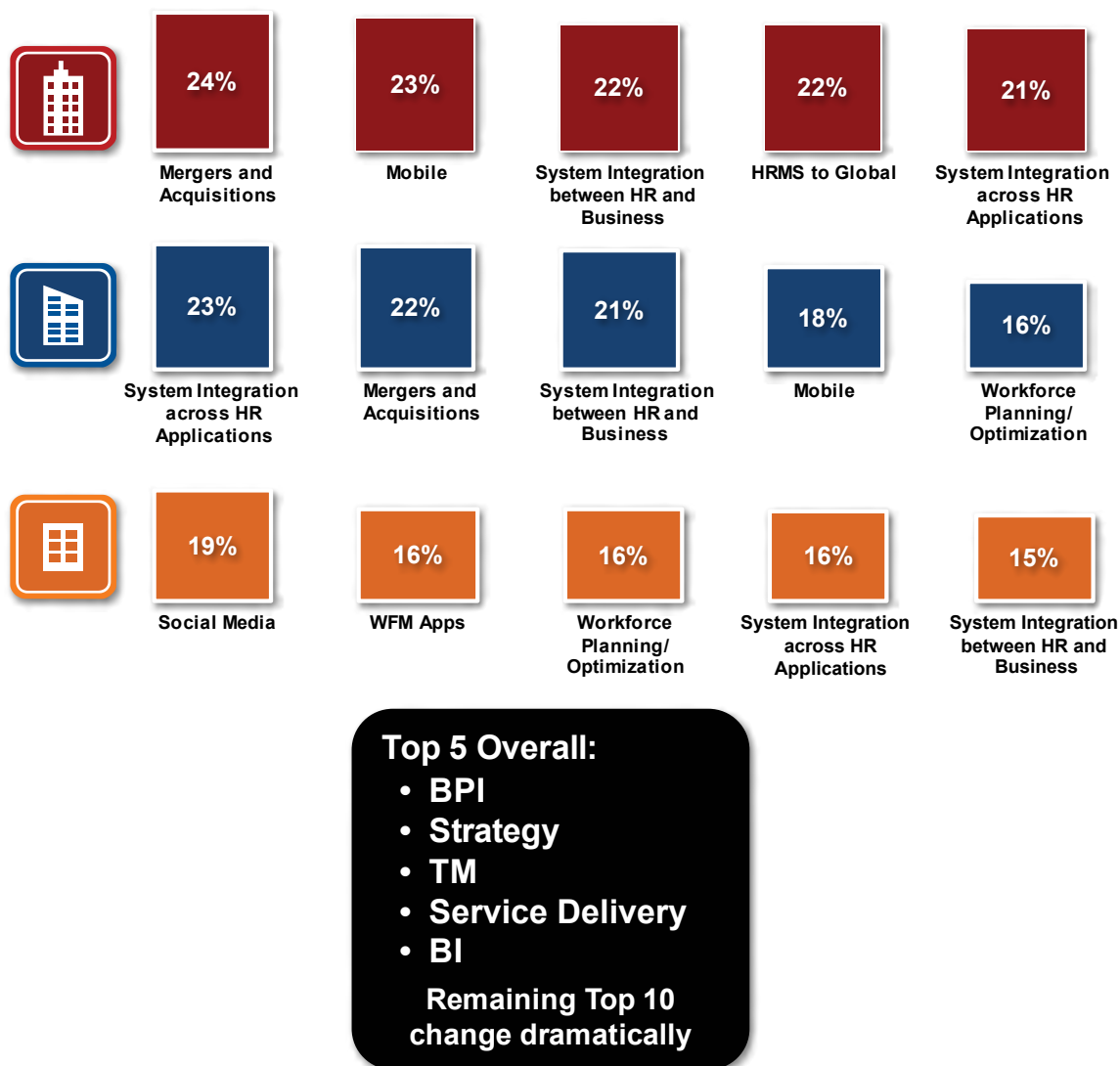
These five initiatives remain the top five across all organization sizes and industries, although we do see some minor differences in their placement; for example, the third major initiative for Large organizations is BI/Workforce Metrics rather than TM applications.

Going beyond the top five initiatives, we see that the most dramatic changes in initiative priorities might be considered the discretionary initiatives—those that are more aligned to unique challenges faced by organizations of different sizes, industries, or approaches to business/mission outcomes. These discretionary initiatives continue to trend up or down each year, such as WFM which has continued to decline over the last several years, while Workforce Planning, Mobile Enablement, and Social Enablement initiatives have steadily increased.

Integration between HR applications, or between HR and non-HR applications, into HR environments continues to be an issue requiring both time and resources for many organizations. One standout from this year's Top 10 HR Technology Initiatives, seeing its first year in the limelight, was Mergers and Acquisitions. Last year, less than 10% of organizations in aggregate were planning on investing major resources or time in this area, but this year that number jumped to 17% and was even higher for our Large organizations.

We've broken out initiatives six through ten by organizational size in the figure below. When looking beyond the top five initiatives, we see that these Large organizations are facing very different challenges than Medium and Small organizations, and issues such as expanding an HRMS globally and Workforce Planning become critical when looked at through the lens of size.

**Figure 4: Top Initiatives by Size**



# 20 Years of the HR Systems Survey: Looking Backward and Forward

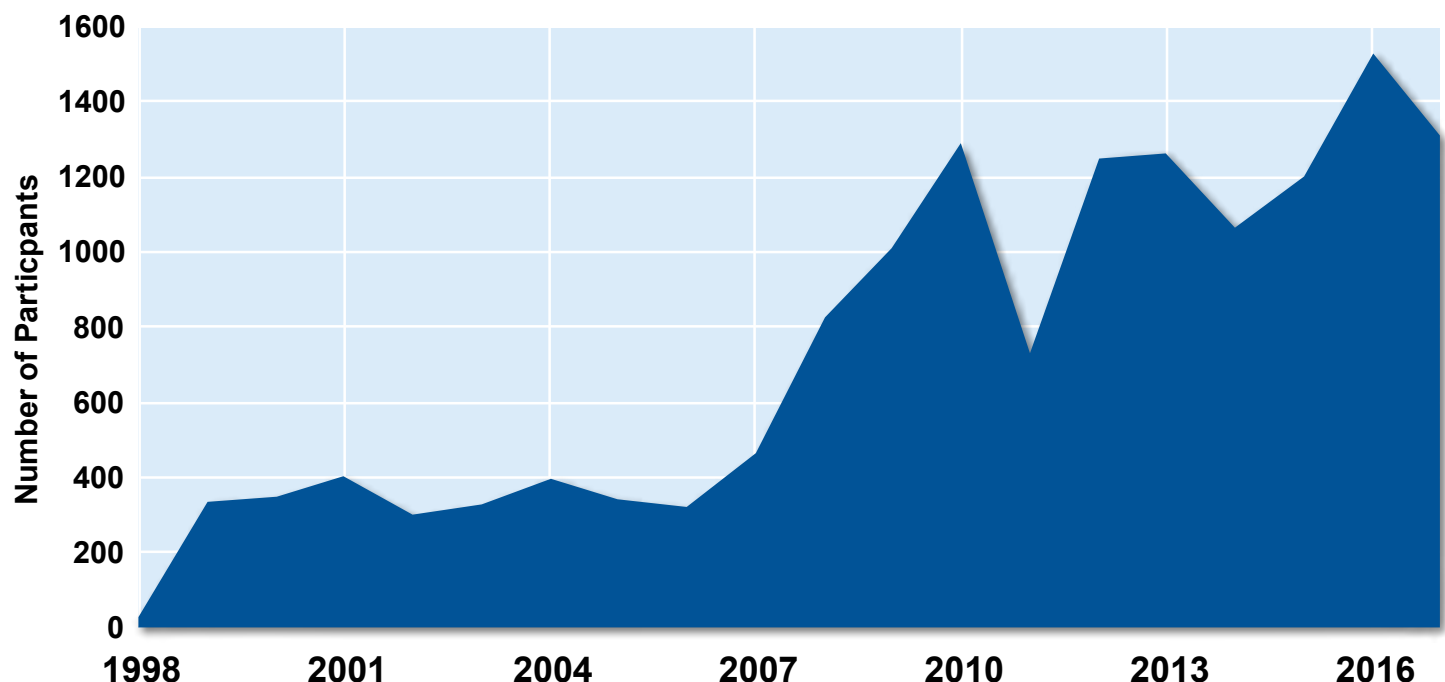
Twenty years ago, Alexia (Lexy) Martin, the first author of the HR Systems Survey, embarked on a journey to understand a new and emerging trend of self-service HR: the idea of giving candidates, employees, and managers access not only to data, but also to tools that they could use to help make decisions and improve their work environments. The Internet was in a state of infancy, and most organizations were still working through mainframe versus client-server application discussions. With Y2K just right around the corner, and all of the anxiety and optimism coming with the start of a new century, the industry was ripe for change.

The first iteration of what we now know as the Sierra-Cedar HR Systems Survey White Paper was released by The Hunter Group under the title of **Human Resources Self Service: One Year Later – 1997**, a cutting-edge piece of research that included ten areas of focus and analyzed data from just twenty-five organizations.



Today, we survey over 1,000 individual organizations on an annual basis, and over the years we've captured data from almost 14,000 individual organizations which cover 234 million employees in a research effort that has spanned the last 20 years. Our hope is that this collaborative effort has made a difference in how organizations viewed their enterprise HR Technology environments and the role technologies play in their employee's work and lives. We hope to continue this tradition of providing insight for the HR Technology space for years to come.

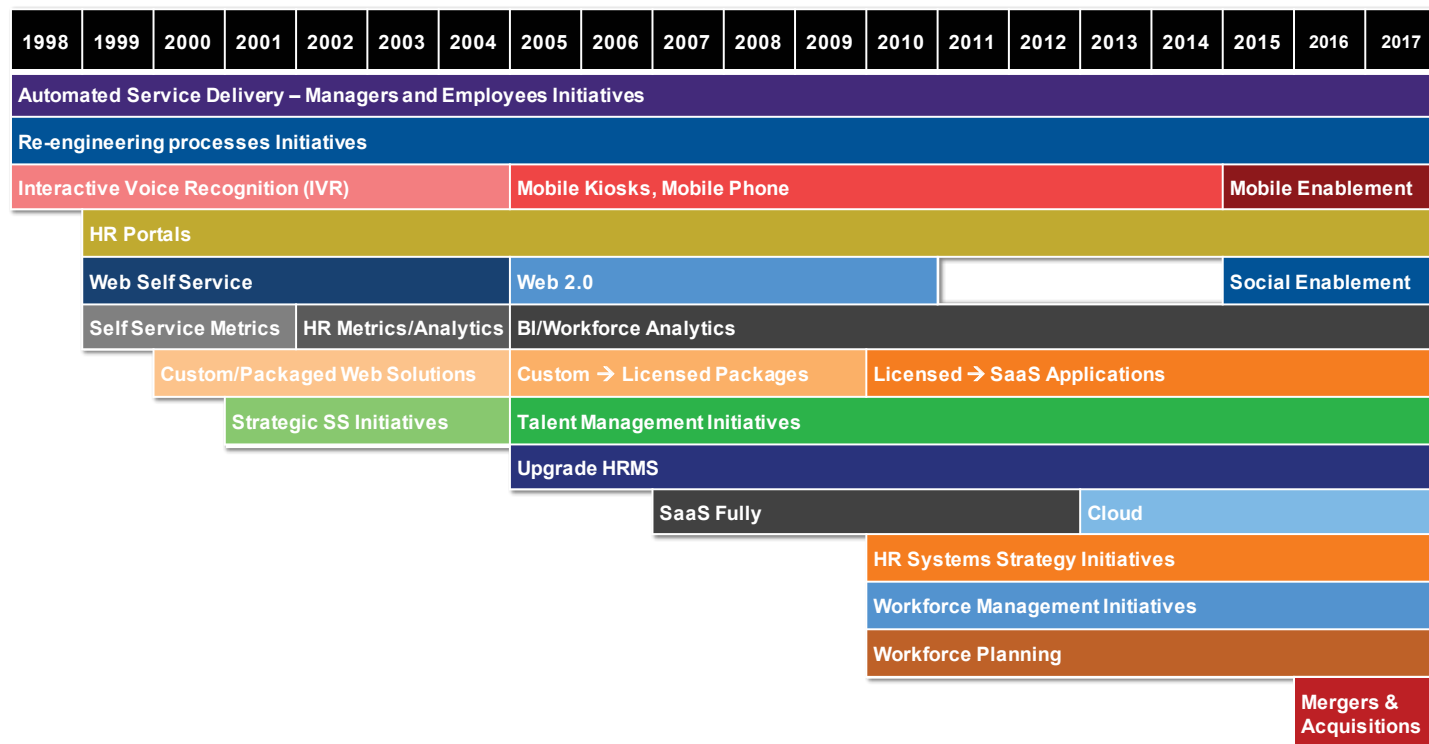
**Figure 5: 20 Years of HR Systems Survey Participation**



Each year, we expand the White Paper to include additional areas of focus and find new ways to analyze the data to understand what's new and trending, what remains constant, and what's going away in terms of current HR technology. Throughout the report, we work to share implications and recommendations that speak to both practitioners and vendors alike.

Over the next year, we plan to dive into 20 years of data and provide insights on application adoption growth, resourcing strategies, vendor changes, and overall findings from 20 years of annual research. For this paper, we have chosen to look back at a timeline of when certain initiatives or topics became major elements in the Survey to see just how far we've come.

**Figure 6: 20 Years of Major HR Tech Initiatives**



To help us reflect on the past 20 years, we asked our participants to share their thoughts on this research and what brings them back, year after year. We learned that organizations continue to complete the Survey because they wish to give back to the industry, and the Survey provides value for their organizations as well as to the individual participant.

This research couldn't be done without a team, and for those of us who work on this project daily, we were humbled by the participants' feedback. We provide research that helps organizations make informed decisions for their employees, as well as their companies. Here at Sierra-Cedar, we believe that the Survey and White Paper provide an opportunity for the industry members to pull together, support each other, and give back to help everyone grow.

As we celebrate a milestone for this research, we acknowledge the technical and cultural changes encountered along this journey. Technology integrates into every aspect of our world, our work, recreation, and social lives today—and yet in 1997, the first Harry Potter book was listed on the recently launched Amazon.com, Netflix was brand new, and Google was still a Stanford research project. When the first Survey was launched, no one had ever heard of Wikipedia, Facebook, or the iPhone, and the first recorded quote using the term “social media” was in reference to AOL.

**To illustrate the evolution of Human Resources over the last 20 years, here are some concerns expressed by early Survey participants in the first Human Resources Self Service: One Year Later – 1997 report:**

**Some organizations are still not sure whether to implement some of these applications. For example:**

- **Benefit enrollment:** “By keeping our benefit plans stable and standard, only [a small percent] of our workforce needs benefit enrollment. It’s just not a high priority application.”
- **Electronic paystub and benefit statements:** “We will not provide these online because we believe these services should go to the employee’s home for family review.”
- **Life events:** “We want to provide this because it makes it easier from the employees’ perspectives. But we don’t have the design strength to develop this approach.”
- **Skill management:** “We want to do this, but cannot get agreement on what skills should be included.”
- **Performance evaluations:** (from a large, multidivisional company) “We just have too much variation in this process.”
- **Workflow:** “Work should not flow. We will take out multiple approval levels and empower the manager to make the decision.”

Looking back with awe and amazement at the technical accomplishments of this industry, we are ever mindful that HR still exists as a very personal experience for the individual. On the corporate side, HR Technology provides the vehicle through which organizations streamline processes, effectively allocate resources, and innovate within their HR function.

For the workforce, our personal lives have become more integrated with our work lives, illustrating the point that when HR Technology works at its best, it provides the framework through which balance can be achieved for everyone. Looking forward, HR Technology may be facing its greatest challenge yet: the future will not be judged by cost savings and ease of use, but rather by value creation and workforce experiences. In this new world, transparency will be expected and yet trust is paramount—and the responsibility for enterprise communications may fall to tomorrow’s HR Technology environments.

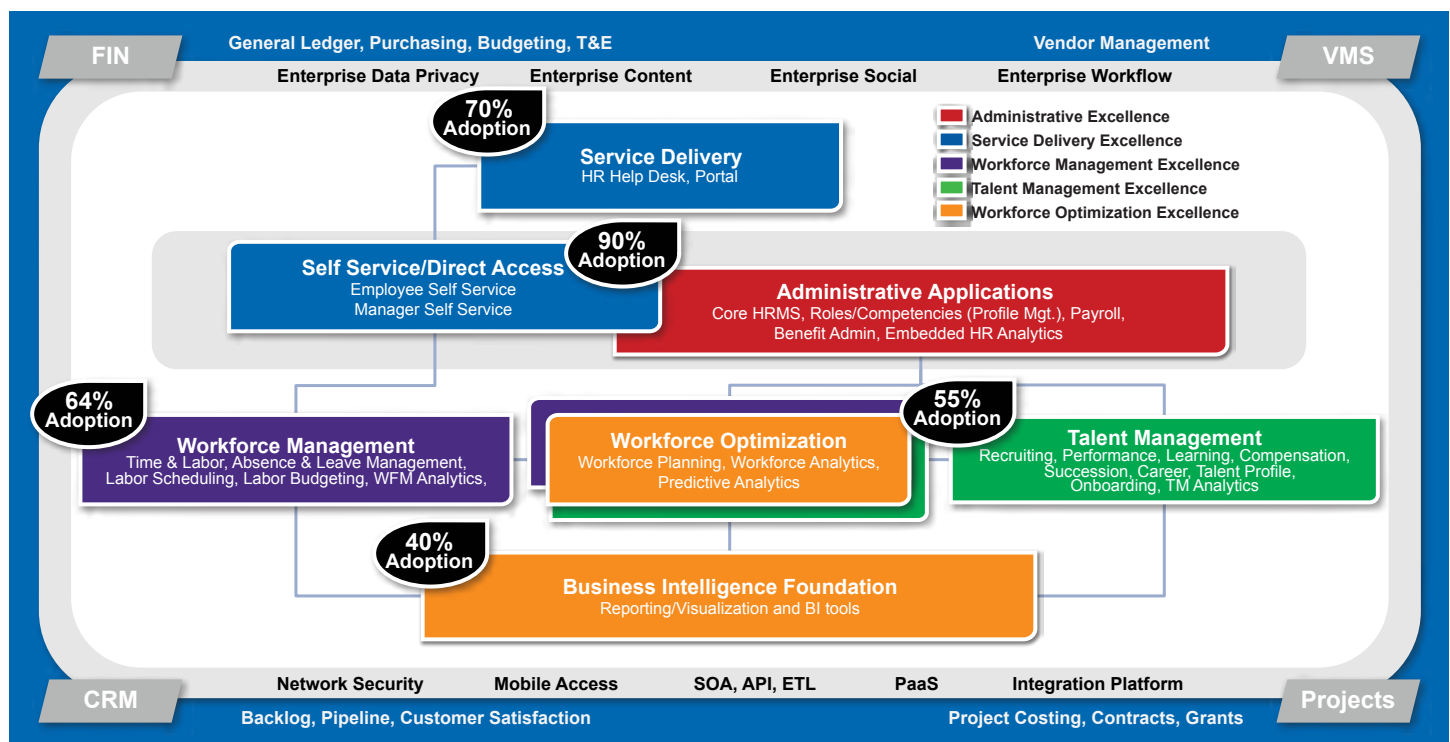
What do you think the next twenty years will hold for HR Technology and our workforces? The next two decades of innovation spreads out before us, and although we cannot be certain exactly where the industry will go, we must make the choices possible to promote positive change in our work, culture, and personal lives.

# Sierra-Cedar Human Capital Management Blueprint

## Sierra-Cedar HR Systems Survey and HCM Blueprint

For the *Sierra-Cedar 2017–2018 HR Systems Survey*, we asked questions about five primary categories and thirty-one individual application areas, not counting emerging technology areas that are detailed in the **Sierra-Cedar Human Capital Management (HCM) Blueprint**. The Survey also gathers details concerning HR System Strategies, processes, vendors, implementation, Change Management, HR Technology expenditures, supporting resources, and Emerging Technologies.

**Figure 7: Sierra-Cedar HCM Application Blueprint**



Over the last 20 years, we've seen a roadmap of application adoptions emerge as we follow respondent organizations through their annual plans for implementing HR applications. Some organizations have a clear strategy for how they purchase and implement their HR systems; others exhibit an organic-growth model based on immediate needs and funds.

The Sierra-Cedar HCM Application Blueprint captures the most common path an organization generally follows when it adopts HR solutions over multiple years; it further embodies our perspective on how to optimize an organization's HR solutions within the context of its enterprise systems environment. Finally, it looks at how organizations connect these solutions to attain the desired levels of excellence required to achieve organizational goals.



## Starting Place: Administrative Applications

Most organizations start their HCM application journey by deploying Administrative Applications, primarily in the form of a Payroll solution—over 98% of our HR Systems Survey respondents have a Payroll solution in place. Most often Payroll solutions are implemented with an HRMS, but some organizations do leverage a Payroll system alone—often in place of an HRMS until their needs expand. Over 92% of surveyed organizations currently have an HRMS in use. For most organizations, the HRMS sits at the heart of their HR and workforce data management needs and shares data with multiple HR applications.



Once an organization reaches a certain size and complexity, an HRMS becomes necessary to manage the needs of the entire workforce, and we see a trend with increasingly smaller organizations finding a need to implement a solution. The Survey data shows that many organizations with just over 50 employees have plans to implement an HRMS in the next 12 months. Those organizations without an HRMS are primarily very small organizations, non-profits, and in some cases franchise organizations.

Other Administrative Applications adopted by organizations include Benefits Administration and increasingly, Embedded HR Analytics. The Benefits Administration application, also highly adopted, is fully outsourced more than any other application—over 14% of organizations leverage a Total Benefits Outsourcing (TBO) solution. Today, most Administrative Application packages include some level of embedded analytics.

## User Experience, HR Service Delivery Applications



When organizations have Payroll, an HRMS, and Benefits Administration in place, they naturally achieve some level of Administrative Excellence for their HR function. Typically, they then focus on self-service applications including Employee and Manager Self Service and other Service Delivery solutions such as an HR Help Desk and Portal technologies. We see Service Delivery tools, general self service, and Manager Self Service continuing to expand and change in the next few years, in part due to the need to keep up with workers' expectations for consumer and Mobile technology that can be accessed where and when it is needed to promote a positive User Experience (UX). Newer, Cloud-based HRMS

applications automatically come with some level of employee and manager self service, while emerging self-service experiences may also include candidates, talent pools, and contract workforces. Organizations that focus on this area of application adoption achieve a high level of Service Delivery Excellence and often experience an increase in the number of people each HR administrative role can support across an organization.

## Business-Driven Applications, Workforce Management, and Talent Management

For many organizations, WFM and/or Talent Management application adoption follows the Administrative and Service Delivery solutions. WFM tools are used to help get the right person, with the right skills, in the right place, at the right time, at the right cost. Talent Management applications are specifically used to help attract, develop,



and retain Talent. Each of these technology categories has multiple individual applications that encompass a total solution. Organizations spend considerable time working towards Talent Management and WFM Excellence—but overall, these two areas work hand in hand, and many organizations find they need to invest equally in both areas to truly achieve their goals for Workforce Optimization.

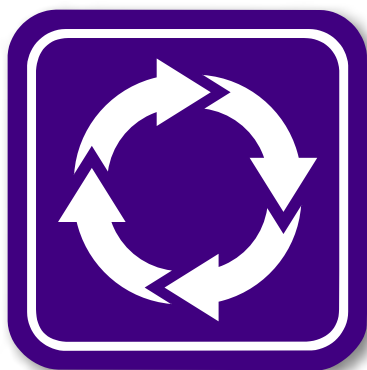
## Foundational BI and Workplace Optimization

Over the past ten years, we have seen organizations with high levels of adoption in other HR system areas focus on bringing all their transactional and process information into a single environment for data analysis efforts. Today, we see organizations investing in a combination of enterprise platform technologies designed for data analytics, along with embedded solutions across each of the primary HR technology categories. Many continue to use traditional applications such as Excel, report building technology, and statistical tools.



Finally, in the new era of Big Data, organizations are leveraging new visualization tools, as well as sophisticated dedicated HR/BI solutions that mix services and analytics technology together to analyze and visualize large amounts of enterprise data. The goal with all of these solutions is to provide wider access and insights into HR data that will help optimize the workforce efforts, as well as scenario planning, workforce planning, and predictive analytics that will provide an organization with the insights needed to make critical decisions for the future.

## No System is an Island, Connecting Enterprise Data and Workflows



As organizations build out their own HCM blueprints, they quickly realize that HR solutions cannot exist separately from enterprise data privacy standards, content, social environments, and workflow solutions. Connecting HR systems to enterprise environments helps embed HR solutions into everyday work environments and these worlds begin to look seamless.

To accomplish seamless connections, organizations need to think about their network security; access to devices such as Mobile, PC, and kiosk; data connection points provided through Service-Oriented Architecture (SOA) tools; Application Program Interfaces (APIs); Extract, Transform, and Load (ETL); and Enterprise Integration Strategy (EIS) and platforms. A recent addition to this list of enterprise connection protocols is Platform as a Service (PaaS) environments that allow for further broadening of the enterprise reach through useful marketplaces and custom-built applications and connectors. It is also important to remember that these HR technologies often coexist in a larger ecosystem that provides access to other data sources such as Finance or Operational data systems which, when integrated, then provide data for the best possible workforce analytics support.

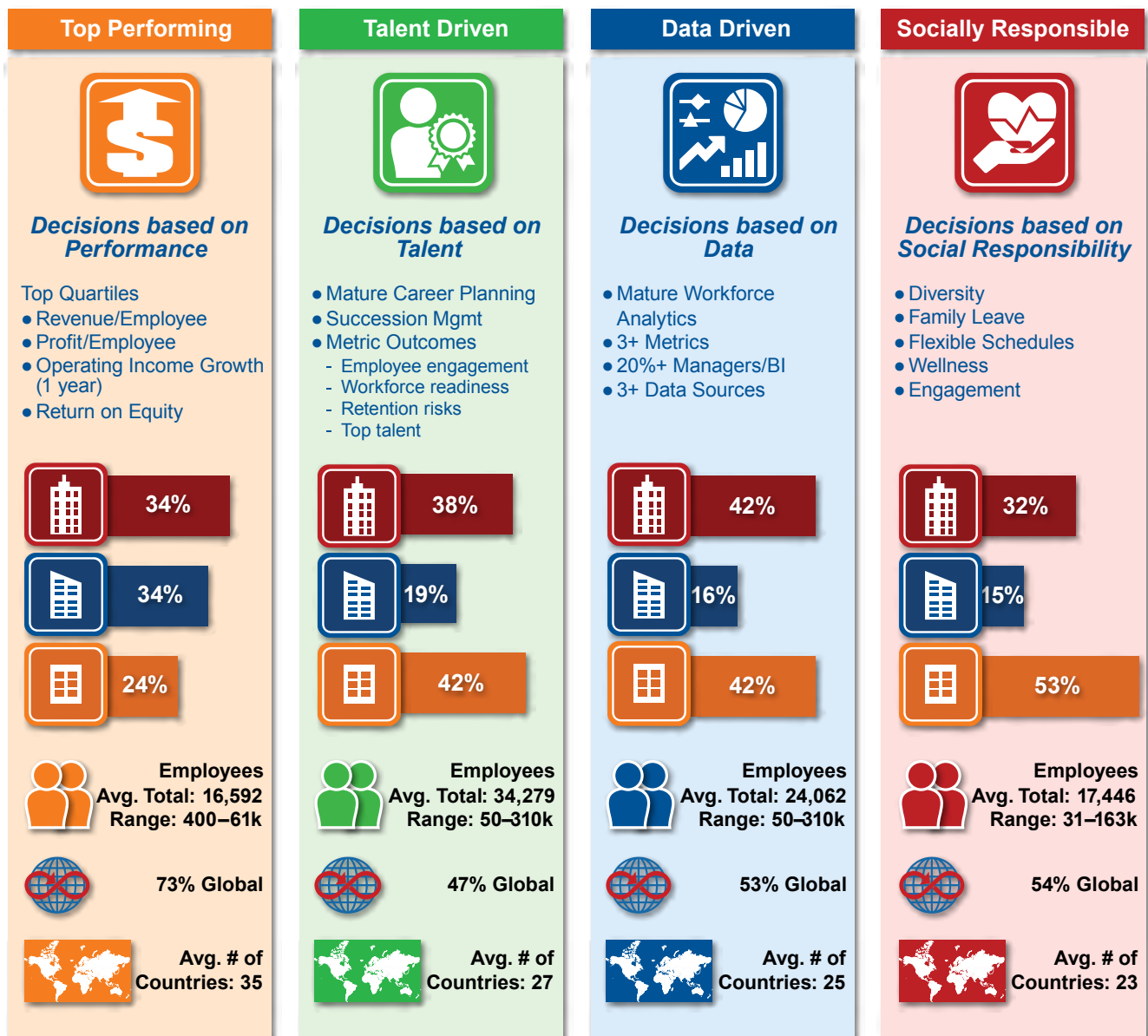
# Outcome-Based HR

Each year Sierra-Cedar asks organizations to tell us whether a series of HR, Talent, and Business outcomes have declined or improved over the last 12 months. In addition to these outcome questions, we independently gather financial metrics for all publicly traded organizations responding to the Survey. We then compare multiple organizational aspects and characteristics across the outcomes matrix and financial data. This year we've defined four different types of organizations based on criteria that we find influences their decision-making process:



Each of these organizations creates its own level of innovation, from process, to people, as well as its technology adoption strategies. Our goal is to share the concept that there are multiple ways to reach business outcomes, while staying true to the culture and capabilities of an individual organization. Figure 8 shows the key characteristics of each type of organization used for this analysis of each type of organization.

**Figure 8: Top Performing, Talent Driven, Data Driven, and Socially Responsible Organizations**



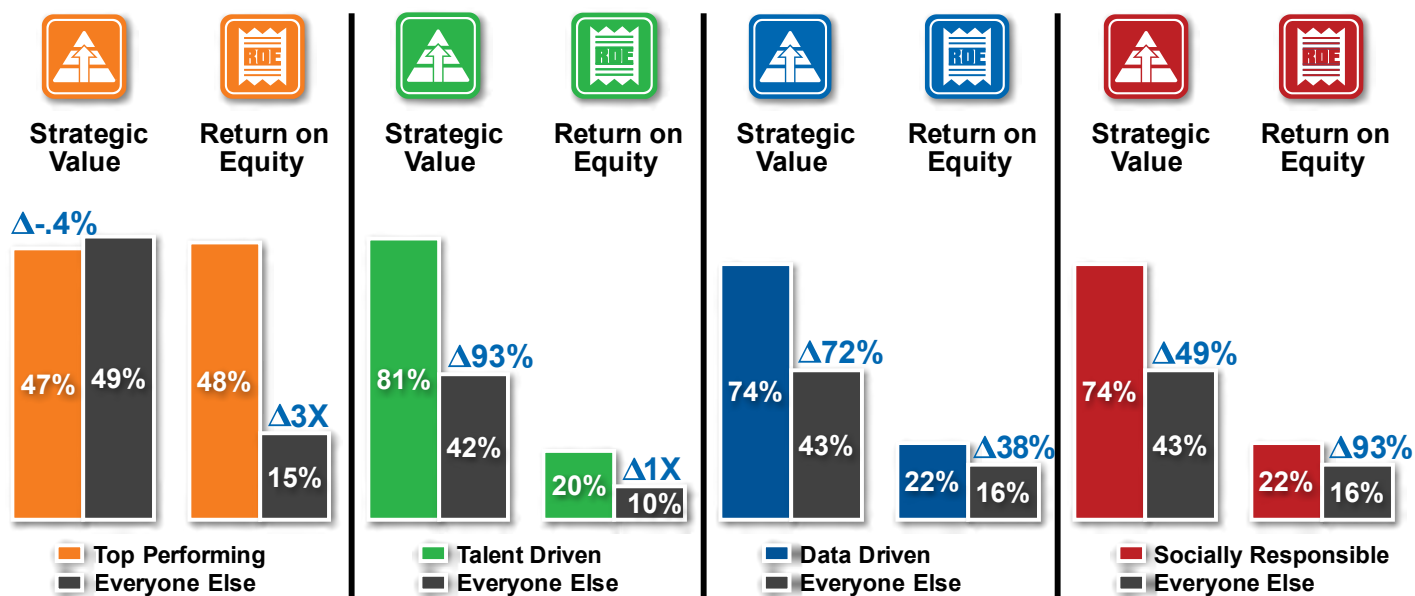
## HR Focus, Outcomes, and Impact

Once we selected our benchmarking index questions, and determined that the sample size was large enough for analysis, we then identified our comparison group. When participants who answered questions for Outcome-based organizations—or in the case of Top Performers, all publicly traded organizations—did not fall into the categories of Top Performing, Talent Driven, Data Driven, or Socially Responsible due to their responses to the index questions, we labeled them as a comparison group. Once we indexed and categorized our Outcome Driven organizations and non-Outcome Driven organizations, we were able to compare them in multiple ways:

- Financial and Business Value Outcomes
- Key Practices (process, technology, and people)
- HR, Talent, and Business Outcomes

The first analysis we undertake involves reviewing financial metrics and the business leader's perception of the HR function's strategic value to its organization. For a fundamental financial metric, we select return on equity (ROE) which provides the standard basis for how efficiently and effectively an organization is run.<sup>1</sup> Since our Top Performers were selected for their financial outcomes, we would expect those outcomes to be higher on average especially when compared to Non Top Performing organization. However, showing the level of difference and the comparison across other factors outside of the selection criteria sheds light on further differences. The chart below shows the comparison analysis for these factors across our four outcome-based organizations.

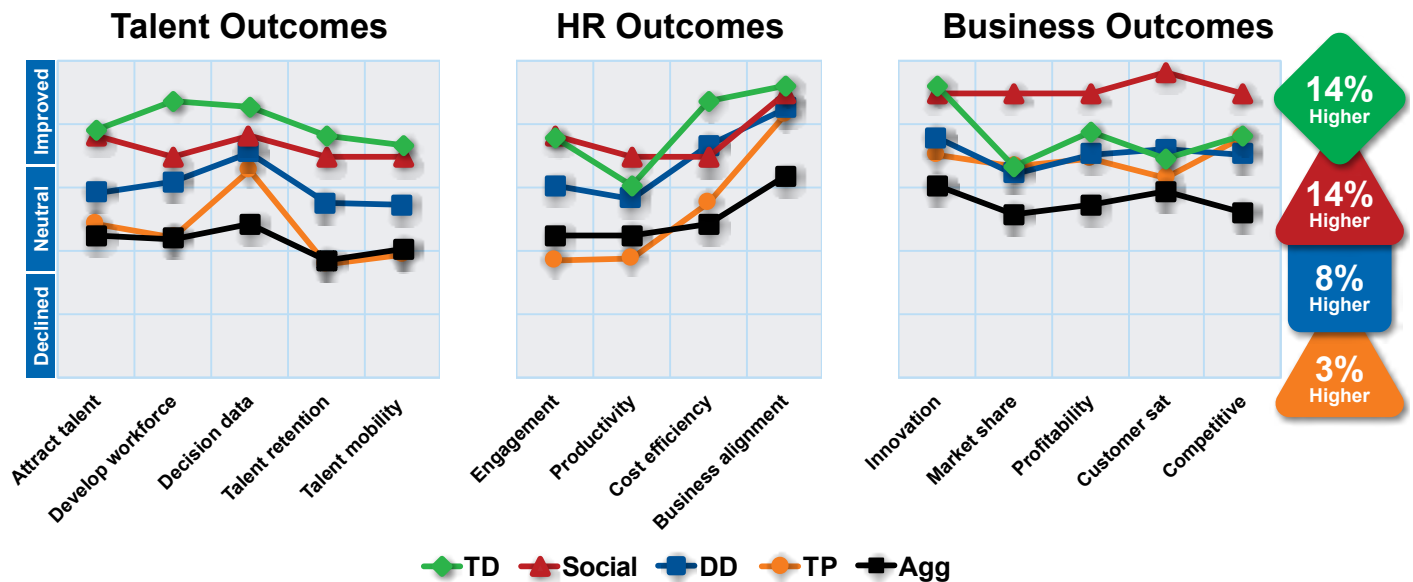
**Figure 9: Strategic Value**



We perform our next analysis across our Business Outcomes matrix, and here we run a comparison against our aggregate data set. Specific outcomes were not included in index selection questions; rather, we looked for practices that were believed to have an impact on various outcome areas like Talent or HR. It is in this analysis that we see our biggest difference across the four groups. Here our Socially Responsible, Talent, and Data Driven organizations achieve considerably higher outcomes than our aggregate and even Top Performing organizations, particularly in business outcomes that are viewed as outcomes that support the long-term sustainability of an organization.

<sup>1</sup> Return on equity measures an organization's success at generating profits from every unit of shareholders equity, such as that allocated for HR Technologies. A company that earns ROE in excess of its cost of equity capital adds value.

**Figure 10: Achieving Outcomes Requires Focus**



Overall, we found that the outcomes for both Socially Responsible and Talent Driven organizations reached the greatest heights, as these organizations report outcomes 14% higher than the aggregate audience. Data Driven organizations reached 8% higher, while outcomes for Top Performers reached just 3% higher than the aggregate data set.

This analysis provides valuable insights on the type of organizations you may look to benchmark against over time. Depending on your own organization's business model and culture, you may find that certain approaches to reaching your desired outcomes are more realistic, and in some cases may provide better long-term success.

## Lessons from the Outcome Driven Organizations

The practices of Outcome Driven organizations provide valuable insight into how they maintain their advantage in today's insight-driven world. This year, we identified the most highly correlated factors with each of these Outcome Based types of organizations:

**Figure 11: Top Statistically Significant Factors across Various Outcome Types**

Top Performers	Talent Driven	Data Driven	Socially Responsible
<ul style="list-style-type: none"> <li>Shared Services function</li> <li>Centralized: <ul style="list-style-type: none"> <li>Data Privacy standards</li> <li>Management of Labor Regulations</li> <li>Benefits</li> <li>Employee Relations</li> <li>WF Analytics</li> </ul> </li> <li>HRMS with Portal Environments</li> <li>Use Embedded WFM Analytics applications</li> <li>Major cross-HR application integration initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Use Machine Learning</li> <li>Use Mobile HR</li> <li>Use Sentiment Analysis</li> <li>Integrate HR data with marketing and benchmarking data</li> <li>Use BI to increase innovation</li> <li>Very Large</li> <li>Provide BI access to all employees</li> <li>Operations/sales Integration influences TM Suite selection</li> <li>Use Wearable technology</li> </ul>	<ul style="list-style-type: none"> <li>Transformational WF Planning, Labor Scheduling, Absence, and WF Reporting processes</li> <li>Use Mobile HR</li> <li>Provide BI access to all employees</li> <li>Use Machine Learning</li> <li>WFM implementation includes WF Labor Budgeting Applications</li> <li>Use BI to increase innovation</li> <li>Transformational HR Recordkeeping</li> </ul>	<ul style="list-style-type: none"> <li>High Value for Voice-based technology interfaces and IoT</li> <li>High % of common HR processes</li> <li>HR Reporting metrics: demographics, diversity, headcount, and regional data</li> <li>Use of Employee Self Service</li> <li>Use of Game-Based Recruiting</li> <li>Use of Marketing Campaign Management</li> </ul>

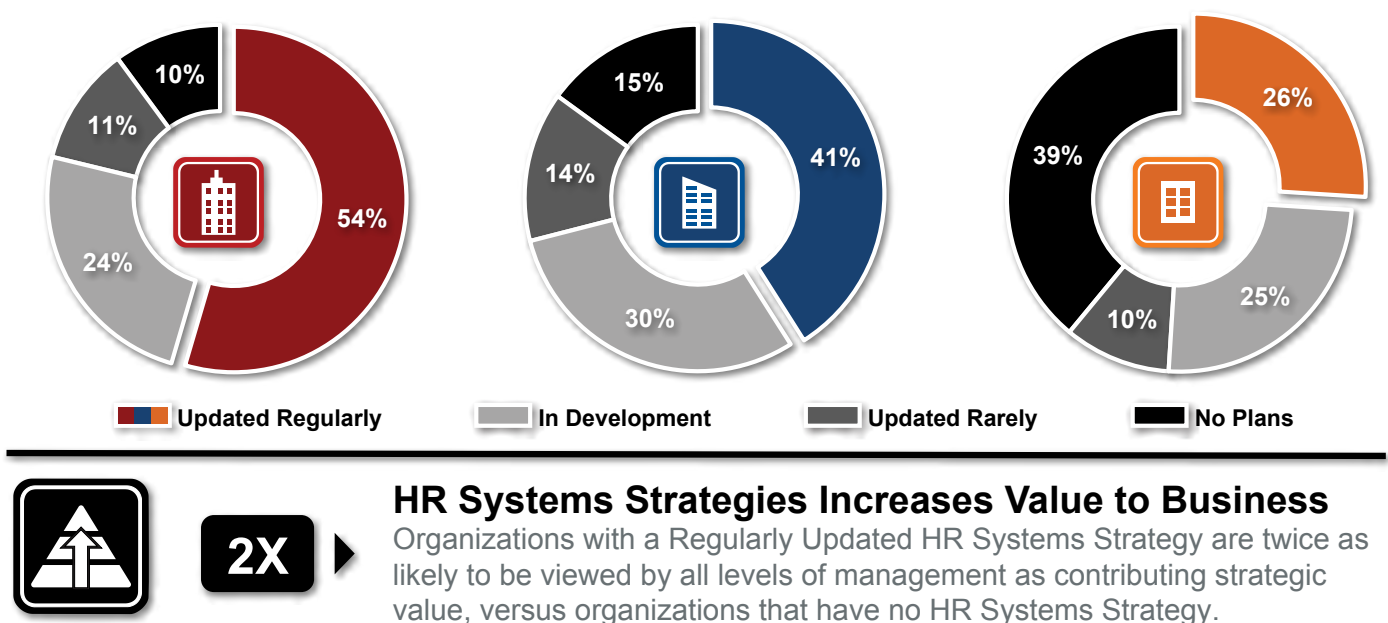
# HR Systems Strategy and Culture

## Continued Focus on Enterprise HR Systems Strategy

As HR Systems shift from administrative support tools to strategic instruments finely tuned to engage and optimize the workforce, it becomes necessary to have an Enterprise HR Systems Strategy for the adoption, integration, and configuration of these solutions.

In aggregate, 31% of organizations have a regularly updated Enterprise HR Systems Strategy, while another 22% have one in development—data similar to last years' findings. This year, we share insights regarding how organizations of various sizes approached their Enterprise HR Systems Strategies. Small organizations are the least likely to have a regularly updated Enterprise HR Systems Strategy; however, when combined with those in development and those with rarely updated versions, over 50% of Small organizations are engaged in some way with an Enterprise HR Systems Strategy.

**Figure 12: HR Systems Strategies by Size**



Large and Medium organizations make up the bulk of organizations that have a regularly updated HR Systems Strategy or are working on developing one. Those organizations are twice as likely to be viewed by internal business leaders as contributing strategic value to their organization, highlighting that as organizations increase in size and complexity, a strategy that outlines the future can influence or direct business outcomes.

This year, 40% of all our responding organizations and 64% of our Top Performing organizations are investing both time and resources in a major HR initiative to create or improve an Enterprise HR Systems Strategy. Talent Driven and Data Driven organizations are more likely to have a regularly updated Enterprise HR Systems Strategy than other organization types, which allows them to be more aligned with business needs when making technology purchases and integrating data.

# Elements of an Enterprise HR Systems Strategy

We are often asked, “What is generally included in an Enterprise HR Systems Strategy?” and, “How often are they reviewed and adjusted?” Most organizations tell us that their Enterprise HR Systems Strategies are reviewed annually, with minor adjustments being made each year.

## Enterprise HR System Strategies often include these elements:

<b>Current State</b>	An outline of the current state of your organization’s Enterprise HR Technology, including integration points, vendors, and ownership details.
<b>Scale and Scope</b>	Careful account of the internal and external workforce that requires support and access to technology that falls within the Enterprise HR environment. This often includes workforce demographics, as well as locations, and priority to organizational long-term strategies.
<b>Benchmarking Data</b>	Data or analyses of how your organization’s current state compares to peer organizations in culture, size, industry, or complexity.
<b>Blueprint</b>	Enterprise documentation of the outcomes desired from HR Technology environments, recommended application adoption or changes to achieve enterprise outcomes.
<b>Roadmaps</b>	Timelines, responsibilities, communication plans, and KPIs associated with any approved application changes or updates.
<b>Governance Principles</b>	Identified decision makers, ownership models, and guidelines for making decisions on Enterprise HR Technology environments, data management, and privacy issues.
<b>Expenditures and Budgets</b>	Past expenditures and future budgets for Enterprise HR Technology environments.
<b>Resources and Outsourcing</b>	Careful account of both internal and external resources, as well as outsourcing agreements that support the Enterprise HR Technology environments.

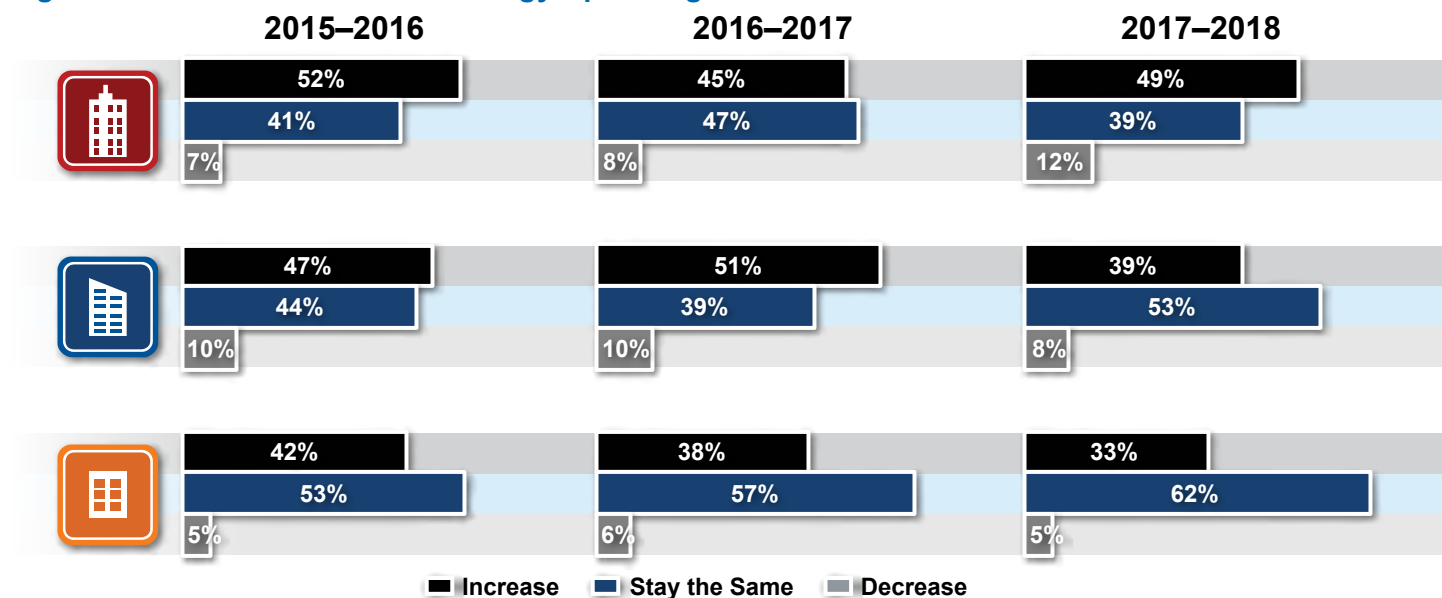
This is by no means an all-inclusive list, but if these areas are reviewed on an annual basis, organizations will find that over time they are more prepared to handle both internal requests and external pressures that impact their HR Technology decisions.



# Enterprise HR Systems Spending

Each year, Sierra-Cedar asks organizations to identify whether their HR Technology spending will increase, decrease, or stay the same. This year, just 38% of organizations report plans to increase spending in 2017–2018, while 7% expect spending to decrease. Spending plans vary by organization size and year in the figure below.

**Figure 13: Three-Year HR Technology Spending Trends Outlook**



Although this year's spending outlook overall is positive, it is a slight slowdown from last year, especially for the Medium and Small organizations. When we look at organizations planning to make a change to their HRMS within the next 12 months, we see that those organizations are more likely to increase HR technology spending; however, if an organization is not planning on making an HRMS solution change, it is more likely to keep its spending the same.

**Large** organizations plan to increase spending next year 49% of the time, an increase from 2016, and a positive sign for those HR Technology vendors targeting that limited, but often more profitable, group of organizations.

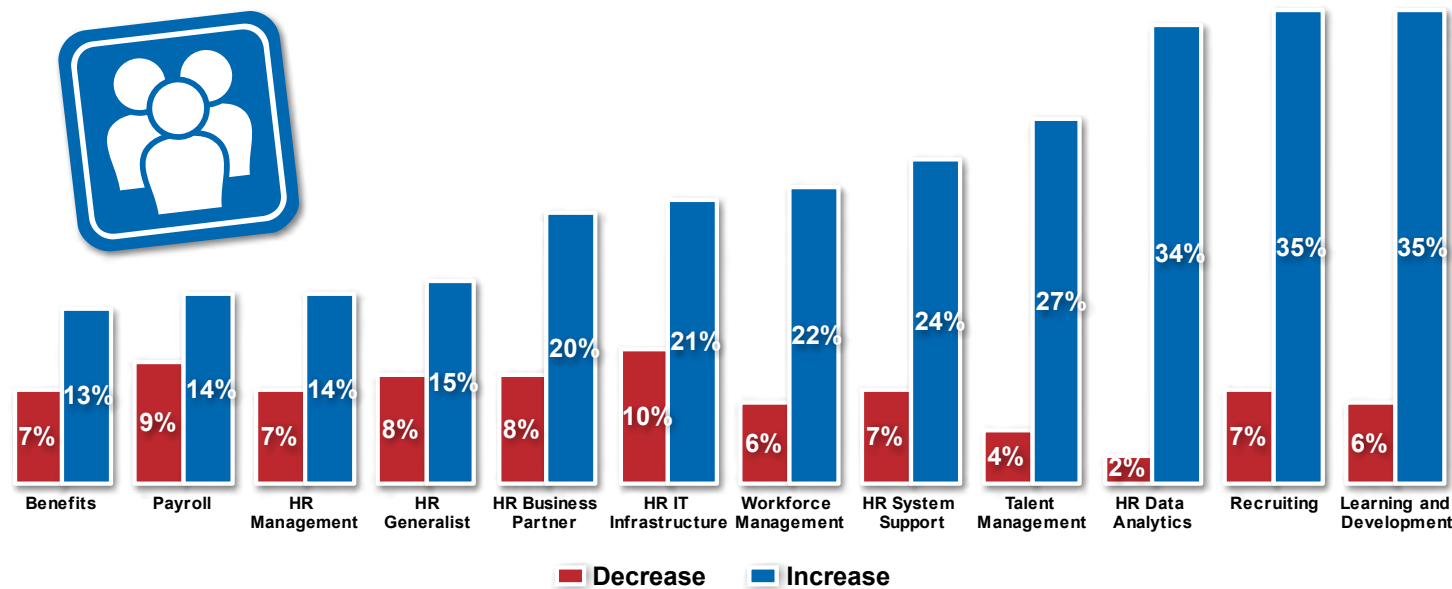
**Medium** organizations were most likely to report spending increases last year; however, for 2017 they are 23% less likely to report spending increases, although they do plan to decrease spending less frequently in 2017 than in the last two years.

**Small** organizations are the fastest growing segment of **new** HR technology buyers, so HR technology vendors will need to come to the table with a compelling reason for them to increase spending next year—62% of Small organizations are on target to simply maintain their existing HR technology spending, an even larger percentage than the 57% of 2016; however, each year we see smaller and smaller organizations investing in HR technology which was once only something Large or Medium organizations were interested in purchasing or able to afford. Small organizations are also the least likely of all the sizes to plan on decreasing their HR spending over the next 12 months.

# HR Technology Resourcing Strategies

Spending doesn't provide the only indicator of what an organization can accomplish when it comes to its Enterprise HR Systems Strategy; therefore, we ask organizations about plans to increase or decrease certain roles across their HR function over the next year. These functions range from administrative to management, and also include roles specific to supporting or working with certain applications such as Payroll, Workforce Management (WFM), Learning and Development, Recruiting, and Talent Management (TM) applications.

Figure 14: Tomorrow's HR Continues to Analyze and Specialize

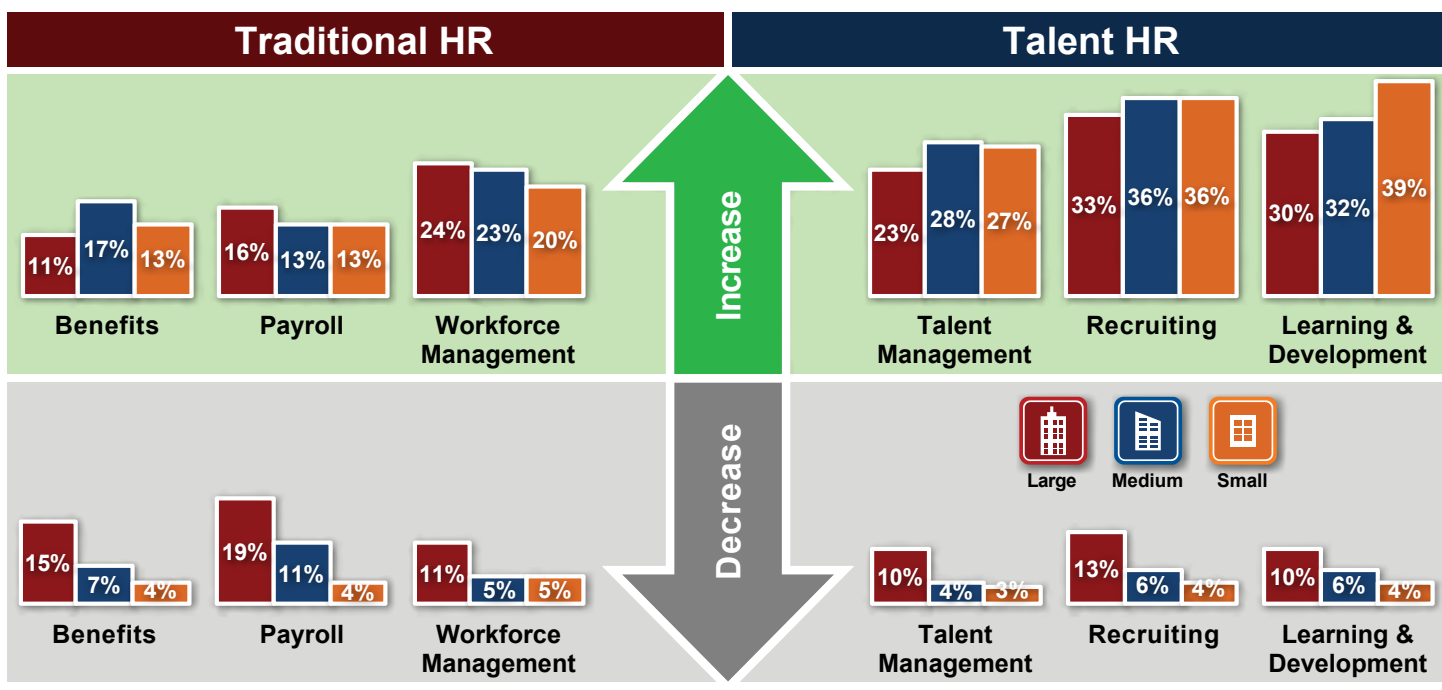


Learning and Development roles were a new addition to the list for 2016, and these roles claimed the top position for increased hiring plans again for 2017, with only 6% planning to decrease roles in this area. A new addition for 2017 was Recruiting roles, which was the second most popular role for increasing after Learning and Development, although slightly more likely to see a decrease at 7% compared to Learning and Development's 6%. Following behind Learning and Development and Recruiting, we continue to see a big focus on hiring HR Data Analytics roles, with 34% of organizations planning to invest in this area.

We also looked at resourcing plans across organizations by size, and found that there were distinct differences between plans to increase and decrease resources. As seen in Figures 15 and 16, we've organized the increase and decrease decisions by Traditional HR, Talent HR, HR Leadership, and HR & IT Analytics. The greatest increase in Learning and Development roles is planned for Small organizations, particularly those that intend to also increase their budgets and implement new HR Technologies. Large organizations, over 55% of them, are planning to increase their HR Data Analytics roles compared to just 25% of SMB organizations. We also see that Large organizations are more likely to be decreasing HR roles, particularly in the areas of HR Generalist positions.

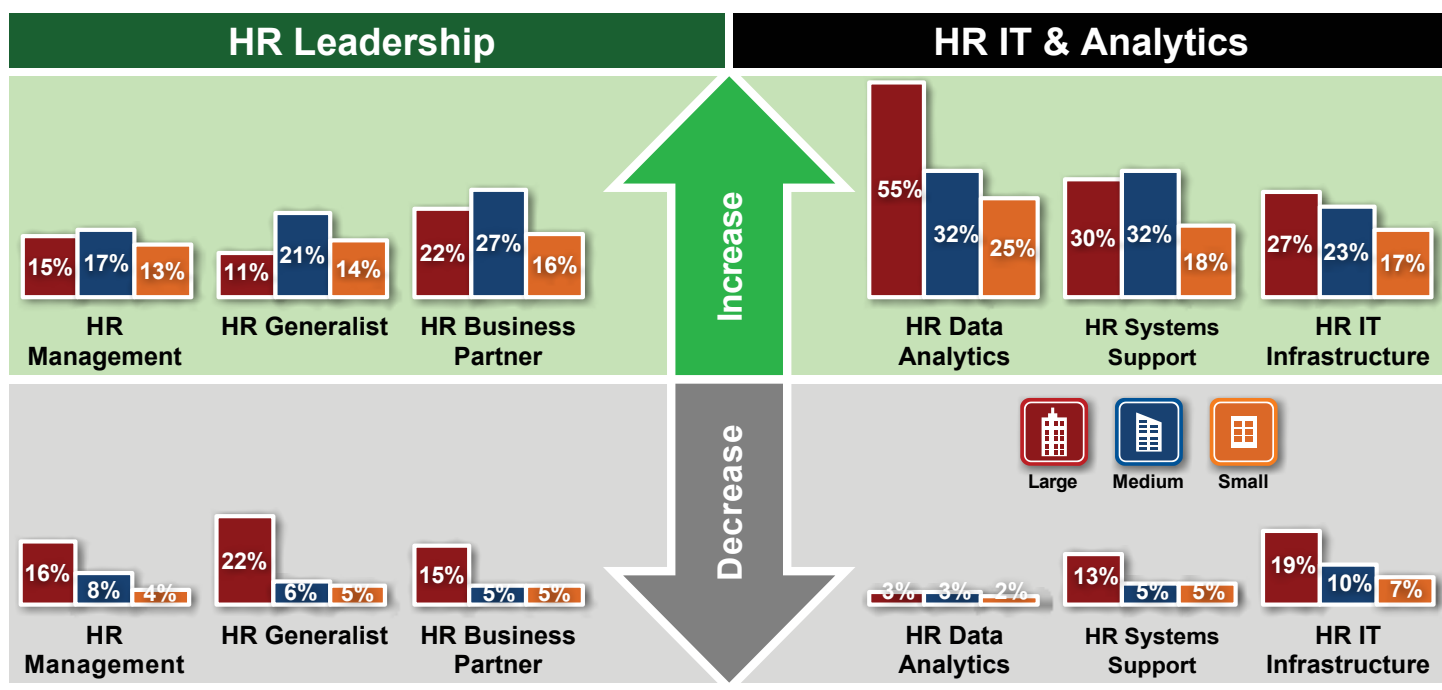


Figure 15: HR Resourcing by Size – Traditional HR and Talent HR



It is important to note that even if you personally fall into one of those areas targeted for reduction over time, the skillset in these roles can be easily transferred to other areas of growth. An HR Generalist could choose to specialize in an area of high growth, such as TM or WFM. Likewise, Payroll specialists could move into a roles focusing on data security, data cleanliness, and the total HR technology landscape due to their extensive knowledge and experience with these issues in the Payroll area.

Figure 16: HR Resourcing by Size – HR Leadership and HR IT and Analytics



## The Value of Change Management

Change Management, an important topic, may be relegated to an afterthought as organizations make plans for HR system acquisitions and deployment. When allocating budgets and time, showing the value proposition for the additional resources required to promote an effective Change Management effort may prove difficult; however, Change Management plays a major role in an organization's culture.

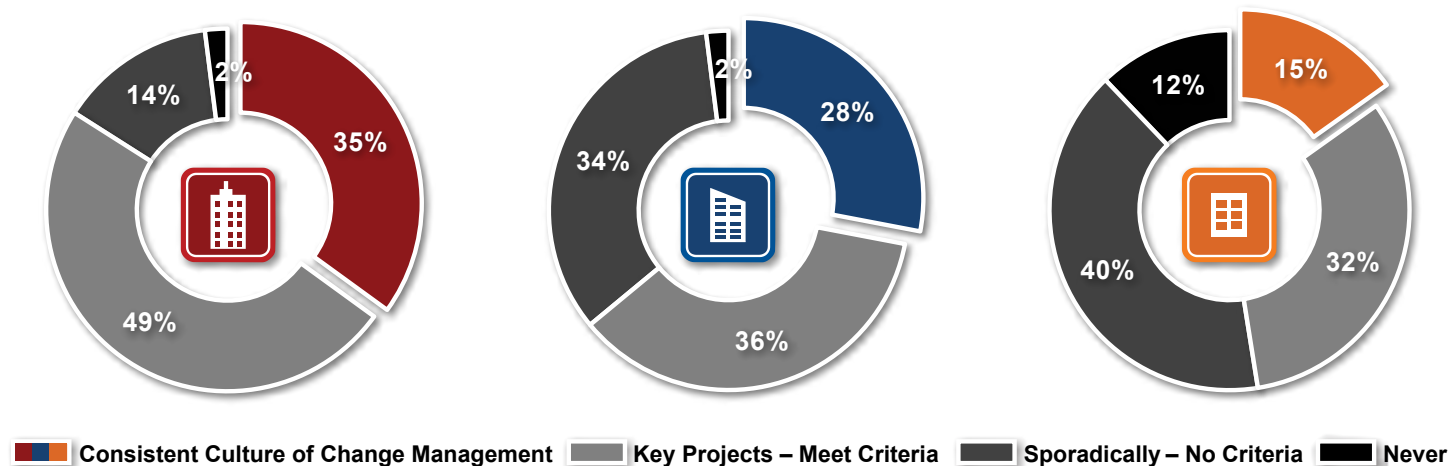
Our Survey continues to ask several questions concerning organizations' various approaches to Change Management efforts for HR technology.

### There are four levels of Change Management for HR technology:

- **Culture of Change Management.** Change Management is done with every technology change in our organization and on a continuous basis.
- **Key projects.** Change Management is done only with a few key projects that meet certain criteria such as size, budget, or breadth of stakeholders.
- **Sporadically.** Change Management is done sporadically with no criteria.
- **Never.**

No organization escapes the constant pace of change that is ubiquitous to our everyday lives. According to our data over the last several years, organizations that invest in creating a Culture of Change Management have seen multiple benefits, yet only 22% of Survey respondents invest in a Culture of Change Management today. HR organizations that support a Culture of Change Management are four times more likely to be viewed by all levels of management as contributing strategic value to their organization versus organizations that practice no Change Management.

Figure 17: Change Management Practices by Size



4X



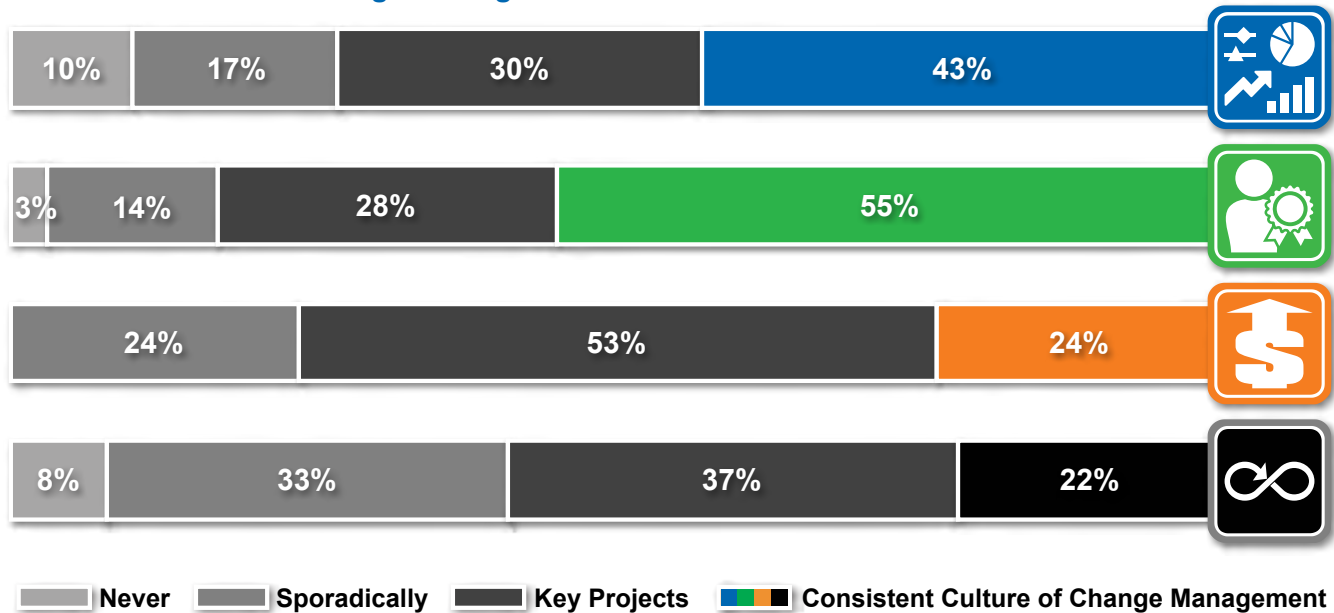
### Change Management Increases Strategic Value of HR

Organizations with a Culture of Change Management are four times more likely to be viewed by all levels of management as contributing strategic value, versus organizations that never use Change Management.

Large and Medium organizations are the most likely to conduct any Change Management, and a third of Large organizations are likely to have a consistent Culture of Change Management. This picture changes dramatically for Small organizations, where only 15% of organizations have a consistent Culture of Change Management and 12% have no plans to use Change Management.

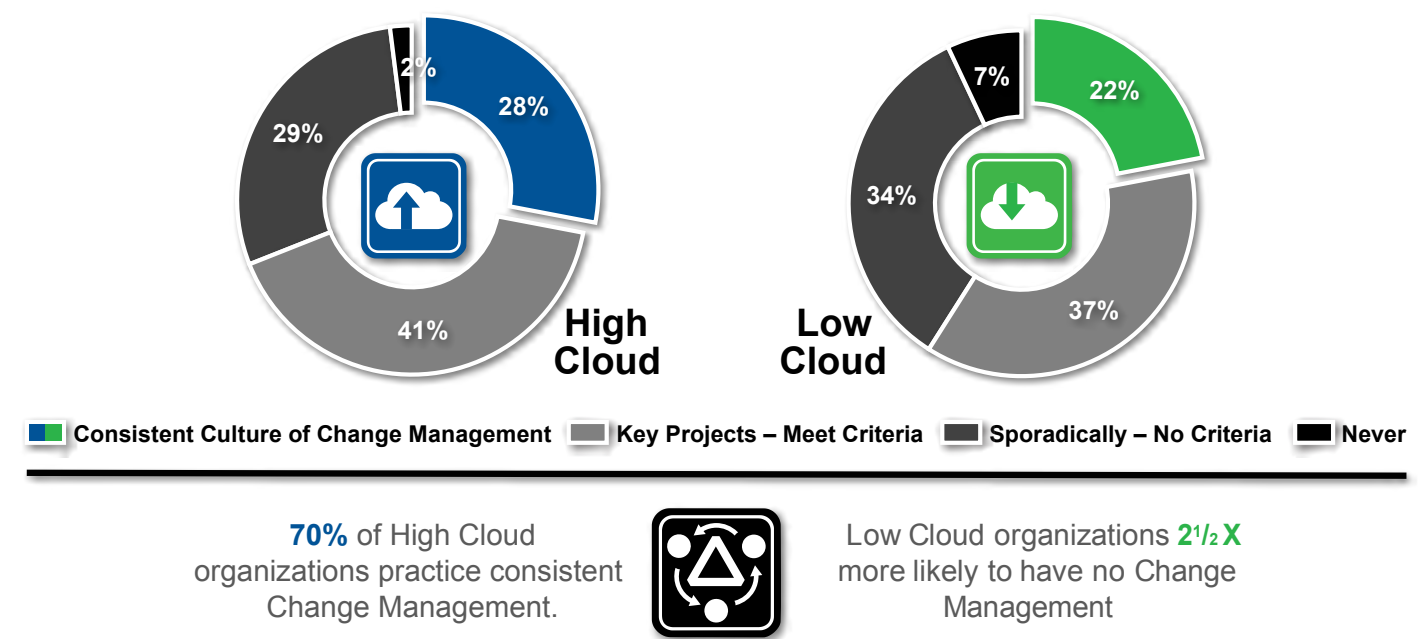
Talent Driven and Data Driven organizations support a Culture of Change Management with high percentages, similar to what we see in the adoption of Enterprise HR Systems Strategies. Talent Driven organizations are particularly focused on Change Management, and serve as an example by providing an engaging and transparent environment for their employees.

**Figure 18: A Culture of Change Management**



Transforming an HR environment necessitates a shift in thinking from project-based Change Management to a continuous Culture of Change Management. This shift doesn't merely entail new Cloud technologies that require constant updates, but also the realization that the pace of change in technology and business simply cannot be sustained with project-based Change Management practices. Project Management practices are based on the idea that all projects have a beginning, middle, and end, and that goals can be achieved as described in the beginning of the process. Today, we live by Key Performance Indicators (KPIs) and expected overall outcomes because, in reality, goals shift almost daily. It is easy to look at changing end-user requirements as scope creep that must be avoided at all costs, a nuisance to your project plans and Change Management strategies. In contrast, if your organization practices a continuous Culture of Change Management, then end-user requirements will be reviewed regularly with an agile model meant to identify changing requirements as they appear and adjust accordingly.

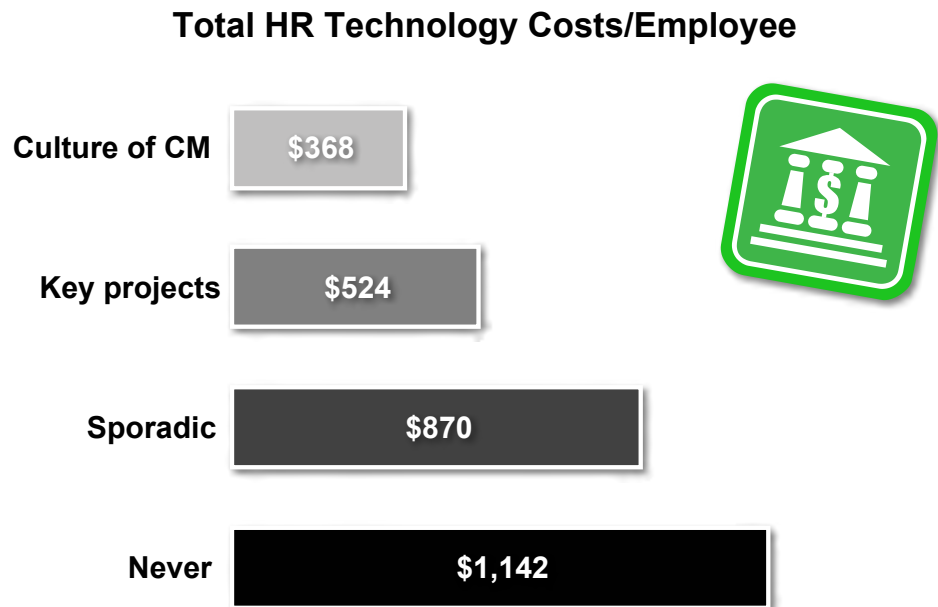
Figure 19: Change Management Practices – Cloud



We also look at organizations with their HRMS, Payroll, Workforce Management, and Talent Management applications all in the Cloud (High Cloud) and compare the Change Management practices to those organizations who do not have all of these four application areas in the Cloud. High Cloud organizations are more likely to have a consistent Culture of Change Management and engage in Change Management practices for key projects or sporadically rather than not at all, whereas the Low Cloud organizations are 2.5 times more likely to never engage in Change Management.

Organizations investing in any form of Change Management experience benefits of reduced total HR technology costs per employee. Those organizations with a culture of Change Management spend 68% less per employee than those that never engage in Change Management practices.

Figure 20: Benefits of Change Management



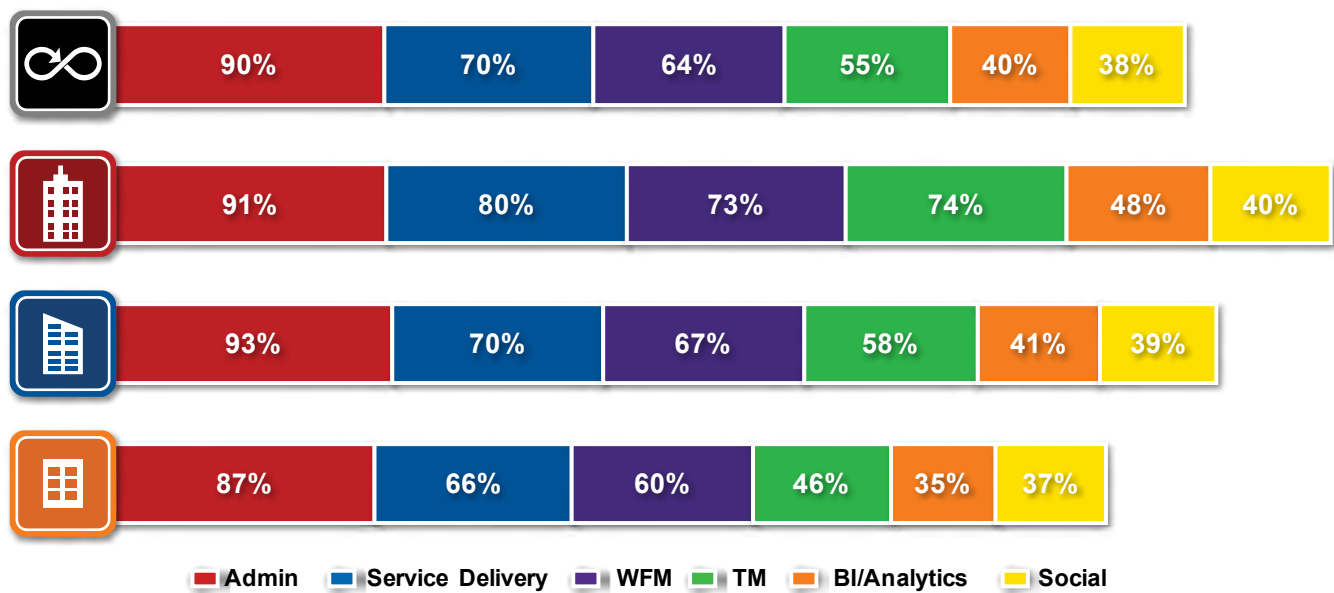
# Overall Application Adoption by Size, Industry, and Region

The charts that follow provide an overall usage snapshot for each application category by size of organization, industry sector, and global region. We provide the average adoption levels to give context and relevance to the specific data sets. While individual organizations will often vary in adoption of HR technologies, these average adoption levels can be used as a basic benchmark for any organization.

## Adoption by Size

In almost all areas of application adoption for the overall average, we see a slight increase from last year, especially for Service Delivery, Workforce Management, and Talent Management. Looking at each HR technology category adoption level by organizational size, we see the continued increase in adoption across each category by size. Although the social category often changes from year to year, there were no new Social applications added to our Survey for the 2017 edition.

Figure 21: Application Adoption Levels by Size



**Large** organizations continue as higher-than-average adopters of all application areas over the aggregate, especially in the areas of Service Delivery and BI/Analytics. Talent Management applications are a particular standout for Large organizations with adoption increasing 12% over the last year.

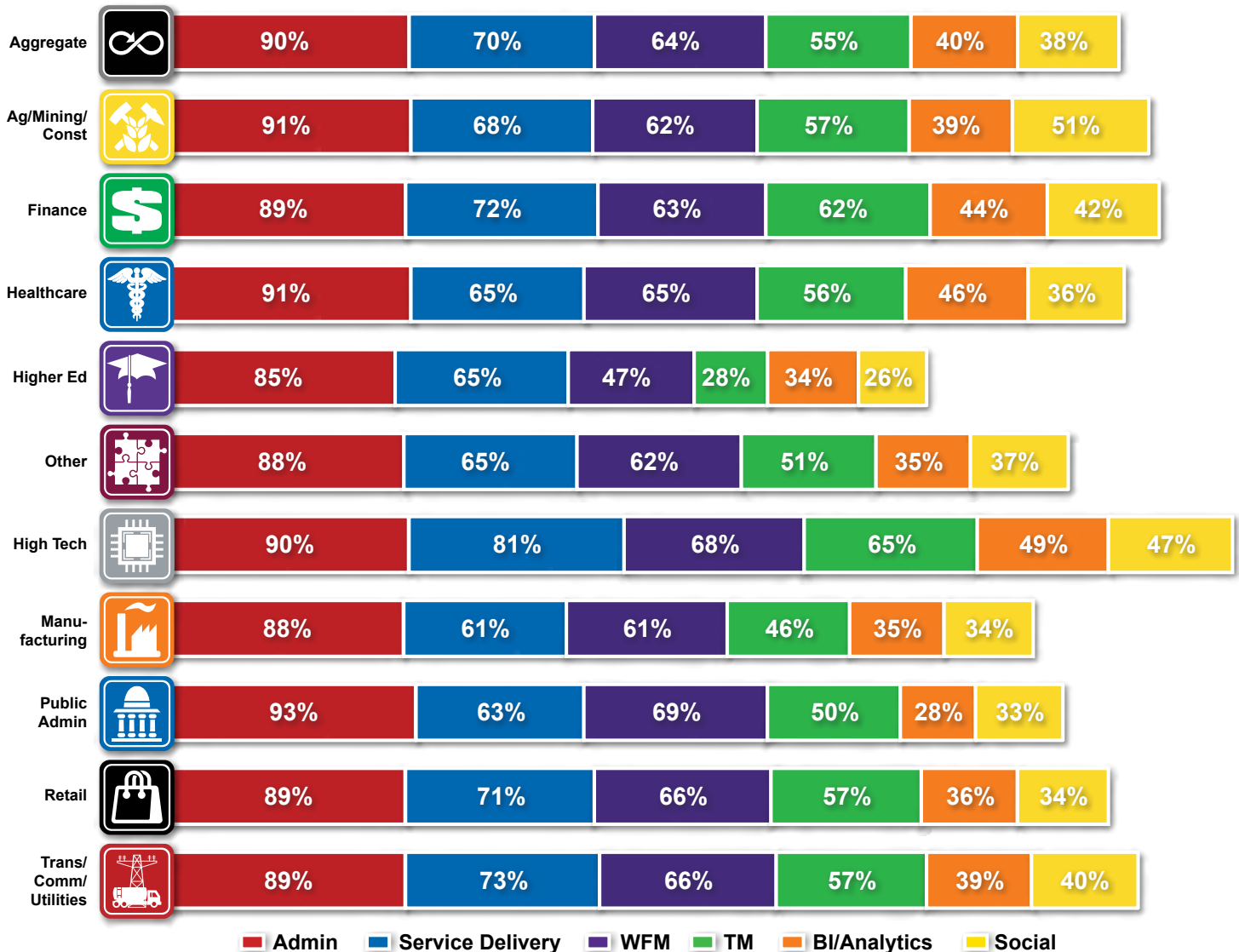
**Medium** organizations often focus on new growth and optimizing their workforce. We see higher levels of adoption in Administrative, Workforce Management, and Talent Management application categories for these organizations.

**Small** organizations are lower-than-average adopters of all application areas, although we continue to see Small organizations purchasing enterprise-wide HR solutions at much earlier stages than they have in previous years.

# Adoption by Industry

There are wide variations in overall application adoption by category, particularly in the area of Workforce Management (WFM), TM, and Social technologies. Manufacturing, Public Administration, and Higher Education organizations continue to have some of the lowest overall application adoption numbers as compared to other industries.

**Figure 22: Application Adoption Levels by Industry**

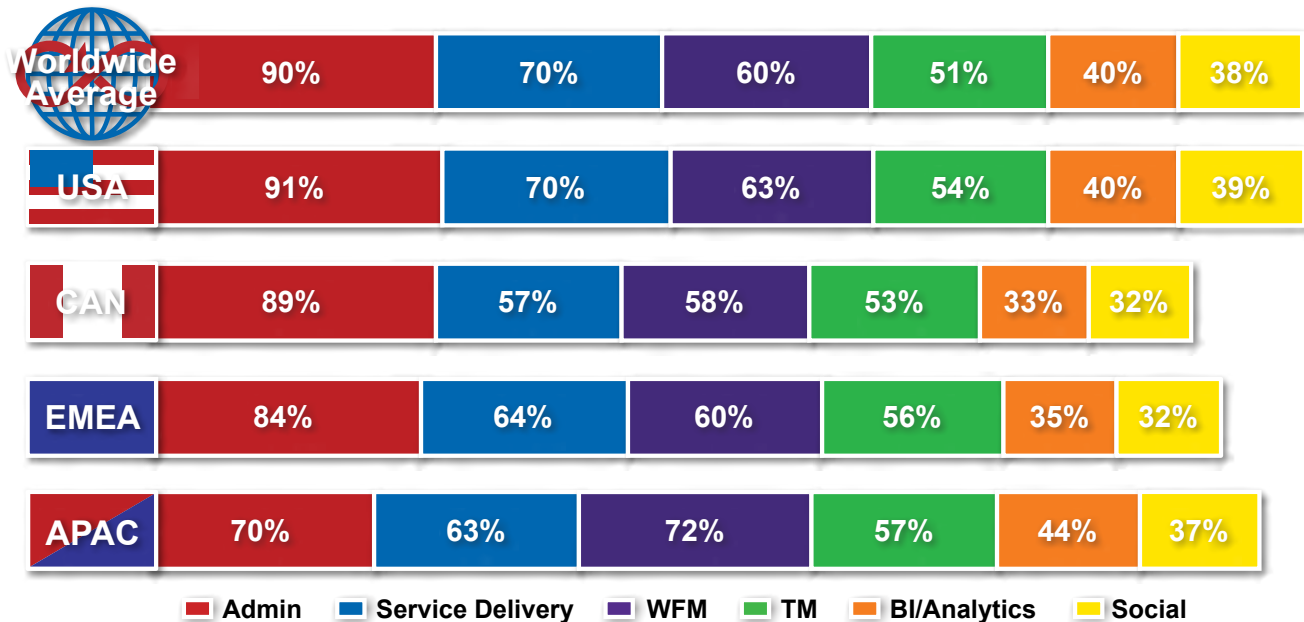


On the opposite side of the spectrum, Financial and High-Tech organizations have the highest level of application adoption in almost all areas—in part, due to their need to more effectively manage highly skilled workforces while optimizing the allocation of both workers' time and skillsets. Finance and High-Tech organizations have adopted a large set of TM applications, which are critical investments during times of low unemployment and skill shortages. Social applications are often viewed as optional, but this year Agriculture, Mining, Construction, and High-Tech organizations have high adoption levels, highlighting the desire to attract a younger workforce within these industries.

## Adoption by Region

U.S. organizations have typically led in application adoption, but as we've seen for the past several years, certain regions have slightly higher levels of adoption than others. **Canada (CAN)** has close-to-average adoption rates for Administrative Applications, WFM, TM, and WFM applications, with lower numbers for Service Delivery and BI/Analytics. **Europe, Middle East, and Africa (EMEA)** have higher-than-average adoption levels for TM and average levels for WFM, but lower for all other application areas. **Asia Pacific (APAC)** responses lagged in HR application adoption in all areas except for WFM and BI/Analytics applications last year, but in 2017 they are leading in Talent Management, while lagging in BI and all other areas.

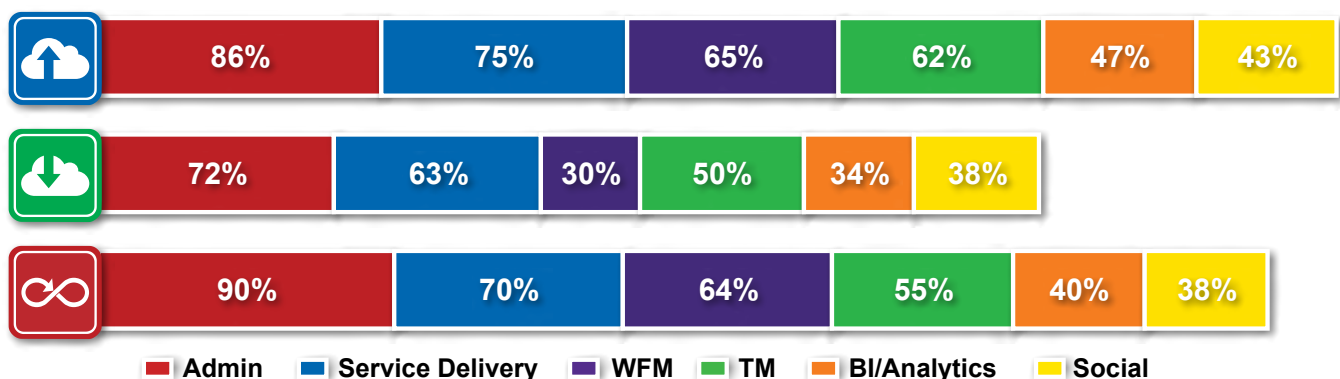
Figure 23: Application Adoption Levels by Region



## Adoption by Technology Approach

When we examine an organization's technology deployment strategy, those with High Cloud Adoption (HRMS, Payroll, WFM, and TM applications in the Cloud) show considerably higher levels of overall HR technology adoption when compared to Low Cloud Adoption organizations. This higher level of adoption by High Cloud organizations could be due to more integrated suites being offered in Cloud platforms, as well as a trend towards integrating BI/Analytics and Social applications in newer Cloud applications.

Figure 24: Application Adoption Levels by Technology Approach

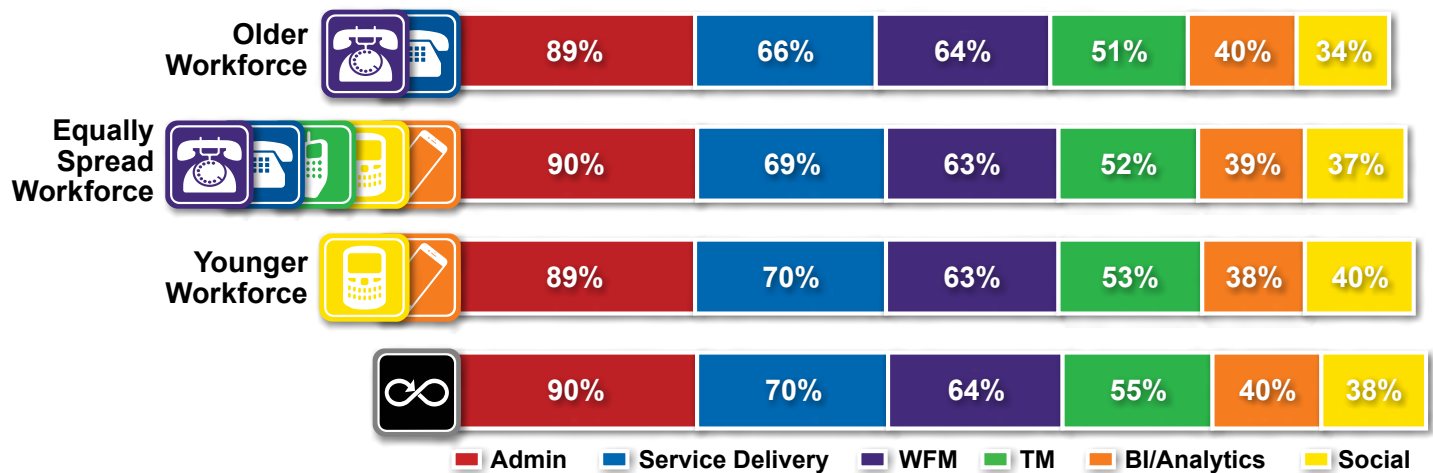




## Adoption by Generations

We ask about the generational makeup of an organization's workforce to assess if different workforce mixes might necessitate or correlate with specific HR technology adoption levels. Overall, the organizations with an Equally Spread Workforce adopt more technologies across each category than either the organizations with an Older Workforce mix or those with a Younger Workforce mix. Organizations with Younger Workforce mixes are slightly more likely to adopt TM applications, and slightly more likely to adopt Social applications for strategic HR use over organizations with Older Workforce mixes.

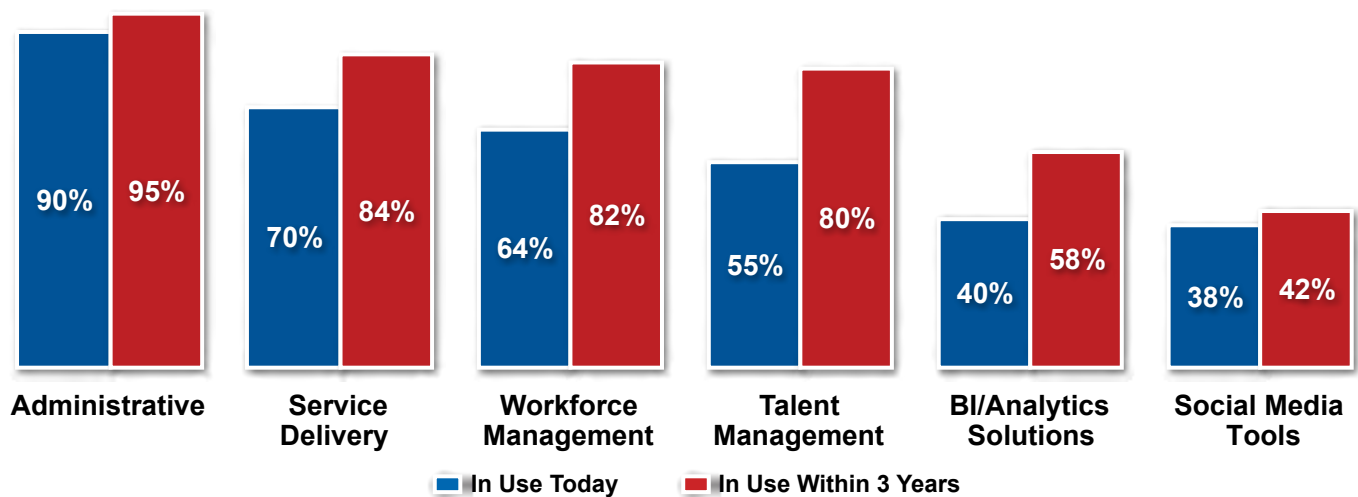
**Figure 25: Application Adoption Levels by Generations\***



## Three-Year Application Outlook

In addition to asking which applications are In Use Today, we also track applications budgeted for the next 12 months or planned for implementation in the next three years, as seen in the combined number depicted as In Use Within 3 Years below.

**Figure 26: 2017–2018 Three-Year Adoption Outlook**



While all categories of applications show slight growth over the next three years, we see the highest levels of growth expectation for TM applications at 45.5% and BI/Analytics solutions with 45%. These adoption outlook projections have not changed dramatically for the last three years.

\*For Generations categories, see Figure 121 on page 111.



# 2017–2018 HCM Deployment Strategies

Over the last several years, both vendors and buyers have shifted their focus towards Cloud and/or SaaS HR applications. For most organizations that have purchased new HR technology in the last few years, Cloud deployment has been the only option. For organizations with existing HR applications looking to update or replace existing solutions, movement to a full Cloud environment is generally not an “if,” but rather a “when” question.

Organizations with existing On Premise HR applications that are trying to decide when they will need to replace their existing applications often weigh these factors against Cloud factors:

On Premise	Cloud
Business-specific customizations	Improved UX
Upgrade requirements	Consistent update schedule
Hardware needs	Growth and scale requirements
Security risks	Security risks
Reduced or limited vendor maintenance	Regional data location regulations
Often-lower costs	Often-higher overall costs
Impact of change	Better analytics and reporting

Vendor or solution changes aren’t solely the purview of organizations moving from On Premise to the Cloud. We are beginning to see organizations with second- and third-generation Cloud deployments, organizations that have replaced one Cloud vendor for another over time, and those that have consolidated multiple vendors into suites. These HR Cloud environments include TM, WFM, Payroll, core HRMS, and emerging technology solutions. When looking at an entire HR Systems’ environment and strategy, organizations should consider a number of factors their enterprise, regional, and group-specific applications.

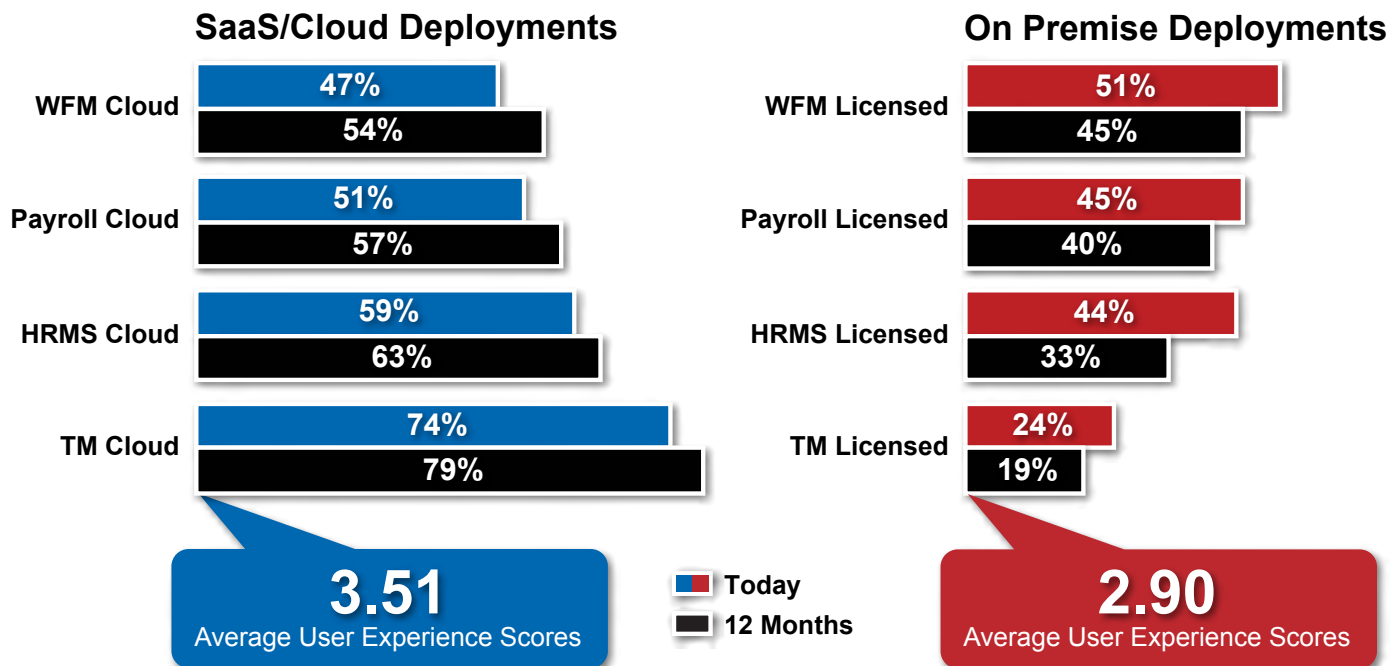
One value proposition of the Sierra-Cedar HR Systems Survey research and our annual approach to gathering enterprise-wide data is our ability to look across all the various applications and provide insights for how organizations develop various HR environments to create a cohesive solution for end-users and categorize a vast amount of enterprise-level data regarding current employees and future candidates.

We provide our readers with a realistic view of which HR technologies are deployed in the Cloud today, and which systems organizations plan to move to the Cloud in the next 12 months. This transition from a legacy technology to a Cloud/SaaS solution is not just about changing technology, but rather about **transforming the experience for their end-users**. If a new platform does not provide a transformative experience, moving to the Cloud offers little incentive in regard to overall costs or flexibility.

The HR Systems Survey White Paper first mentions Cloud/SaaS deployment methods in 2007; by 2011, over 50% of deployed Talent Management applications were in the Cloud; in 2015, we first hit the 50% mark for purchased core HRMS Cloud/SaaS solutions.

We expect 2018 to be a major milestone year for the HR industry. In the next 12 months, over 50% of our Survey respondents plan to deploy a Cloud-based HR application in all four of our major categories: core HRMS, Payroll, WFM, and TM applications. We may look back over these past few years as the tipping point for HR environments, a point at which consumer and Data Driven applications became standard in the HR community.

**Figure 27: 2017–2018 HCM Technology Deployment**



*Note: these include combination and hosted environments.*

Presently, 44% of organizations maintain a Licensed/On Premise core HRMS solution, though this has decreased by 23% from last year—the **greatest year-over-year decline since we’ve been tracking deployment methods by application area**. Many organizations have multiple HR application environments deployed within a single organization, therefore overall deployment percentages never equal 100% between current On Premise and Cloud deployments; we call these “combination environments.” As Cloud applications gained popularity, we did not see a corresponding reduction in On Premise applications. However, this trend is slowly changing and we are now seeing more organization retire the On Premise applications in core HRMS by consolidating their On Premise environments, reducing archive environments, and removing parallel run systems. We anticipate this same trend over time for Payroll and Workforce Management applications.

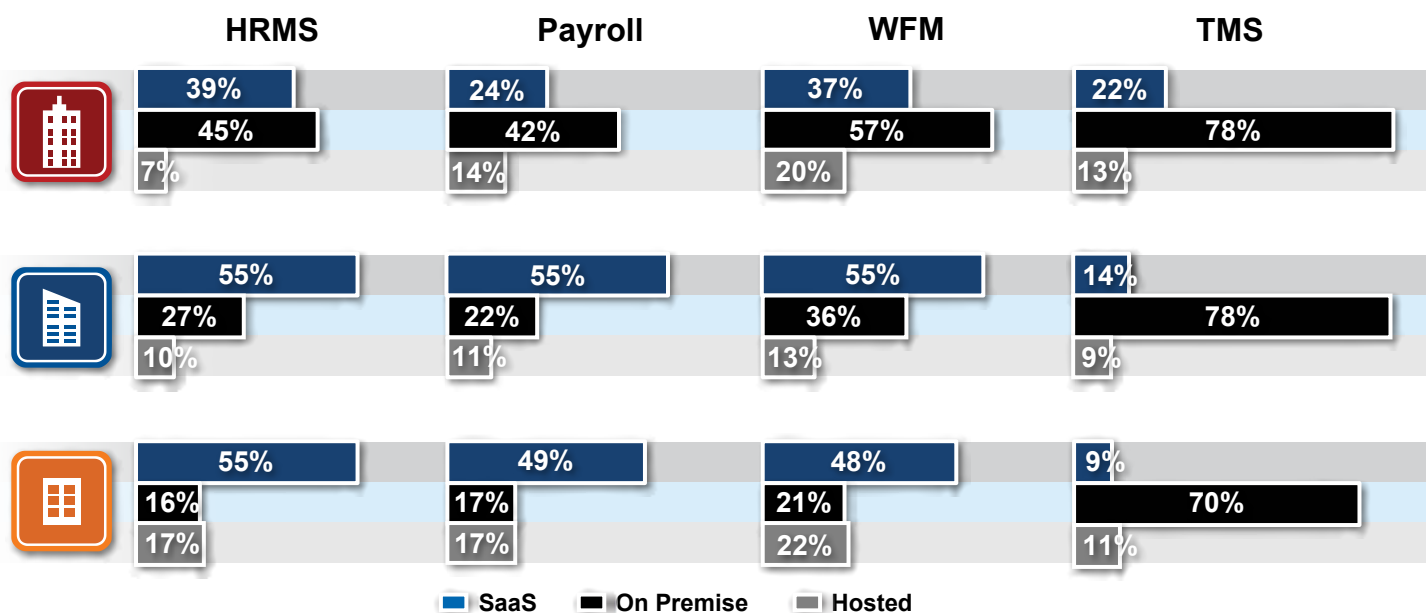
Year over year, we expect to see continued declines of Licensed/On Premise solutions; however, as the data has shown for the last several years, the pace of change is slowing. Those organizations that remain in Licensed/On Premise environments today are the most complex, risk-adverse, and cost-conscious organizations that are likely to move more slowly to the Cloud than early adopters. Last year, only 24% of our aggregate respondents planned to make a move to a Cloud/SaaS core HRMS solution in the next 12 months; only 16% actually did so, not nearly as large of a jump as organizations predicted and actualized in previous years. The 7% planned increase in HRMS Cloud solutions for 2018 is much smaller than the plan for last year, and based on past data, we believe this is also optimistic.

**Figure 28: Core HRMS Transition to Cloud/SaaS Solutions**

Aggregate Respondents – Core HRMS Transition to Cloud/SaaS Solutions				
2013–2014	2014–2015	2015–2016	2016–2017	Planned 2017–2018
48% ↑	32% ↑	2% ↑	24% ↑	7% ↑

It is tempting to believe that your organization is the only one that hasn't moved to the Cloud; however, reality varies greatly by the size of organization and application area. Significant deployment method changes in past years in all categories except for TM were predominantly made by organizations under 10,000 employees; we are now beginning to see real movement for Large organizations. This year, we saw a major reduction in Licensed/On Premise applications for Large organizations in Payroll, WFM, and TM; however, they are twice as likely as Small and Medium organizations to have plans to increase their SaaS core HRMS adoption levels in the next 12 months to 47%—a 21% increase.

**Figure 29: 2017–2018 HCM Deployments by Size**



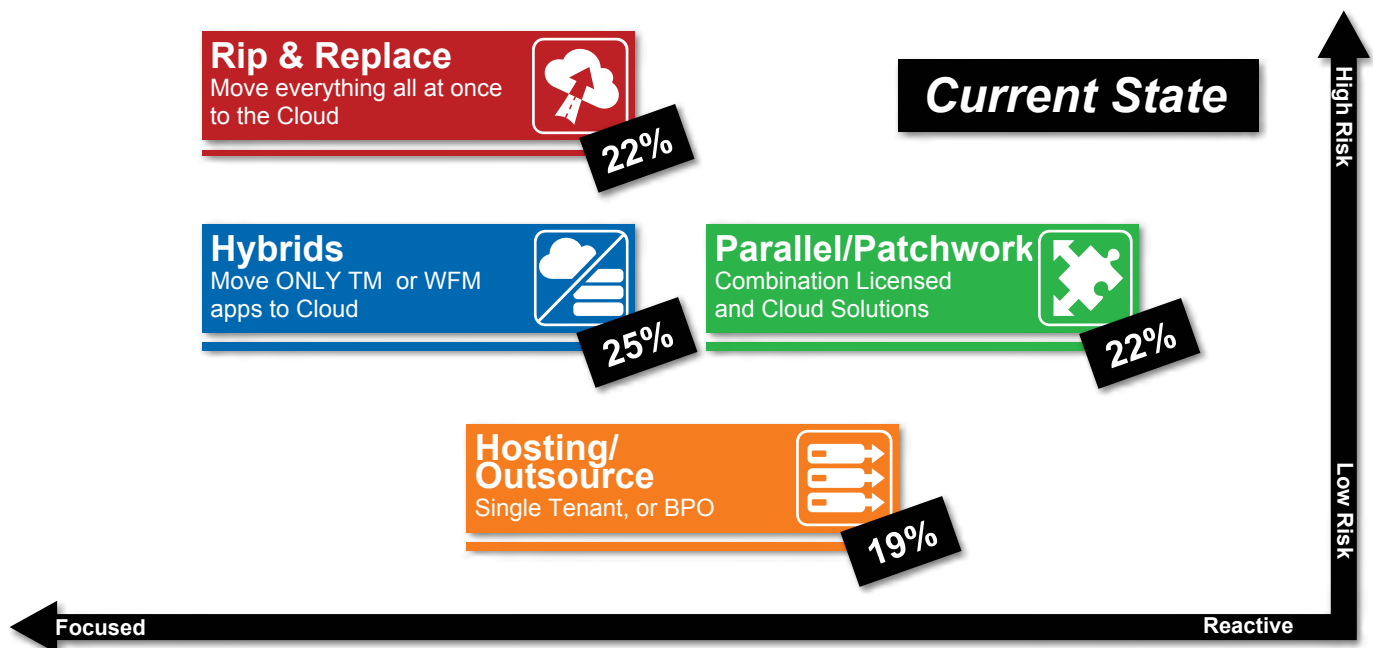
Hosting of Licensed On Premise and full Outsourcing of all application types have increased slightly over the last few years; these services, once only the domain of Very Large organizations (over 50,000), are now expanding to Small and Medium organizations as they continue to remove the expense of infrastructure in their own facilities. Organizations with only an On Premise HRMS are twice as likely to be evaluating the benefits of public Cloud hosting or IaaS over those organizations already hosting their software in the Cloud.

# Transforming HR Systems Environments

Eventually, all organizations will require some level of HR technology transformation, if for no other reason than some current environments will simply become obsolete and vendors will stop supporting certain solutions. Additionally, tomorrow's workforce will have higher expectations for all of their technology interactions, and it will become increasingly difficult to encourage top talent to overlook workforce technology that provides minimal value.

Organizations are taking different pathways to transforming their HR Systems Environments, which include Rip and Replace, Combination, Hosting, Outsource, and Hybrid methods. Vendors may provide services and support for clients via multiple integration options and tools that organizations need when leveraging a mixture of deployment models.

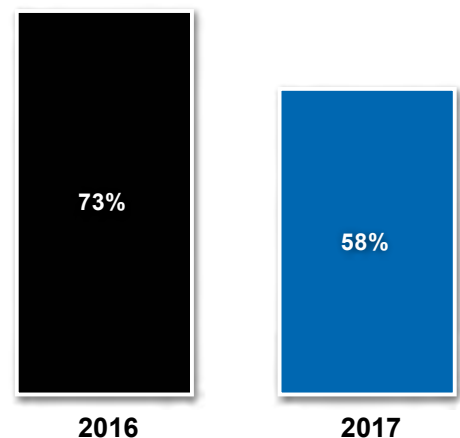
**Figure 30: Multiple Pathways to an HR Tech Transformation, Current State**



These paths for transformation are defined as follows:

- **Rip and Replace** – move everything to the Cloud at once
- **Hybrid environments** – move TM and/or WFM solutions to the Cloud while keeping Payroll and/or Core HRMS On Premise
- **Parallel** – run parallel Cloud/SaaS and On Premise solutions across multiple HR systems in tandem
- **Patchwork** – create a patchwork of SaaS, On Premise, Hosted, and Outsourced solutions that are only replaced when needed or contracts are up
- **Hosting/Outsourcing** – leverage a Licensed solution, but in a Hosted or Outsourced environment

## Orgs Planning to Transform Their HR Tech Environment

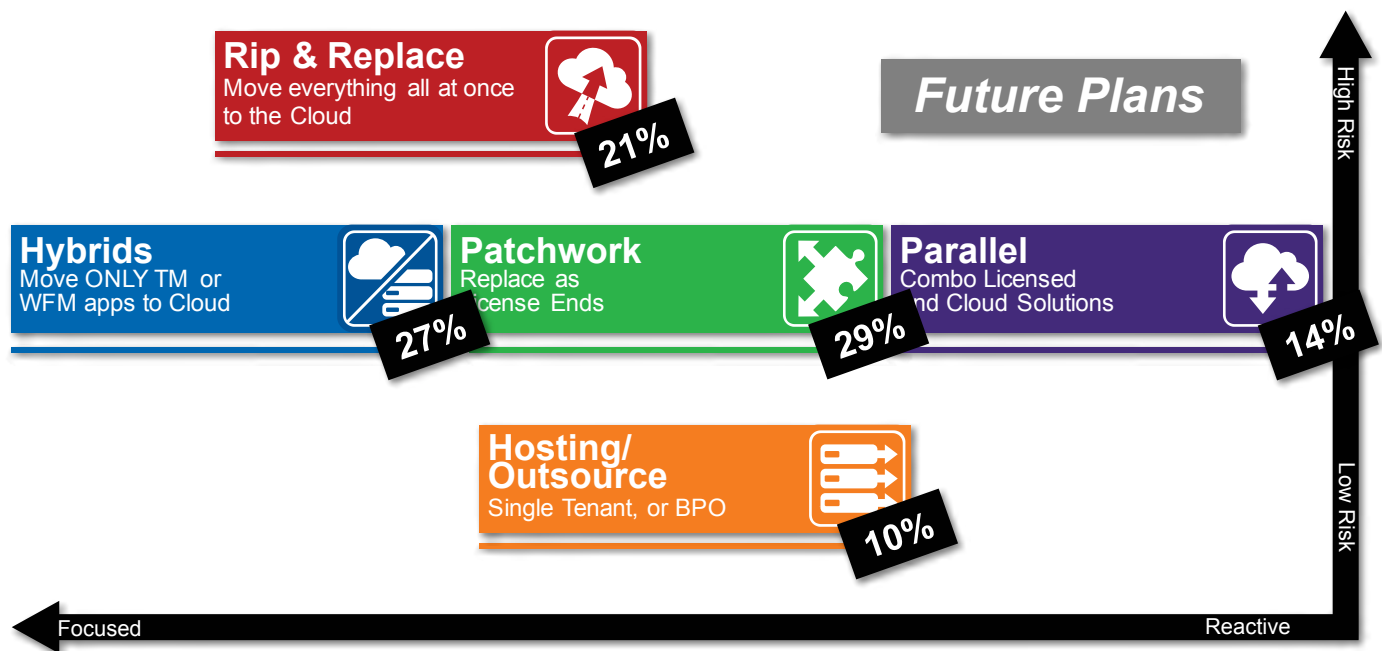


There is no right or wrong path to take for organizations working to transform their HR technology; each organization must make decisions based on its unique needs and internal requirements. When we review the current state of organizations' HR technology environments, there are slightly more organizations at 25% with a Hybrid model where they have moved only their TM or WFM apps to the Cloud; 22% of organizations have undergone a Rip and Replace, and another 22% maintain both Licensed and Cloud solutions.

In addition to actual transformation numbers, only 58% of organizations plan to make a major change to their HR solutions in the foreseeable future. Last year, 73% of organizations were planning HR Technology transformations going forward—this is down 20%. There will always be some level of transformation efforts taking place in the HR Technology landscape, but the major shift of the last five years has definitely begun to slow down.

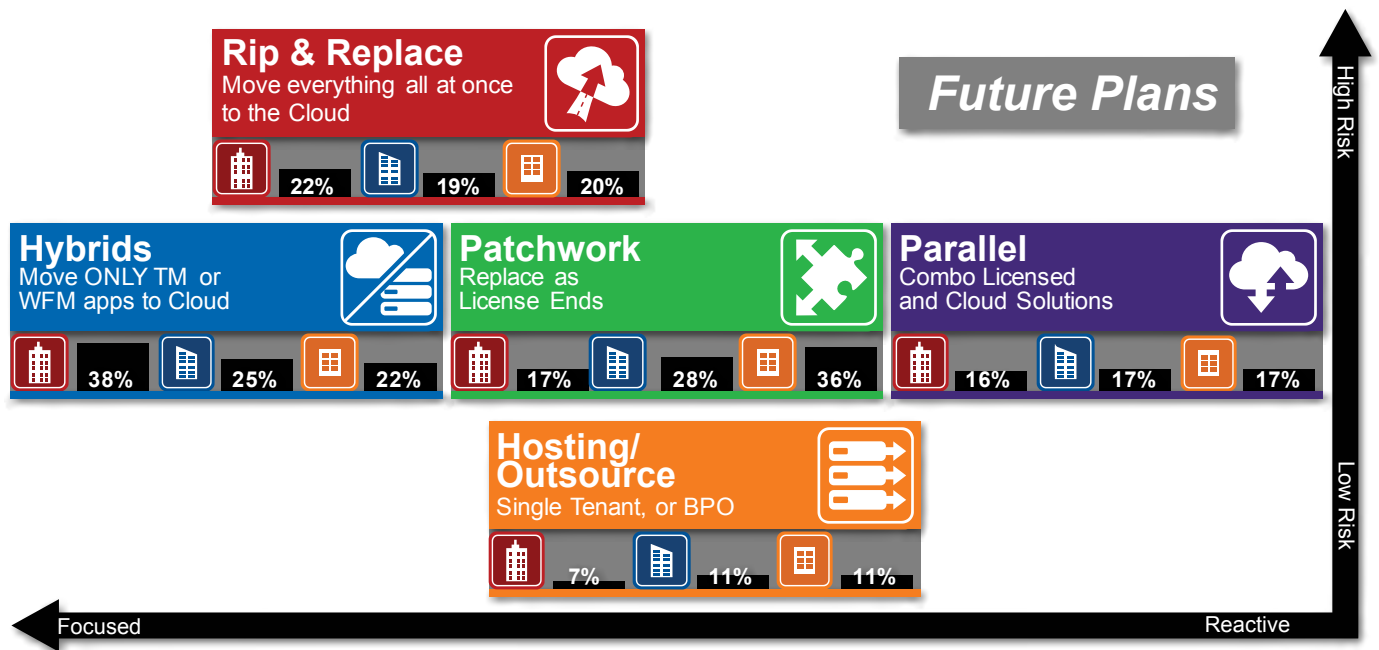
In the HR Technology Future Plans below, we see the self-identified approaches by organizations planning to make an HR technology transformation in the next 12 months. Of the changing organizations, 70% plan to maintain a Hybrid, Patchwork, or Parallel environment strategy. These are broad generalizations concerning a very complex technical ecosystem, but these choices do shed some light on the thinking of the organizations that have yet to make major HR transformations.

**Figure 31: Multiple Pathways to an HR Tech Transformation, Future Plans**



When looking at this data by organizational size, Hybrid environments are favored by 38% of Large organizations and 23% of Medium and Small organizations. Large organizations are more interested in Rip and Replace and less interested in Hosting/Outsourcing solutions. Small organizations replace their HR technology when needed.

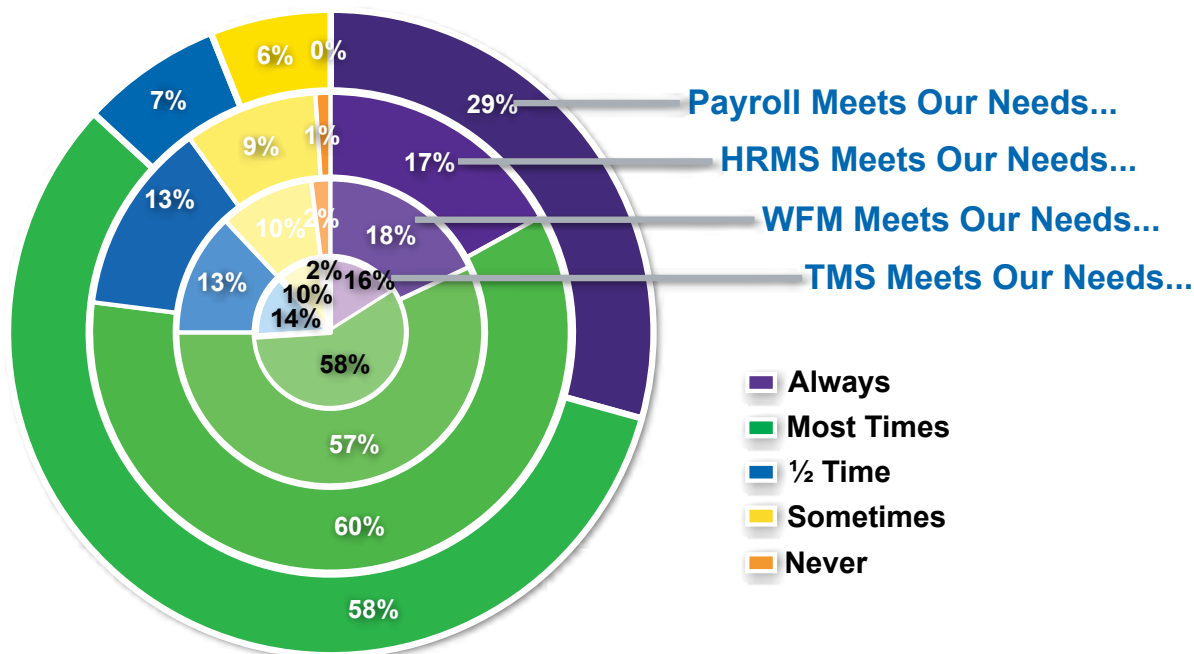
**Figure 32: Multiple Pathways to an HR Tech Transformation, by Size**



## HR Technology Gap Analyses

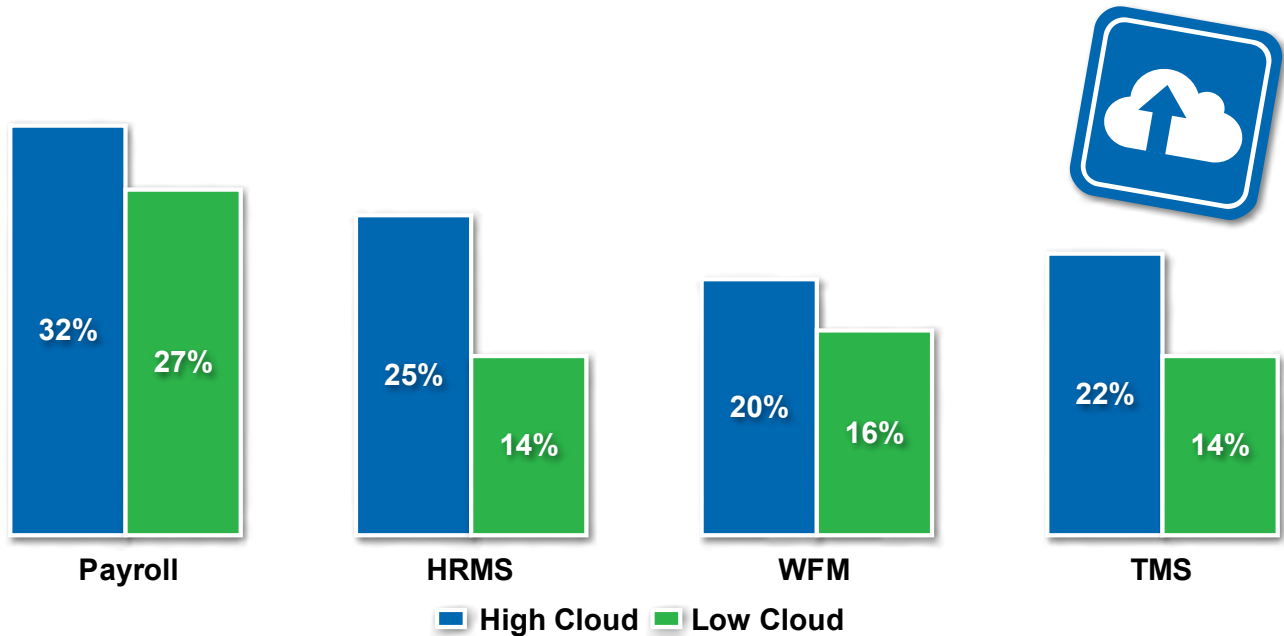
When examining why organizations might choose a Hybrid or Parallel environment, we look closely at how effective the various existing HR applications are at meeting their organization's business needs. Over 75% of organizations report that their current HR Systems applications either Always or Most Times meet business needs—positive news for current HR Technology solution providers.

**Figure 33: Does Your HR Technology Meet Current Business Needs?**



Analyzing the gap data for those organizations categorized as High Cloud versus Low Cloud, High Cloud organizations were twice as likely to report that HR applications Always meeting business needs in all categories. For Low Cloud vendors, the percentage of organizations that who believe that their applications Always meeting business needs almost doubled this year.

**Figure 34: System *Always Meets Our Needs* Higher for High Cloud Adopters**



Since feature and function gaps are no longer major issues for over 75% of the organizations with existing HR solutions, Survey respondents report that these driving forces may induce an organization to replace an existing solution:

- Service and support
- Integration
- Overall vendor relationship
- Cost
- Solution Roadmap
- Configurability/ability to customize
- Vendor culture



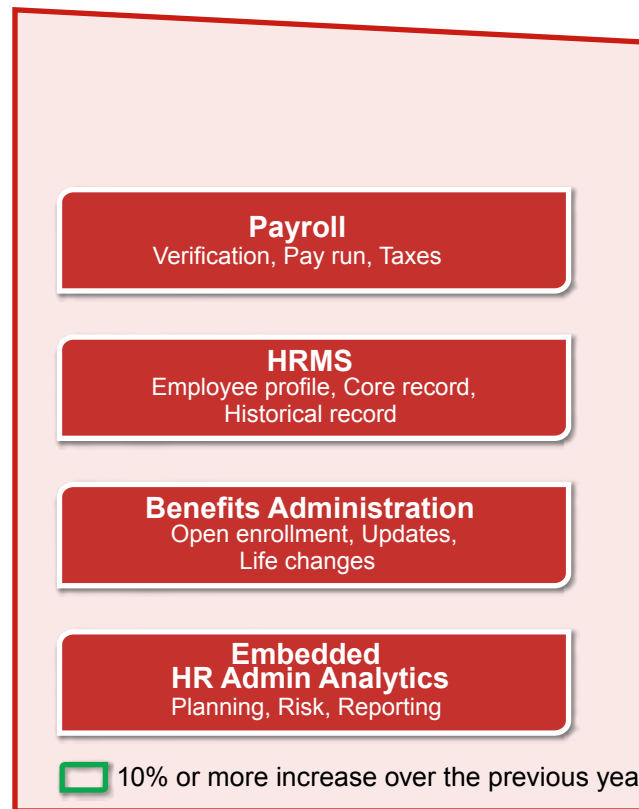
# Administrative Applications

## Payroll Applications

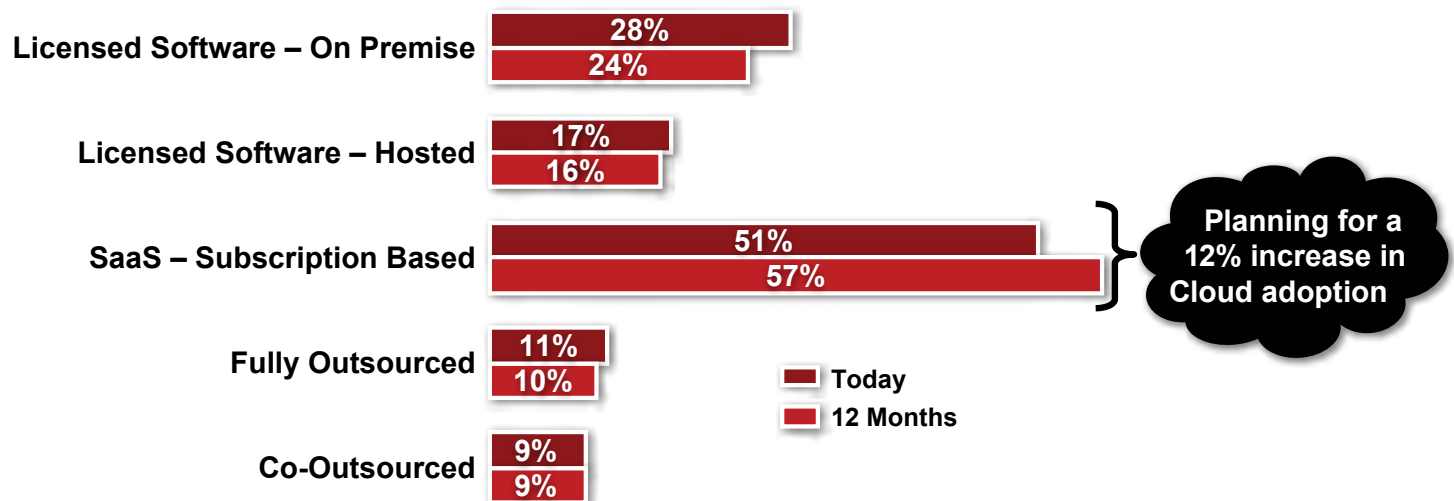
Payroll applications are generally the first and most universally adopted by organizations—and at 97% adoption, this holds true again for 2017. The small percentage of organizations not using a complete Payroll solution this year noted that they are using financial tools to manage Payroll or that accounting firms handle Payroll for employees.

A key question for an organization's Payroll management involves whether Payroll is handled completely in house and/or is outsourced. This question can be complicated by the number of regions—and even countries—occupied by an organization's workforce, and the various legal and compliance regulations to which it is held accountable in terms of employee time tracking and payment.

Almost 20% of organizations are doing some level of outsourcing, either fully outsourcing the entire function or co-outsourcing where administrative tasks are outsourced, yet still keeping Payroll management in house. One change to note for 2017 is that Software as a Service (SaaS/Cloud) Payroll solutions have surpassed Licensed Payroll adoptions and are now at 51%. Over the next 12 months, our Survey respondents plan to increase their SaaS/Cloud Payroll adoption by 12%.

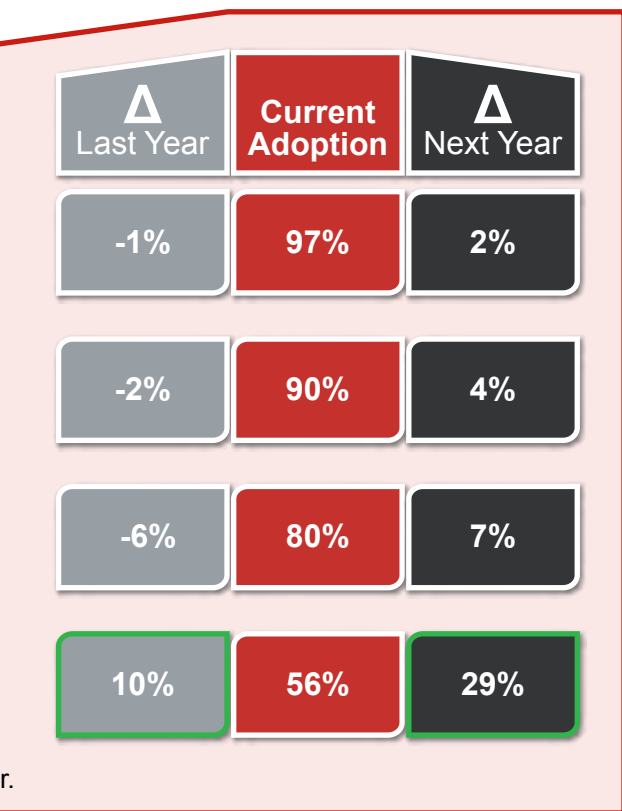


**Figure 35: Payroll Deployment Models In Use**



*Note: these include combination environments.*

Large organizations still sit below the 50% mark in Payroll SaaS/Cloud adoption at 24%. Currently, they are using a mixture of stable, On Premise technology, newer Cloud solutions, Cloud aggregators, and outsourcing services to manage their global Payroll needs.

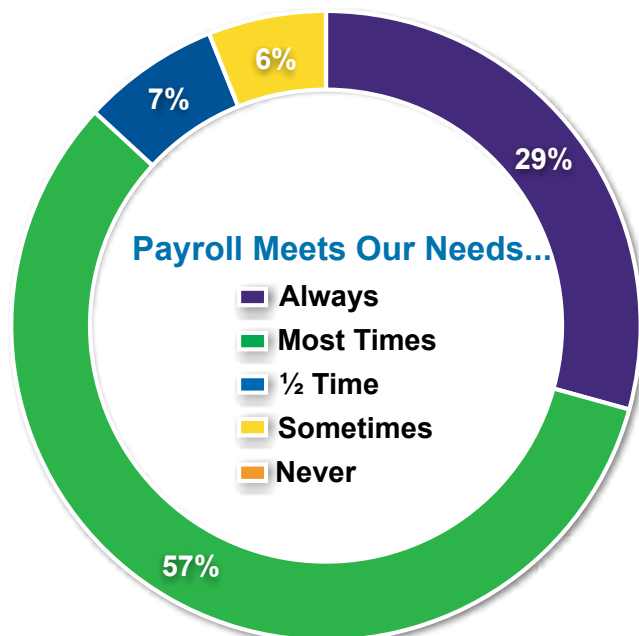


Although the Payroll model can be complex, our surveyed organizations are fairly comfortable that current Payroll solutions effectively manage their Payroll needs. Payroll is the technology solution most likely to meet an organization's current needs both Always and Most Times. This general comfort with the current Payroll technology has led many vendors to make Payroll the last big technology update that they plan to make in their HR stack; therefore, many of the Cloud solutions for the larger Payroll providers are still maintained as "single-tenant" vendor hosted solutions, versus the new multi-tenant SaaS model. Depending on compliance requirements and solution performance expectations, this distinction may or may not be important to an organization.

Organizations reporting gaps in their Payroll solutions shared the following challenges:

- UX – 20%
- Reporting – 11%
- HRMS Integration – 13%
- Third-Party Integration – 9%
- Tax and Compliance – 9%
- Global Payroll – 8%
- Customer Service – 8%
- Training Needs/Skills Gap – 5%
- Time and Attendance Integration – 4%

**Figure 36: Payroll Solutions**



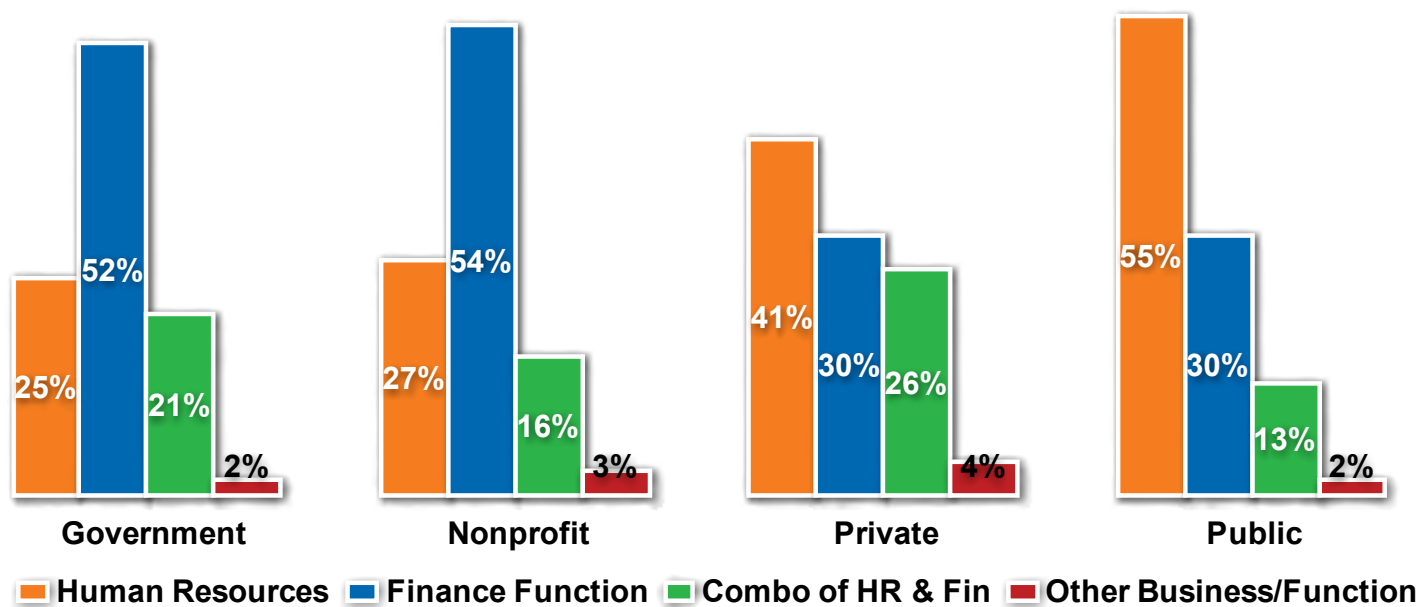
These areas present challenges that technology vendors hope to address through improved functionality, better service offerings, and stronger certified partner relationships. Large and Small Payroll technology vendors are teaming up with outsourcing, hosting, and service partners such as Northgate Arinso HR, Accenture, and OneSource Virtual to offer packaged solutions for buyers. We continue to see partnerships across various vendors with Cloud Aggregators that help expand global capabilities as part of an overall payroll solution. Cloud aggregators, such as CloudPay, ADP, and Celergo provide a single relationship and middleware technology to aggregate local payroll relationships and data for global organizations.

Our Survey data shows that organizations are reporting between 1 and 100 Payroll solutions within a single organization, often due to mergers and acquisitions or Global Payroll needs. An average organization has 3.7 Payroll instances.

Many Global organizations view their Payroll on a country-by-country basis; if a single country's Payroll solution is working effectively, they are more hesitant to consolidate everything under a single solution. With this level of complexity, and the business need for Payroll to run smoothly, the management responsibilities for the Payroll function can often be a critical issue for organizations as they mature and grow in size.

The Payroll administration connects an organization's Finances directly with its workforce—and often management—and falls under one or the other, or both, of these functions. We found Payroll is likely to be managed by the HR department in Public and Private organizations, while in Government and Nonprofit organizations, it is more likely to be managed by Finance.

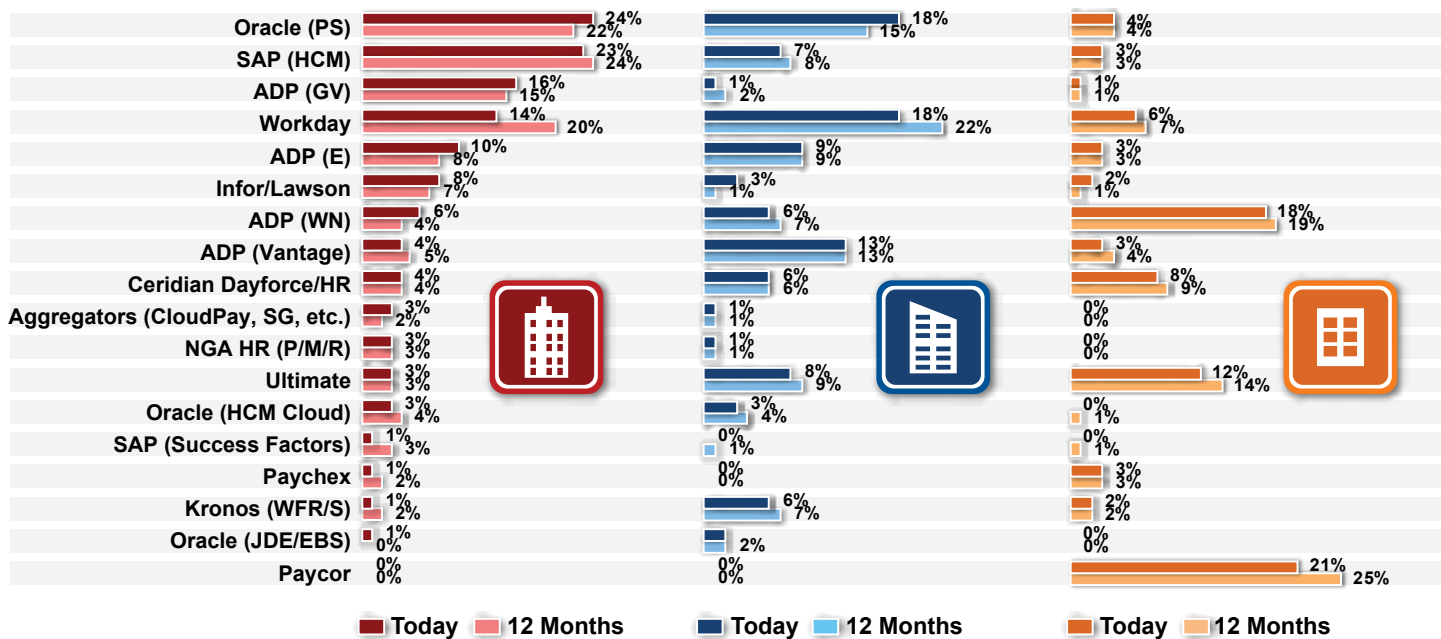
**Figure 37: Payroll Management by Organizational Type**



# Payroll Vendor and Solution Outlook

For each application area we cover, we provide an outlook on the **current state of vendor solution adoption** by our Survey respondents and their adoption plans for the next 12 months. Please note this should not be considered Market Size data. We have chosen to break **each application area into Small, Medium, and Large adoption trends**, as adoption varies based on organization size.

**Figure 38: Payroll Solutions Adoption by Size**



Note: columns do not add up to 100% as organizations have multiple solutions in use.

Although the combined ADP Payroll solutions continue to hold the largest overall adoption level in the Payroll category Today and in 12 Months, we also see that adoption levels by organization size show Oracle PeopleSoft continuing to hold the largest adoption for a single solution. Large organizations show increased plans for adoption of SAP (HCM), Workday, UltiPro, and now Oracle HCM Cloud in the next 12 Months.

SAP SuccessFactors Employee Central has not yet made a major rollout of a new Cloud version of its Licensed SAP (HCM) Payroll solution, but last year it announced an SAP Cloud Managed Payroll offering in conjunction with several partners who will host its Licensed solution and allow clients to remove the need for hardware and infrastructure upkeep in-house while moving other HR applications to the full SaaS HRMS environment.

For Medium and Small-sized organizations, solutions such as UltiPro, Workday, Ceridian Dayforce, and ADP Vantage are seeing considerable planned gains in adoption levels over the 12 Months. A recent addition to our list last year was Paycor, joined this year by PayChex, both representing a class of vendors that service the Very Small (<1,000) market, and showing up more often in our Survey data as we widen our research base. Paycor also sees a considerable increase in adoption over the next 12 months for Small organizations.

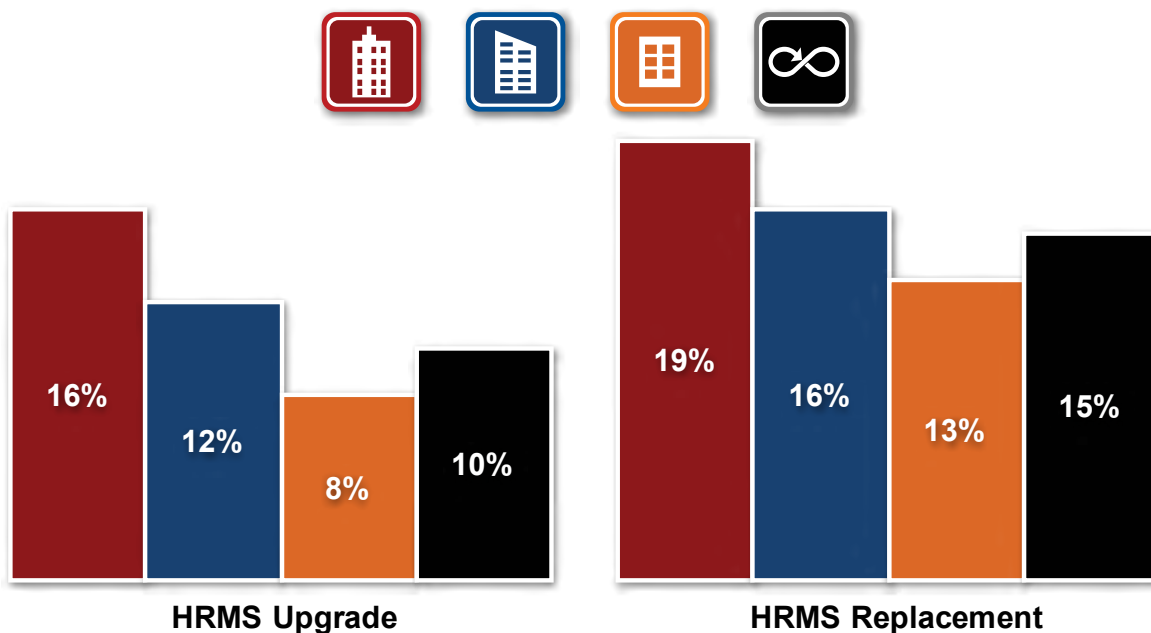
Only 11% of organizations plan to change their Payroll solution in the next 12–24 months, while 18% are evaluating other solutions.

# Core HR Management System Application

Central to most organizations' HR system environment is a core HRMS that handles administrative recordkeeping and ideally serves as the single source of information about the workforce. More recent solutions include employee profiles, organizational structures, analytics tools, and in some cases contingent worker information.

The vendor and deployment model of a core HRMS plays a major role in the decisions made concerning additional HR technologies. When making the decision to replace or upgrade a core HRMS, this change requires a considerable amount of work for both the HR and IT functions and can cause an organization to rethink its entire enterprise HR Systems Strategy. Large global organizations often have multiple core HRMSs due to mergers, acquisitions, and unique regional requirements. These multiple systems create even greater challenges when an organization plans to update its core HRMS environment.

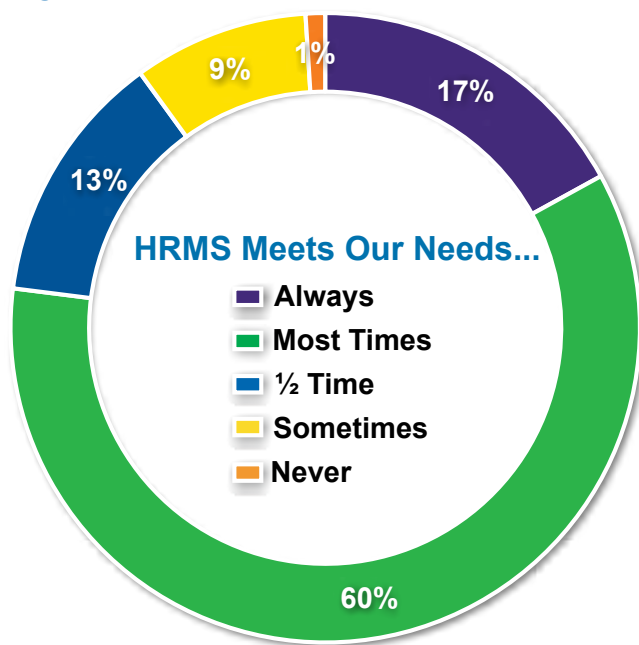
**Figure 39: HRMS Replacement Initiatives by Size**



We began tracking the major initiatives for replacing or upgrading core HRMS environments in 2013. For the last several years, we've seen more replacements than upgrades—a sure indication that organizations were rapidly moving to Cloud/SaaS solutions. This year, 15% of organizations are planning a major initiative to replace their HRMS. Large organizations are seeing an increased focus on HRMS replacements, with 19% planning an HRMS replacement this year, compared to 16% of Medium organizations, and 13% of Small organizations.

Although core HRMS solutions are central to the HR function's ability to both understand its workforce and effectively communicate with its employees, only 17% of organizations report that their current HRMS solution Always meets their business needs.

**Figure 40: HRMS Solutions**



Organizations whose current HRMS providers had gaps in meeting current needs stated that these were the greatest challenges today:

- Reporting functionality – 44%
- Lack of/too much customization – 38%
- Integration challenges – 10%
- Payroll, Benefits, Time, Org Structure – 15%
- Compensation, Recruiting, Talent Management – 19%
- Poor usability/UX – 17%
- Poor service and support – 11%
- Internal skills gap – 8%
- Cost, maintenance, updates – 8%
- Compliance, historical data, international needs – 6%
- Mobile – 4%

These gap areas are challenges that technology vendors are working to address as they transform their core HRMS solutions to meet today's business requirements; it is critical for buyers to define these before making final selections.

## Core HRMS Vendor and Solution Outlook

The core HRMS vendor solution landscape<sup>1</sup> has seen rapid changes over the last five years as new vendors have entered the market and existing vendors have shifted flagship products to focus on Cloud-based solutions. We will continue to see dramatic changes across these solution providers.

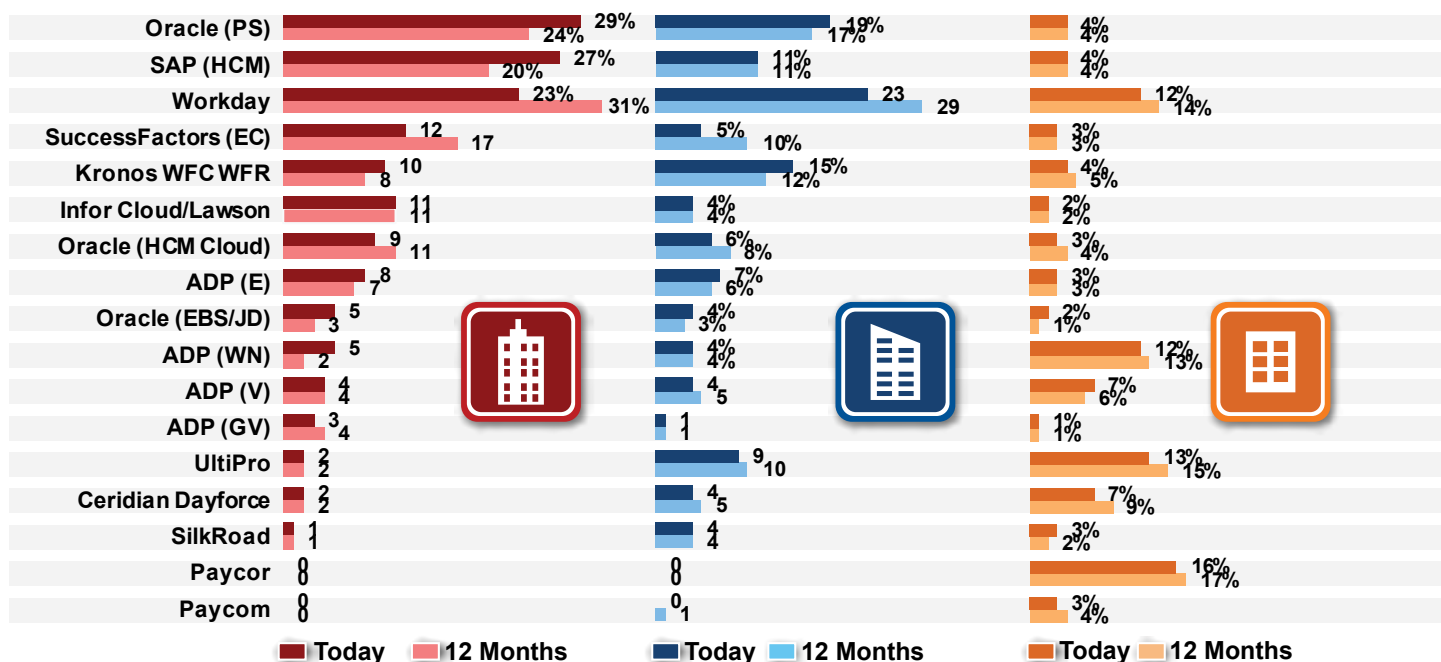
As the core HRMS purchasing decisions shift from a focus on administrative excellence to business outcomes and consumer-level experiences, solution providers struggle to create a one-size-fits-all approach to application development. For some vendors, the answer to this challenge is extensive configurability within a single modularized, feature-rich application. Other vendors choose to maintain multiple independent solutions designed to meet various size or industry needs under one vendor brand. In both cases, buyers are expecting a more tightly connected relationship with this critical vendor—one that includes transparency in a vendor's culture, business issues, and the achievability of published product roadmaps. Understanding these dynamics is helpful when navigating the changing HCM solution landscape.

Since relationships and UX are now critical buying factors, we see various vendors expanding rapidly among specific client profiles that may include industry, size, or cultural factors. For these reasons, our Vendor Landscape charts are now broken into specific vendor solutions and grouped by size.

<sup>1</sup> We provide an outlook on the current state of Vendor Solution adoption by our Survey respondents and their adoption plans in the next 12 months. Please note this should not be considered Market Size data.

Insight becomes crucial when trying to understand the impact any one vendor may have on the current HR market; for example, if we look at the overall adoption by individual buyers across the entire core HRMS chart, we find that Oracle has the largest overall adoption numbers (if shown in aggregate) at 27%, with ADP and SAP following closely at 20%, and Workday at 19%. The aggregate numbers, however, only tell us half the story: while looking at the adoption numbers by individual solution area and size, we can see which application adoptions are increasing or decreasing more clearly.

**Figure 41: HRMS Adoption by Size**



*Note: columns do not add up to 100% as organizations have multiple solutions in use.*

We continue to see overall decreases in adoption for Oracle PeopleSoft, EBS, and JD Edwards, as well as SAP HCM. It is likely that we will see the overall adoption numbers eclipsed by the newer Cloud applications in Large organizations within the next two years.

For Large Organizations, Workday shows some of the highest plans for overall adoption increases in the next 12 Months, but SAP SuccessFactors Employee Central and Oracle HCM Cloud also have considerable plans for increases this year; we also see some increase planned for ADP Global View by Very Large organizations. Infor's overall adoption numbers have stabilized and we are beginning to see a small but steady increase that balances the vendor change numbers. Infor's investment in its own new core HCM Cloud platform should influence those individual numbers within the next two years.

For Medium organizations, Workday sees a modest increase in adoption plans, along with SAP SuccessFactors EC, Oracle HCM Cloud, UltiPro, Ceridian Dayforce, and ADP Vantage.



Small organizations once again have the most diverse vendor map, with growth seen by Workday, Kronos, ADP WorkforceNow, UltiPro, and Ceridian Dayforce. We also see a growing number of vendors meeting our Vendor Landscape adoption threshold that focuses on the Very Small organizations (<1,000). Vendor solutions that address this category of buyers include Paycor, ADP Workforce Now, and Paycom. This is a rapidly growing space, however financial outcomes for these vendors depend greatly on high-volume client work with increased levels of automation.

Only 14% of organizations plan to change their core HRMS in the next 12–24 months, and another 18% are currently evaluating a change. Time spent in the selection process on upcoming roadmaps, service models, and vendor support is as important as time spent on feature and functionality checklists. In this new world, an organization's new technology purchase means buying more than just a new piece of software—it is also purchasing that vendor's future possibilities.

## Benefits Administration Applications

The area of Benefits applications and solutions is currently experiencing major upheaval. These solutions range widely from simple U.S.-only Healthcare selection, enrollment, and data-capturing tools, to recent innovations that now include global benefits management, wellness program management, and wider Employee Assistance tools to manage major life events.

In the U.S., adoption of Benefits applications has reached 85%, while in Canada and Europe/Middle East/Africa (EMEA), adoption is closer to 70%; for Asia-Pacific (APAC), adoption of these applications drops to 57% of organizations.

For the last two years, we've asked organizations about their individual benefits solutions. The list of solution providers below was based on the list created from the first year's write-in responses. This market is particularly segmented by size, and solution providers rarely serve market segments on both ends of the spectrum.

These vendors fall into three very specific category types:

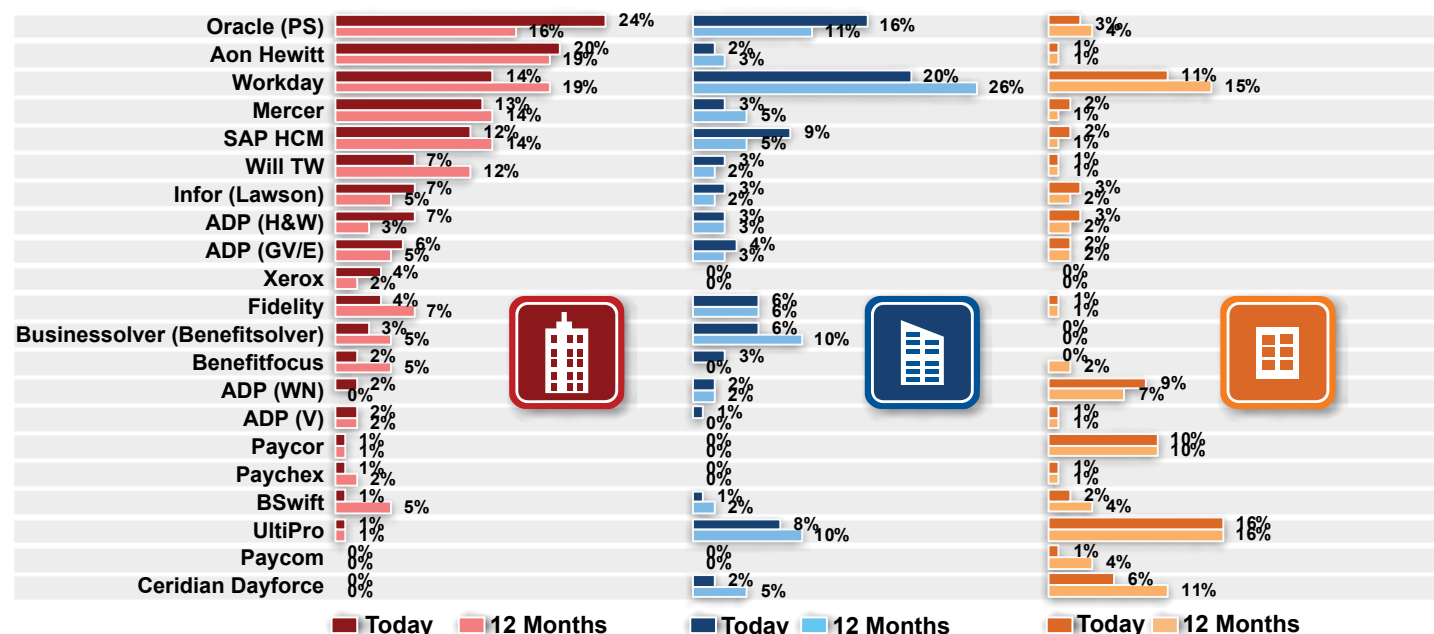
- **Enterprise Systems** – Oracle, SAP, Workday, ADP, Infor/Lawson, UltiPro Ceridian, Paycor
- **Benefit “Point” Solutions** – Benefitfocus, Businessolver
- **TBO (total benefit outsourcing, services and technology)** – Aon Hewitt, Willis Towers Watson, Xerox, Mercer

Organizations might use only a single solution or a combination of these solutions.

Adoption percentages by size play a major role in the Benefit applications organizations choose to use, along with types of benefit offerings, benefit communication offerings, and emerging technology trends in the Benefits space.

Only in the Large category do the TBO solution providers hold large audiences, with Aon Hewitt receiving the largest percentage of that group of solution providers, followed by Mercer, Willis Towers, and Fidelity, while Willis Towers Watson and Fidelity were the only TBOs to see an increase in adoption in 12 Months. We also see that Oracle PeopleSoft, SAP HCM, and Workday hold high adoption percentages in the Large category, with only Workday seeing planned increases over the next 12 Months.

**Figure 42: Benefits Solutions Adoption by Size**



*Note: columns do not add up to 100% as organizations have multiple solutions in use.*

Workday, UltiPro, ADP Vantage/WFN, Paycom, and Paycor all had high adoption in the Medium and Small categories, with expectations for increases over the next 12 Months. Benefitfocus and Businesssolver are the only two Point Solutions that showed up with percentages high enough to make our list this year, and we believe Point Solutions might be under-represented in this data. We'll make a concerted effort to reach that audience next year as this market continues to rapidly evolve.

A growing part of an organization's Benefits function role is managing non-Healthcare package benefit programs as well as international non-healthcare benefits. We asked Survey respondents which of these innovative Benefits programs they are currently using in their organization. Over 75% of all organizations are now managing a wellness program, while Large organizations are more likely to have onsite or reimbursable fitness programs, Tele or Virtual Medicine programs; Healthcare Centers of Excellence are also offered by many organizations.

Few healthcare-based Benefit applications are designed to manage these growing, non-traditional offerings—and we've seen a significant increase in ancillary benefit/wellness-based applications designed to provide tracking and access to many of these services offered by organizations. Mobile-enabled HR is expanding quickly in the Benefits space, and expectations are high for consumer-like UX.

**Figure 43: Innovative Benefits Offered by Organizational Size**

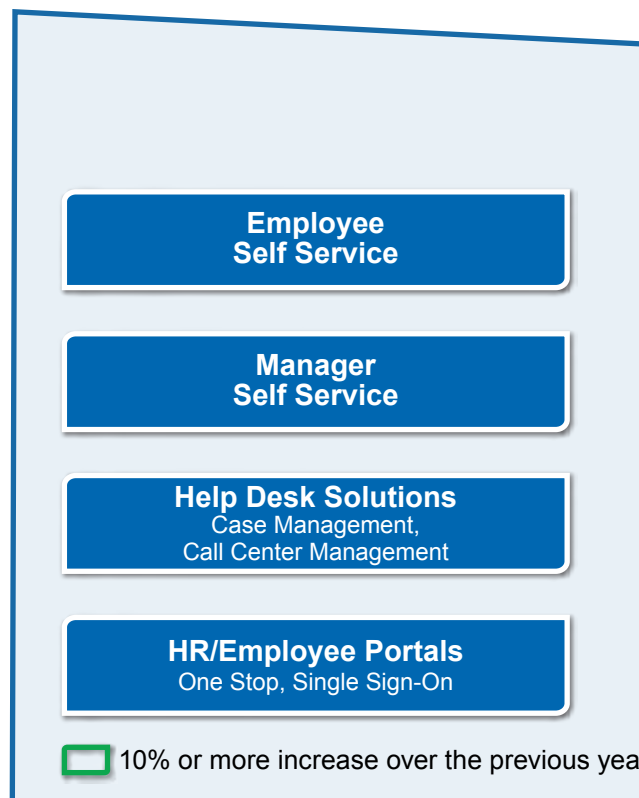


# Service Delivery Applications

## Service Delivery and Mobile

Service Delivery Applications are an ever-evolving category of technologies that typically includes Employee Self Service (ESS) and Manager Self Service (MSS), HR Help Desk solutions, HR/Employee Portals, and/or Employee/Manager Portals. In some cases, the solutions are now automatically rolled out with many of the new Cloud HRMS solutions, but not in all cases or for all applications. Organizations rolling out Mobile access in addition to these Service Delivery Applications find that their overall adoption levels increase significantly.

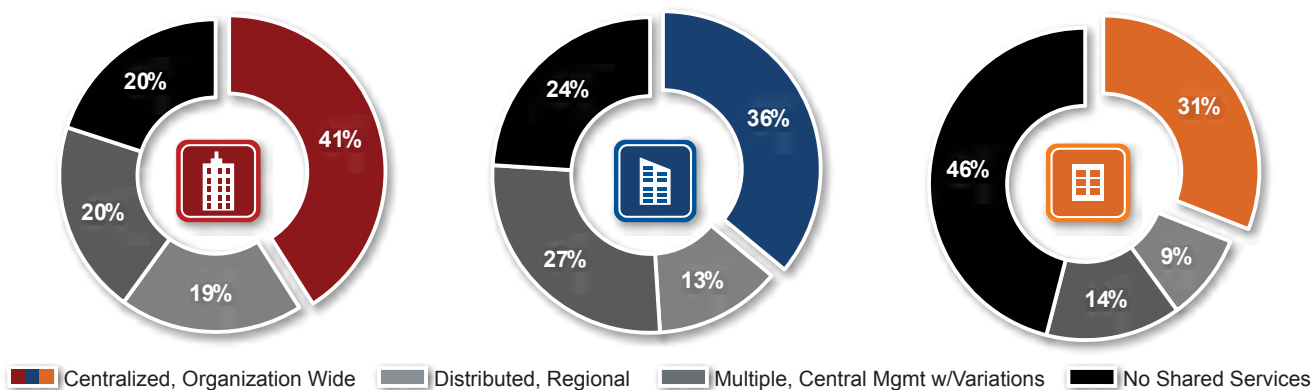
This year, we see a slight increase in the adoption of MSS and Portal solutions across organizations. We can reasonably expect that the investment many organizations are making in Mobile-enabled HR processes will result in the continued growth in adoption levels for these applications over the next few years. We also see planned double-digit increases for all Service Delivery Applications in the next 12 months; however, we saw those expectations in 2016 and they were not realized in 2017.



## Changing the Conversation about Shared Service Delivery

An organization's approach to Service Delivery Applications is directly connected to its approach in delivering HR services to its workforce. In an effort to increase HR efficiencies and improve the UX, many organizations invest heavily in Shared Service centers.

Figure 44: Shared Service Models by Size



2X

### Centrally Owned and Managed Shared Services

Organizations with a Centrally owned and managed Shared Services model are twice as likely to be viewed by all levels of management as contributing strategic value, versus organizations with no Shared Services.

This year, 70% of organizations have some level of Shared Services; however, these numbers are not a significant increase from last year. A Centralized model is the most widely used, which employs the organization-wide standardization of processes and technology. The other Shared Service models that we ask about include

a Regional model (managed and has processes standardized at the regional/local level) or a Blended model (results in central management with local variations in technology and processes).

Organizations with a Centralized Shared Service model are twice as likely to be viewed as contributing strategic value to their organizations than those without a Shared Service model.

When we look at these models by organizational size, we see that Small organizations are the least likely to have any Shared Services—for those who do, they most frequently have a Centralized model. Complex global organizations are the most likely to use Regional or Blended Shared Service models.

Just 37% of organizations have an Enterprise Shared Services function that includes HR as well as Operations, Finance, and other central process areas. Shared Service centers are generally located in an organization's Headquarters, while Large global organizations may have multiple centers around the world.

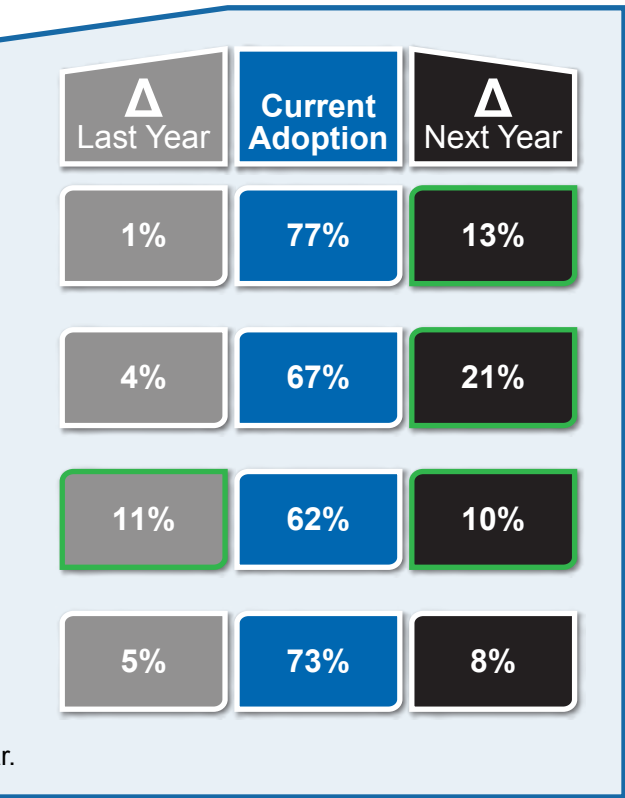
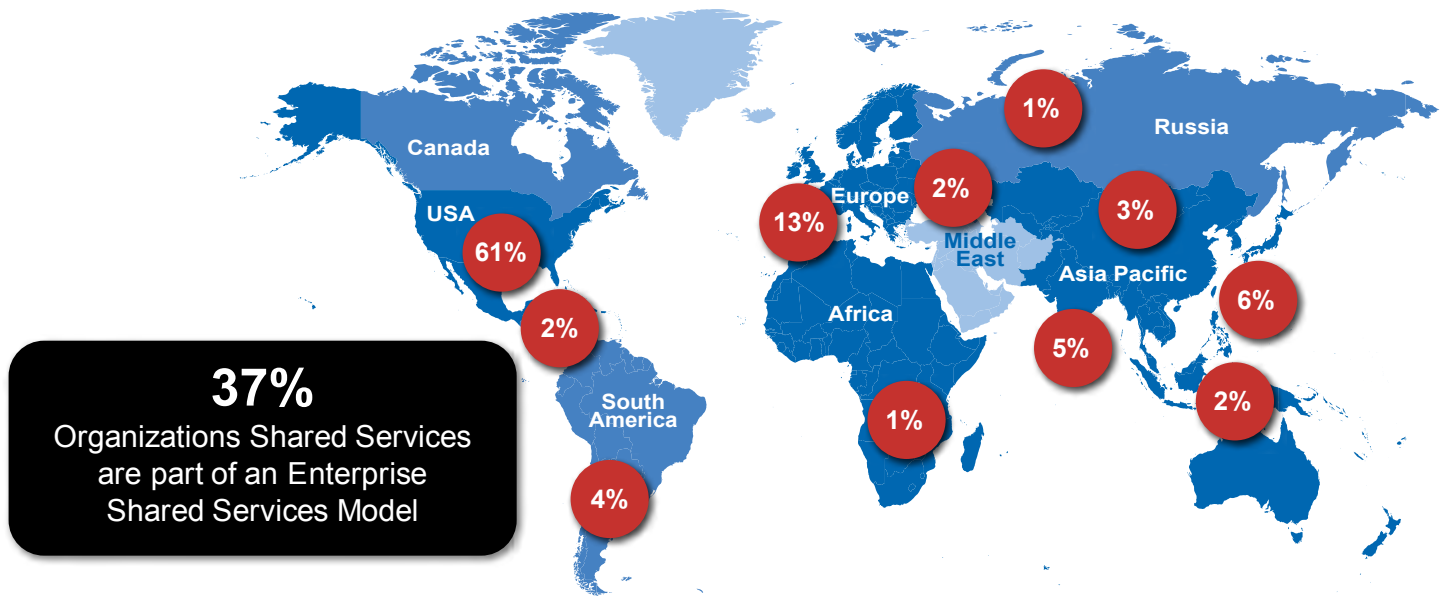
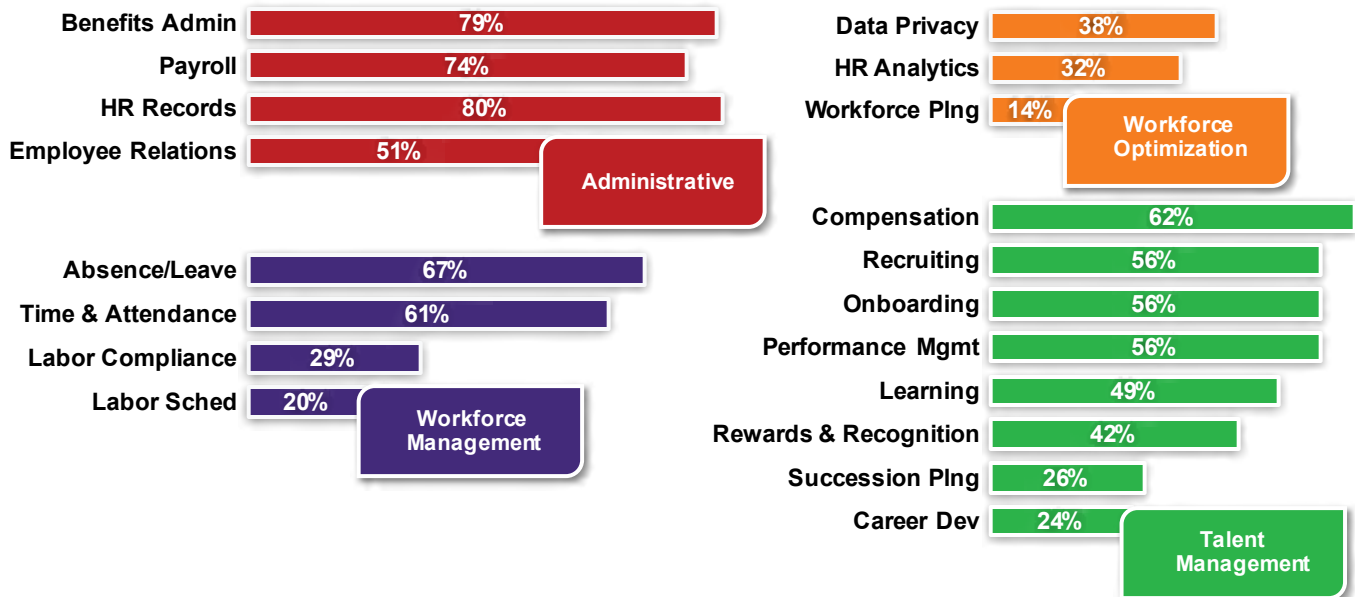


Figure 45: Shared Service Center Locations



Those organizations with a Shared Services function also provided insights into the processes they currently include in their Shared Service centers, with Administrative functions being the most likely solutions to be centralized. Over 50% of organizations are sharing some level of Workforce Management and Talent Management applications, and 38% of organizations share Data Privacy work within their Shared Service centers.

**Figure 46: Functions Included in HR Shared Services**

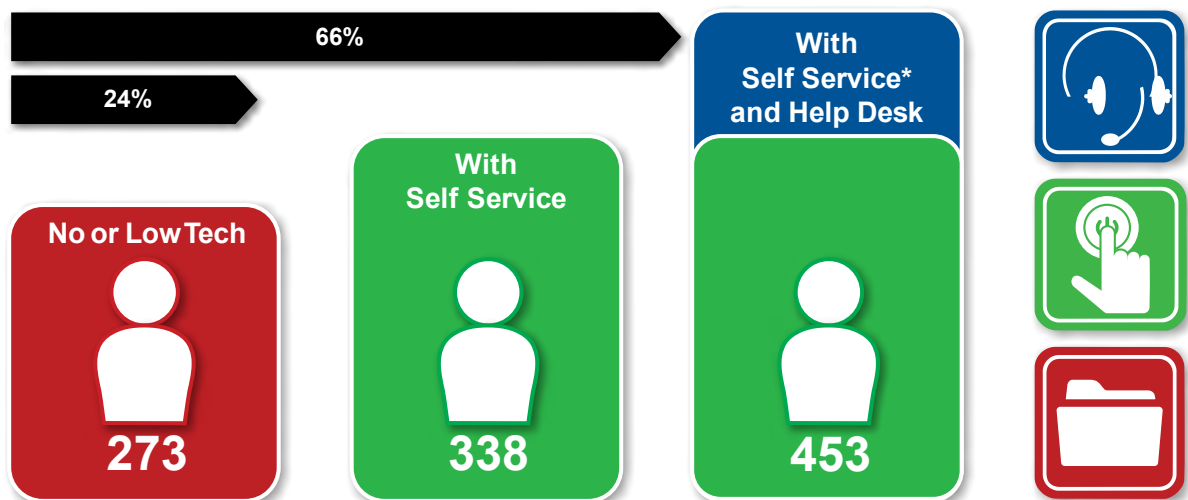


## Service Delivery Efficiencies and Outcomes

We view Service Delivery technologies through the lens of enabling a more efficient and personalized HR organization. One way to gauge the impact of Service Delivery involves reviewing the cost efficiency of an organization's HR department, measured by the ratio of employees per HR administrative staff.

**Figure 47: Value of Service Delivery Technologies**

### Employees Served by HR Administrative Headcount



*\*With Self Service: Employee and manager Self Service applications serve 60% or more of employees and 50% or more of manager populations*

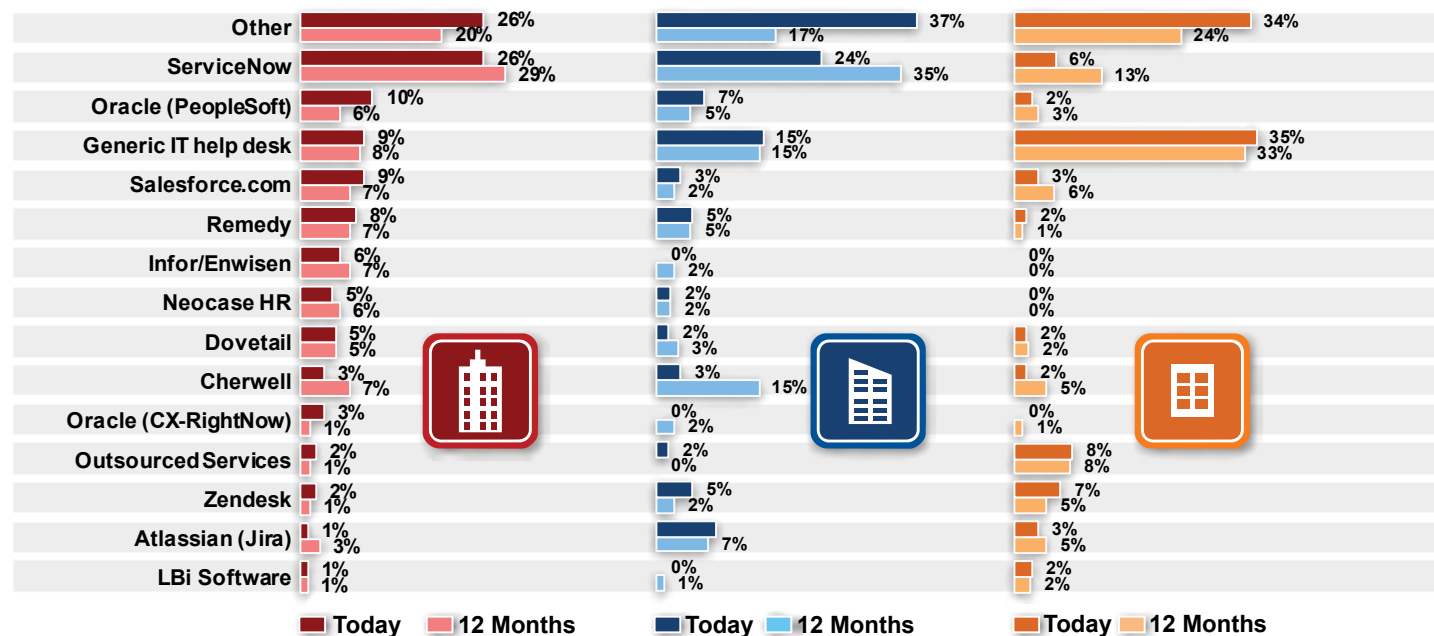
Organizations rolling out higher levels of ESS support along with self-service technology, on average, serve 24% more employees per HR Administrative staff headcount than those with low or no or self service. Organizations implementing self-service technology within a Shared Services function with HR Help Desk technology serve 66% more workforce per HR Administrative staff. Though this combination of technologies delivers the highest level of efficiency for the enterprise, there are always variations by industry and size that can be determined through benchmarking to construct your optimal service delivery model.



# HR Help Desk Vendor and Solution Outlook

Help Desk solutions are part of the complex mix of technology, process knowledge, and empathy required for an HR Shared Services function. Shared Service centers deal in data, and the tools that capture, tag, and manage that data are becoming increasingly important. Improving the service experience for the end user is not just about technology, but about the relationship an organization develops with its employees. A well trained, supported, and prepared internal Help Desk function should be as important as any external-facing customer service or Help Desk initiative. To achieve this, organizations may leverage an existing IT or Sales Help Desk solution, or find a solution tailored to the HR industry. In both scenarios, we an increased focus on Mobile Help Desk solutions that can provide employees with 24x7 access to their critical HR information.

**Figure 48: Help Desk Adoption by Size**



*Note: columns do not add up to 100% as organizations have multiple solutions in use.*

As the Help Desk space rapidly grows, a distinct difference emerges between organization size and the selection process for their solutions. Large and Medium organizations gravitate towards HR solutions such as Oracle PeopleSoft, Infor/Enwise, Dovetail Software, Neocase™ Software, and LBi Software, as well as operational Help Desk solutions including ServiceNow, Cherwell, and Salesforce.com, while the Other and Generic IT solutions have high adoption percentages regardless of size. The Other category includes many Small and Mid-Market Help Desk solutions that are rarely HR specific. ServiceNow has recently focused on tailoring an HR-specific Help Desk offering, and its focused approach seems to resonate with buyers. Planned increases are also expected for Infor/Enwise, NeoCase HR, Cherwell, and LBi Software over the next 12 Months.

Once an overlooked administrative area, we anticipate the Help Desk industry will continue to see large strides as investments in enterprise innovations, such as Robotic Process Automation and Virtual Bot assistants, as well as technology buzz words Machine Learning and AI. These investments leverage the abundance of internal data to achieve higher business efficiency and automation. As an example, Oracle HCM Cloud recently released a Help Desk module showcasing voice interface and bot-based Machine Learning.



# Workforce Management Applications

## The Changing Definition of a Workforce Management Suite

A Workforce Management (WFM) Suite is a collection of applications that help organizations manage scheduling, assignments, and actual time worked. In some cases, these systems include the actual activities of their workforce, and we include six specific applications in the category that we define as Workforce Management Applications. Time and Attendance applications continue to be the most widely adopted solutions in this category, with 89% adoption today and continued plans for growth over the next few years. In previous years, we primarily saw Time and Attendance applications adopted at high levels by organizations with large hourly and part-time workforces such as Retail, Manufacturing, and Healthcare. Today, we also see high adoption levels by organizations in other sectors such as Financial Services, High Tech, and Consulting.

Workforce/Labor Scheduling solutions, as well as Workforce/Labor Budgeting, are often overlooked despite their important role in helping organizations confirm that they allocate individuals with the right skills, to the right location, at the right time. Industries such as Financial Services, High Tech, and Other Services with heavy project management requirements, as well as highly specialized skills, frequently leverage sophisticated WFM scheduling and labor allocation solutions to help plan, schedule, and manage projects cost effectively.

Absence Management and Leave Management applications are newer applications to the WFM suite, but play a major role in helping organizations manage regional labor laws and reporting requirements. Many organizations outsource Absence Management, however, any modern WFM solution updated for regional regulations can be a critical tool for managing risk internally.

The addition of Predictive Analytics and Machine Learning may prove to have a significant impact on Workforce Management Applications. Workforce and Labor Budgeting applications have always provided some level of ballpark forecasting for organizations with years of historical data and standard work roles, but recent attempts at schedule optimization based on limited forecasting algorithms have led to employee engagement issues over erratic schedules or the practice of “clopening”—opening and closing on back-to-back shifts—often automated based on Machine recommendations. Vendors today invest heavily in increasingly sophisticated predictive capabilities and embedded WFM analytics with the goal of providing more insight for management decision making, without removing the human oversight.

**Time & Attendance (Labor)**  
Time tracking, Activity tracking


**Absence Management**  
Request Off, Missed Work

**Leave Management**  
Leave requests, Case management, Compliance

**Workforce/Labor Scheduling**  
Schedule, Resource analysis

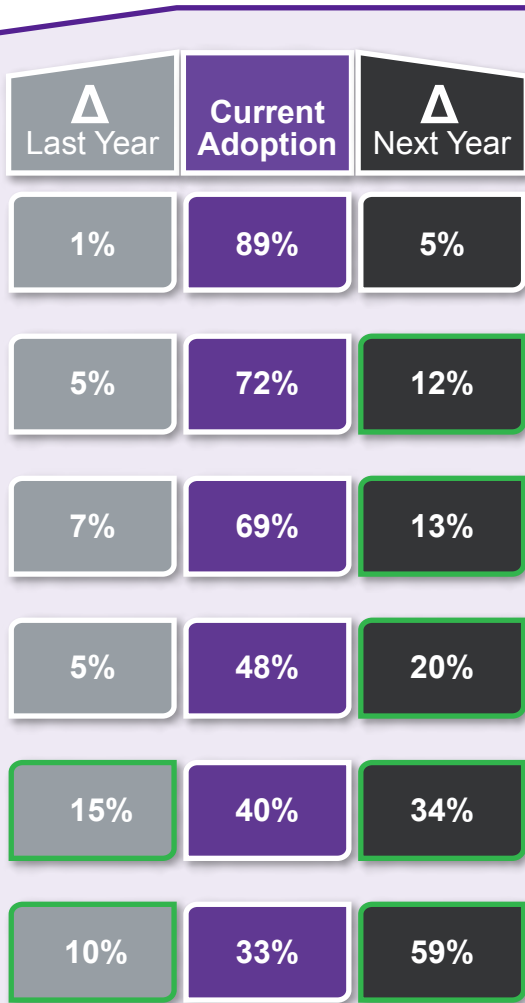
**Workforce/Labor Budgeting**  
Labor analysis, Forecasting

**Embedded WFM Analytics**  
Planning, Risk, Reporting

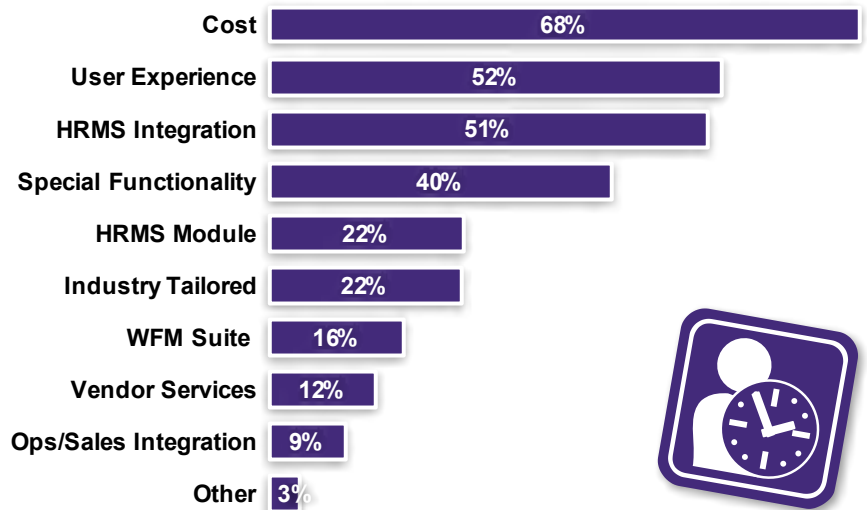
 10% or more increase over the previous year

# Workforce Management Buying Patterns

Changes in the WFM Applications selection process focus on compliance and tactical elements, taking a broader enterprise view regarding the strategic role of WFM in achieving HR outcomes into consideration as organizations shift to operations-driven decision making. Cost continues to be the top selection criteria of WFM Applications for 68% of our Survey respondents. However, this year 52% of respondents also selected UX as a top factor, along with another 51% selecting HRMS integration. For two industries, Finance and Higher Education, Cost criteria came in behind both UX and HRMS integration requirements.



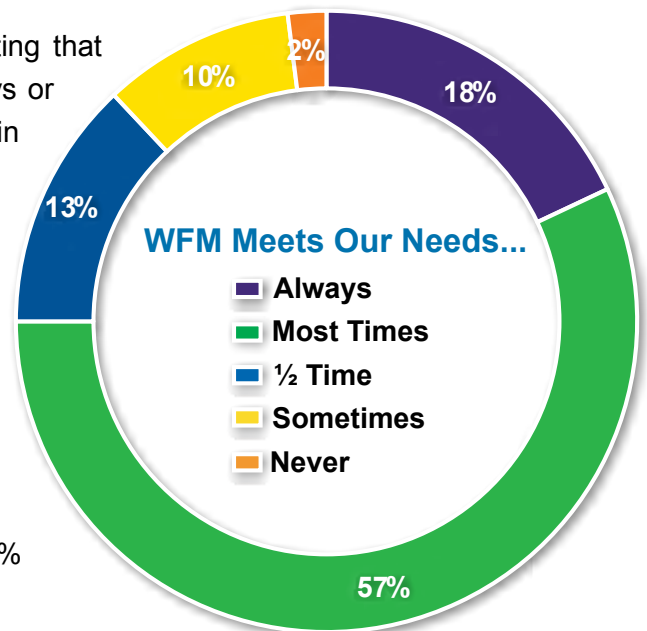
**Figure 49: Primary Factors in Selecting WFM Applications**



This year, we see a slight increase in organizations reporting that current WFM applications meet their business needs Always or Most Times to 75%. Of those organizations identifying gaps in their WFM application, these issues are the top challenges:

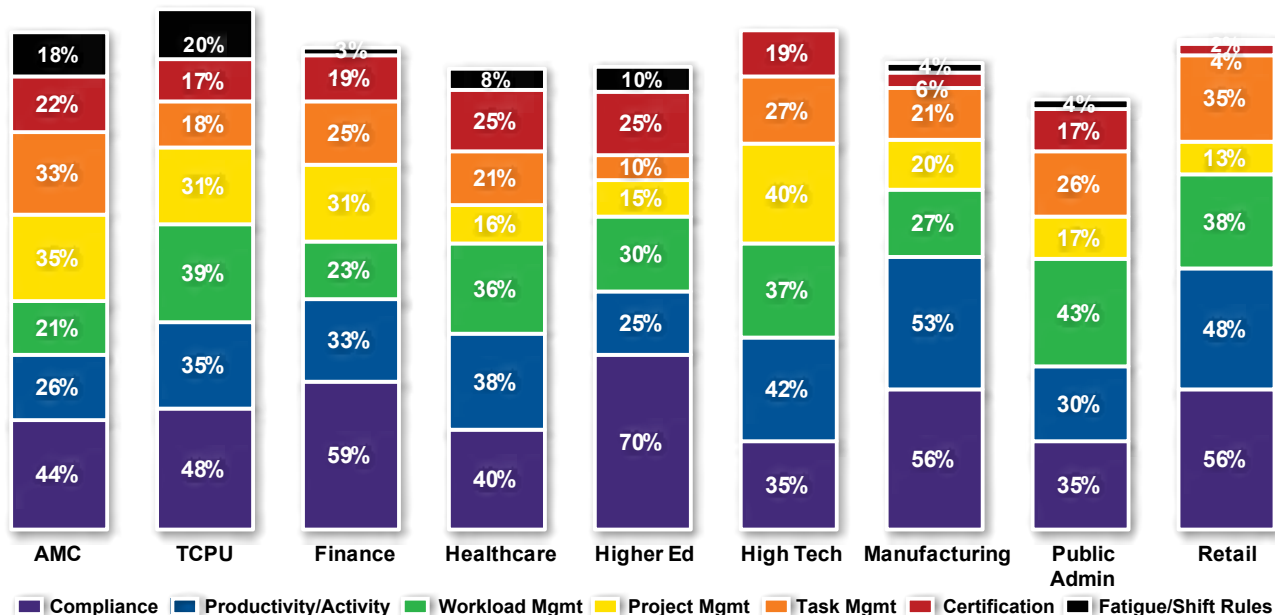
- Lack of functionality/customizations – 40%
- Integration challenges – 40%
- Reporting functionality – 17%
- Cost/lack of modules due to cost – 10%
- Customer services/maintenance – 10%
- Poor usability/UX – 12%
- Management of Leave or Absence UX – 8%
- Complex Workforce Issues, Regional, Union, etc. – 6%
- Lack of System Knowledge/Skills Gap – 5%

**Figure 50: WFM Solutions**



Organizations reporting challenges within their WFM solutions provided a list of desired functionality improvements. Compliance resources ranked number one for every industry except High Tech, where Productivity and Activity Management were slightly more important. Organizational preferences range widely across industries, particularly in areas like Fatigue Management or Shift Rules, where Agriculture, Mining, Construction, and Transportation ranked these functions as a much higher priority than High Tech, Retail, Finance, and Manufacturing.

**Figure 51: Top Functionality Wish List, By Industry**

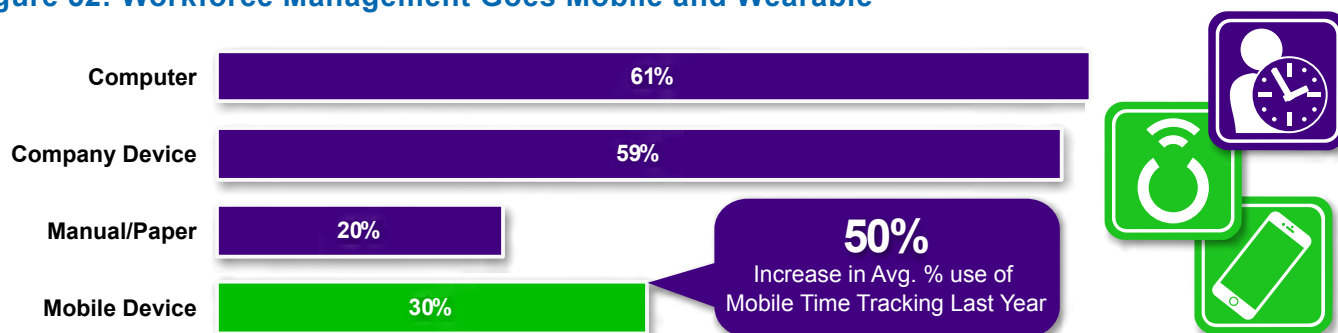


Compliance resources top the list of requested features, with less emphasis on Workload Management and more emphasis on Productivity/Activity. Productivity and Activity Management tracking tie in with conversations concerning employee monitoring through Mobile and Wearable technologies. Real-time employee activity and performance tracking helps identify improvement opportunities benefiting both the employee and organization.

## Breaking Free from the Time Clock

Survey participants report that individual PCs and company-wide devices (biometric, card-swipe, code) are the predominant methods for submitting their time, with almost 60% of employees using these methods. For 2017, we see a dramatic decrease in the use of Manual time tracking to 20% of the workforce; in contrast, we see a 50% increase for those tracking time in a Mobile environment. As Mobile devices increase their geolocation capabilities and organizations replace older WFM applications with new consumer-focused applications offering Mobile and Wearable time tracking, we anticipate this percentage will continue to increase.

**Figure 52: Workforce Management Goes Mobile and Wearable**



# Workforce Management Suite Vendor and Solution Outlook

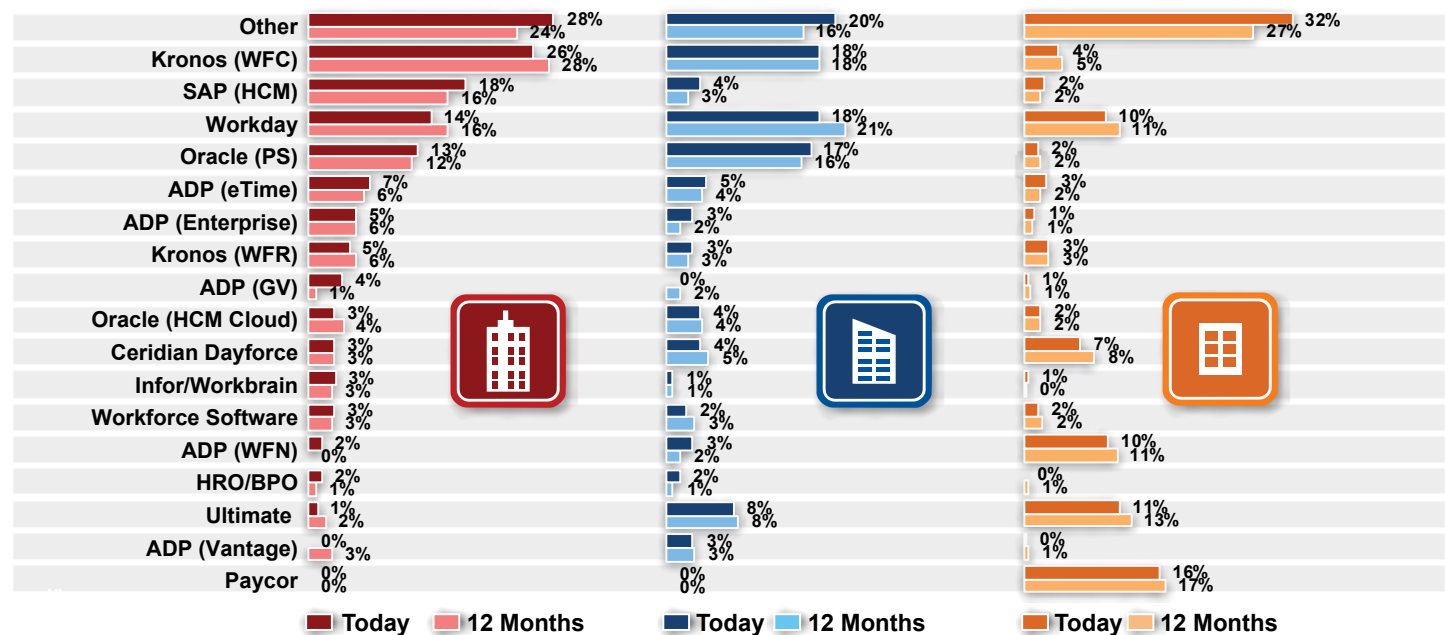
Our Survey respondents provided an outlook on the current state of Vendor Solution adoption and their adoption plans in the next 12 months. Please note this should not be considered Market Size data.

## Workforce Management Adoption Trends by Size

Workforce Management applications are one of the least standardized HR system environments across Vendor Solutions. Vendors offer a wide range of features and functions, leading many organizations to purchase multiple solutions to meet their needs. Kronos has a healthy adoption level across organizations of all sizes, but particularly in Large and Medium organizations. For the first time in the WFM application area, SAP HCM and Workday had slightly higher adoption numbers for Large and Medium organizations than Oracle PeopleSoft. There are expected increases in Large and Medium adoption plans for the next 12 Months for Kronos Workforce Central, Kronos Workforce Ready, Workday, and Oracle HCM Cloud.

Recent entrants to the Workforce Management space are also seeing plans for considerable adoption increases over the next 12 Months, including Ceridian Dayforce HCM, Workforce Software, and ADP Vantage, particularly in the Medium and Small organization space, and UltiPro sees gains for all three size areas planned for 2017. Paycor continues to represent solution providers meeting the needs of Very Small organizations (<1,000 employees), achieving a large adoption percentage in the Small category.

**Figure 53: Workforce Management Adoption by Size**



*Note: columns do not add up to 100% as organizations have multiple solution in use.*

Last year, 15% of organizations planned to change or replace their WFM solution, with 20% evaluating a change; for 2017, we see that decrease to 12% of organizations planning to replace their WFM solution in the next 12 to 24 months and 19% are evaluating a change. The Other solution category is still very large for this application area, particularly for Small organizations where it is over 32% Today. These organizations are most often adopting operational or industry-focused solutions. As this market begins to move beyond a compliance focus, we anticipate WFM will become a major topic for many organizations.

# Talent Management Applications

## Shaping a Strategy

For the last three years, growth of application adoption in the aggregate Talent Management (TM) category has been limited, but this year we see a slight increase to 55% adopting a Talent Management application suite. We include nine applications in our category definition of Talent Management, all pertaining to the recruiting, development, and ongoing relationship between an organization and its workforce.

Organizations are currently in the process of re-evaluating their approach to many of the key process areas traditionally managed with TM applications—such as Recruiting, Performance Management, and Learning. Each of these application areas is going through tumultuous transformation.

Recruiting and Performance processes that once focused on annual events, key roles, and confidential assessments are now being transformed into continuous feedback models, tailored to meet enterprise-wide individual needs and built on expectations of transparency and trust.

Learning technologies, originally designed to adhere to strict reporting structures and event management models, are finding it difficult to rapidly alter architectures to accommodate constant input and personalization.

These changes are likely why 35% of our Survey respondents plan to invest considerable time on TM initiatives in the next 12 months, and why TM processes continue to rank among the highest Business Process Improvement (BPI) initiatives. The overall planned increase in adoption was also seen in all sizes of organizations; 46% for Small organizations, 58% for Medium, and 74% for Large organizations. TM solutions were often viewed as less critical to many Small and Medium organizations when compared to HRMS, Payroll, or Workforce Management applications. Low unemployment and high talent shortages in North America and Europe, combined with increased expectations for higher wages in Asia Pacific, will likely force organizations to rethink their focus on Talent Management applications this year.

**Talent Acquisition**  
Marketing, Branding, Sourcing,  
Assessing, Onboarding

**Performance Management**  
Goals, Objectives,  
Rankings, Plans

**Learning & Development**  
Training, Dev, Certifications,  
Content/Knowledge Management

**Compensation Management**  
Pay Ranges, Evaluation,  
Rewards, Incentives, Modeling


**Onboarding**  
Compliance, Culture, Readiness

**Talent Profile**  
Competencies, Skills, Experience,  
Goals, Objectives, Languages, Awards

**Succession Management**  
Reviews, Assessments,  
Ranking, Development

**Career Management**  
Development, Coaching,  
Mentoring, Mobility

**Embedded Talent  
Management Analytics**  
Gaps, Plans, Identification, Reports

 10% or more increase over the previous year

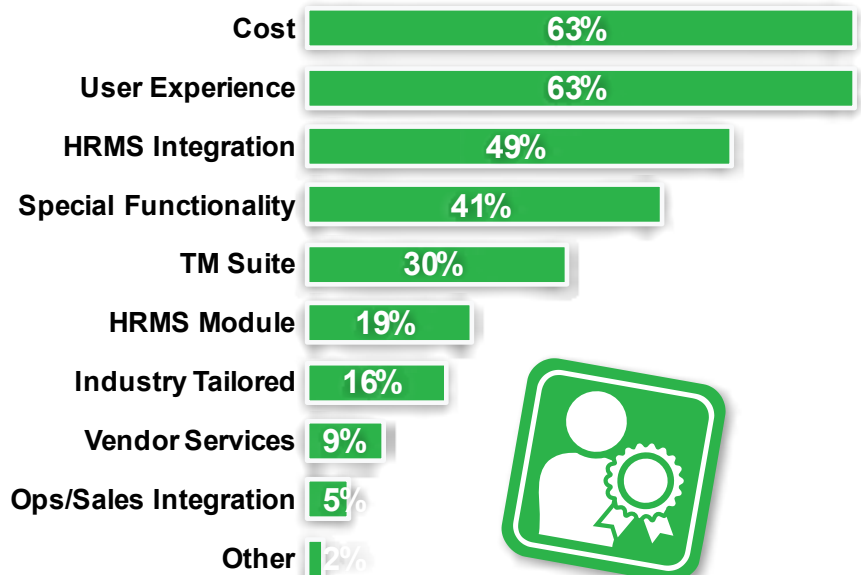
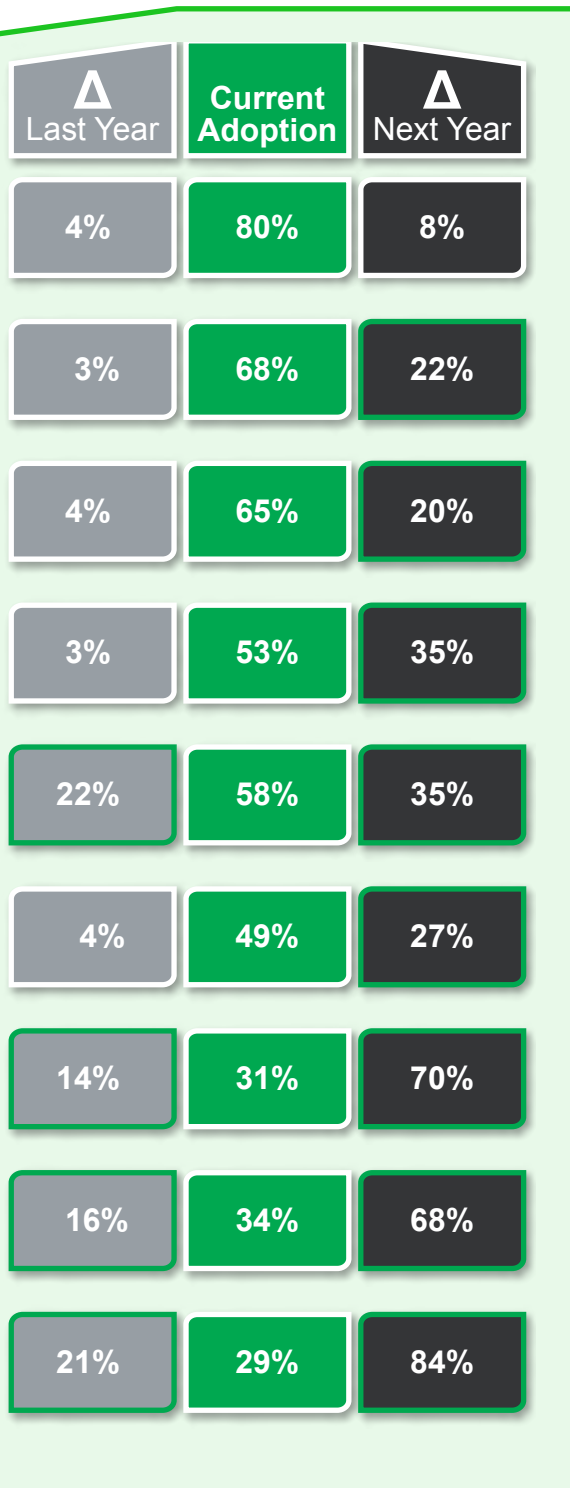


# Talent Management Buying Patterns

Changes are occurring with respect to how organizations select and purchase TM applications. Organizations are shifting from selection criteria based on siloed process management features which often led to stand-alone,

best-of-breed solutions to a broader enterprise view that takes into consideration the need for data integration and seamless UX. Cost and UX tied for the number one spot this year for TM applications' selection criteria, with 63% of organizations choosing them as one of their top three factors. While special TM Functionality is important, decision makers seem to require that a full TM Suite of applications be available—a concept more important for the TM buyers than WFM buyers, with 30% of organizations selecting this as a top selection factor.

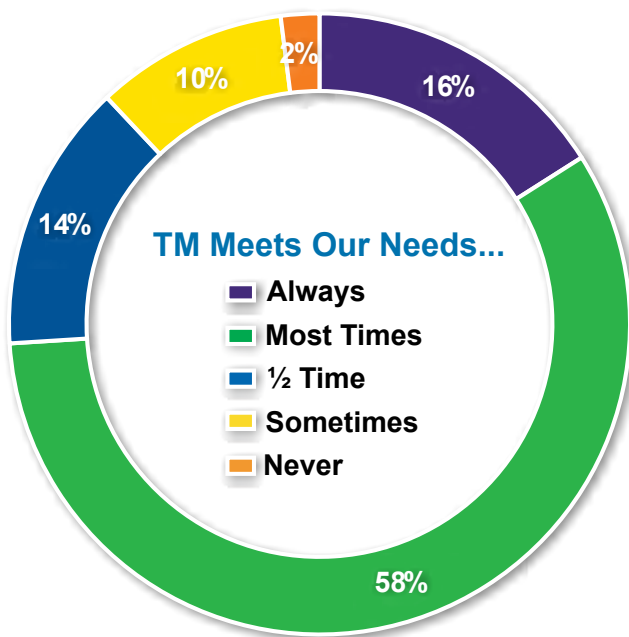
**Figure 54: Strategy for Selecting Talent Management Solutions**



## Average # of TM Applications Owned



**Figure 55: Talent Management Technology Meeting Needs**



Although 74% of organizations believe that their TM applications meet business needs Always or Most Times, TM applications still have the largest percentage of organizations at 26% that are less satisfied. These are the issues identified as top challenges:

- Customization/configuration issues – 27%
- Integration challenges – 23%
- Poor usability/UX – 18%
- Waiting for new modules – 17%
- Cost/lack of modules due to cost – 10%
- Reporting functionality – 6%
- Learning modules – 8%
- Performance modules – 7%
- Customer services/maintenance – 5%
- Lack of system knowledge/skills gap – 4%
- Recruiting modules – 4%

Innovative organizations have improved their TM application by integrating talent data with enterprise-wide business and operational data.

## Talent Management Suite Vendor and Solution Outlook

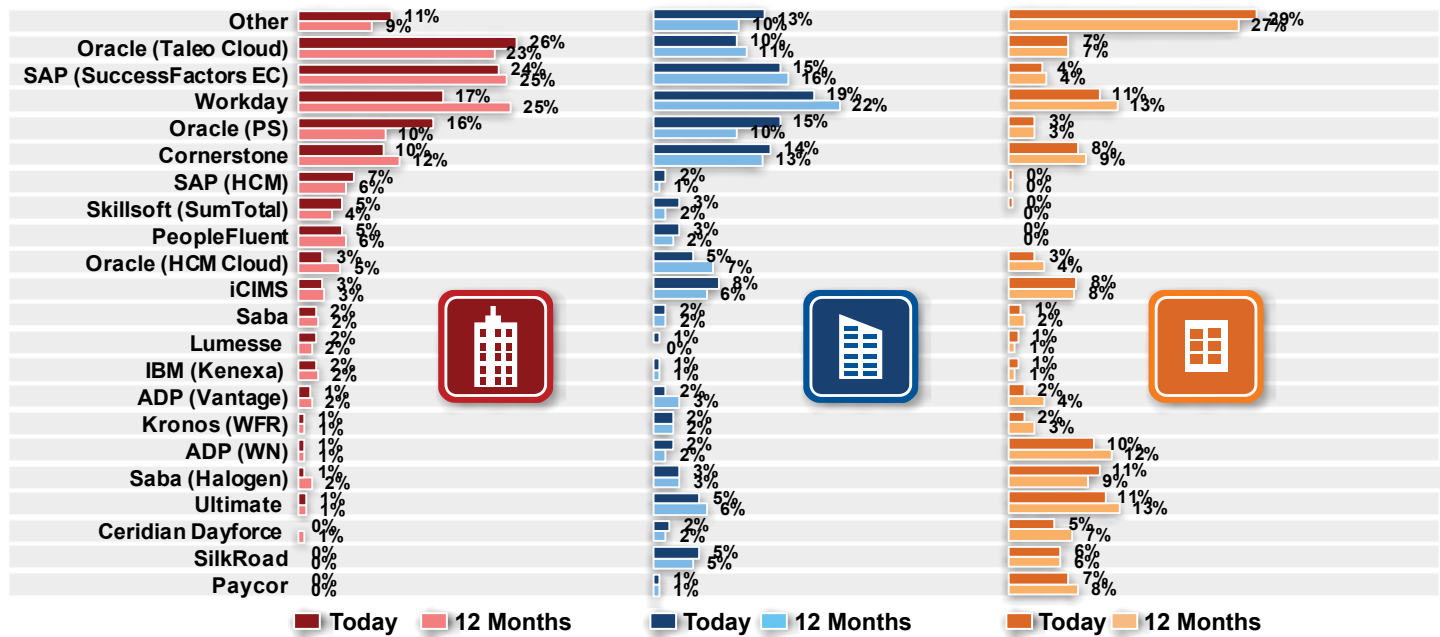
For each application area we cover, we provide an outlook on the current state of Vendor Solution adoption by our Survey respondents and their adoption plans in the next 12 Months. Please note this should not be considered Market Size data. We break each application area into Small, Medium, and Large organization adoption trends—as the greatest changes in adoption are often found in all three organization sizes.

### Primary Talent Management Suite

We also ask organizations to identify their primary TM suites as well as solutions they are using for individual application requirements, which provides us with a broad look across the entire TM landscape. Last year, 19% of organizations planned to change their primary TM solution; this year's percentage is a bit lower with 14% planning a change; another 18% of are evaluating other solutions.



**Figure 56: Talent Management Suite Adoption by Size**



Note: columns do not add up to 100% as organizations have multiple solutions in use.

This year in the Primary Talent Management category, we see an expansion of the Vendor Solutions that meet our adoption metrics threshold, as organizations employ a wider variety of overall solutions in this area. We continue to see Oracle (Taleo Cloud) and SAP (SuccessFactors EC) garner high levels of overall adoption percentages in Large and Medium organizations, with SAP (SuccessFactors EC) seeing plans for increased adoption over the next 12 Months. This is the first year we had enough individual data points to breakout the organizations that identify Oracle (HCM Cloud) as their Primary Talent Management application—and as Oracle (Taleo Cloud) and Oracle (PeopleSoft) see declines in adoption, Oracle (HCM Cloud) sees an increase.

Although a recent addition to the Talent Management suite category last year, Workday adoption percentages have increased, and should continue to increase over the next 12 Months. Existing Workday HCM and Payroll clients are highly likely to be implementing Talent Management applications in the near future. For Large organizations, the Talent suites of Cornerstone OnDemand, PeopleFluent, and Saba (Halogen) are the vendors seeing the highest adoption plans over the next 12 Months.

The Talent Management space for Medium and Small organizations is currently experiencing high levels of change, including the purchase last year of Halogen by Saba, while Vendor Solutions such as Ceridian Dayforce, iCIMS, Ultimate, ADP, and Paycor are expanding their Talent Management offerings. Organizations report plans for increased adoption in Small or Medium organizations for all of these solutions. Although organizations like iCIMS would not be considered a full Talent Management suite, the recent addition of Onboarding has solidified its role as a primary Talent Management application for many SMB HR functions. Paycor represents a class of vendors that service the Very Small market (<1,000 employees); previously seen as a Payroll and HRMS solution, recent additions to its offerings of Recruiting, Hiring, and Onboarding make it a viable Primary Talent Management solution for Small organizations. We also see a large group of Other organizations for all size groups at 36%, which continue to address market needs in new and unique ways.

# Individual Talent Management Solutions and Vendor Outlook

Outside of the primary Talent Suite, we continue to see organizations leverage niche solutions and make purchasing decisions based on unique requirements for individual TM applications. The TM space consists of many individual vendors that are working to create innovative features focused on industry verticals or ever-growing consumer demands. Understanding which Talent applications are seeing the greatest growth in HRMS and Talent Suite solutions provides valuable insight to this space.

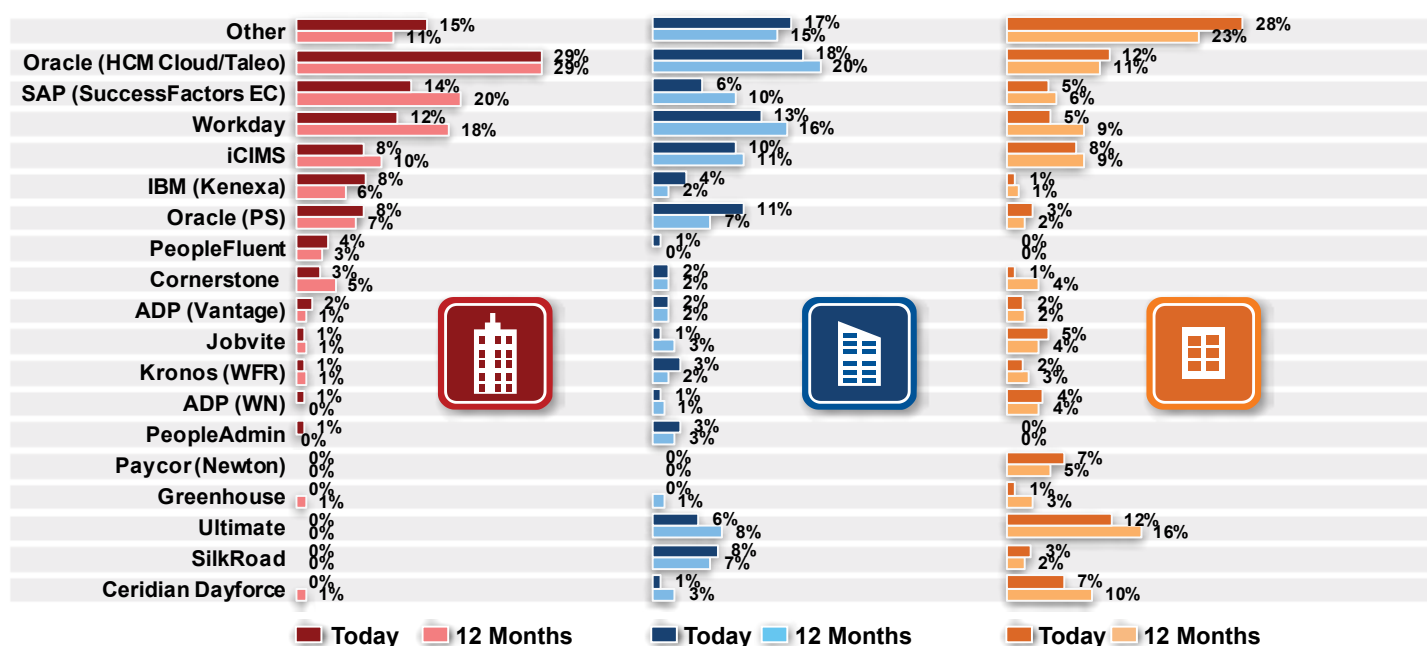
We share data down to 2% aggregate adoption levels in this section to provide detail on the shifting vendor landscape in these individual TM areas. We've broken out data by Small, Medium, and Large organizations in all charts. Some Survey respondents have shortlisted vendors for their TM solution but not yet made a selection; for these shortlisted vendors, the pending decisions may appear as a slight drop in their adoption rate.

## Recruiting and Talent Acquisition Applications

Recruiting or Talent Acquisition applications are almost universally adopted, particularly across Large and Medium organizations. Medium and Large organizations are typically ahead of the average adoption level by 10%, and Small organizations are typically 10% below the average. Most of the vendors on this list offer a full complement of applicant tracking features, along with a diverse mixture of marketing, Onboarding, and analysis tools.

Much of the growth and innovation in the Talent Acquisition space takes place outside of the Recruiting application. These innovative solutions support existing tools by providing better decision-making data or increasing candidate engagement such as video interviewing, big data analysis tools, and assessment technologies. Several HRMS and TM vendors previously without Recruiting applications have launched their own Cloud-based applications within the last three years and have begun to see adoption gains.

**Figure 57: Recruiting Applications Adoption by Size**



Note: columns do not add up to 100% as organizations have multiple solutions in use.

Although Oracle (HCM Cloud/Taleo) continues to hold the largest adoption level for Recruiting vendors Today, organizations report expected adoption of many new platform and suite applications in the Recruiting space over the next 12 Months. SAP SuccessFactors Employee Central, Workday, UltiPro, Cornerstone, Ceridian, and Paycor (Newton) are forecasted to realize considerable adoption growth in the next 12 Months.

We also see Point solutions iCIMS and IBM (Kenexa) continue to maintain large adoption percentages, with iCIMS seeing increased growth in all size categories for the next 12 Months. New additions to the Recruiting list this year based on write-in responses include Jobvite and Greenhouse—both applications are projected for slight adoption growth next year, but this may increase when they are added to the vendor list next year.

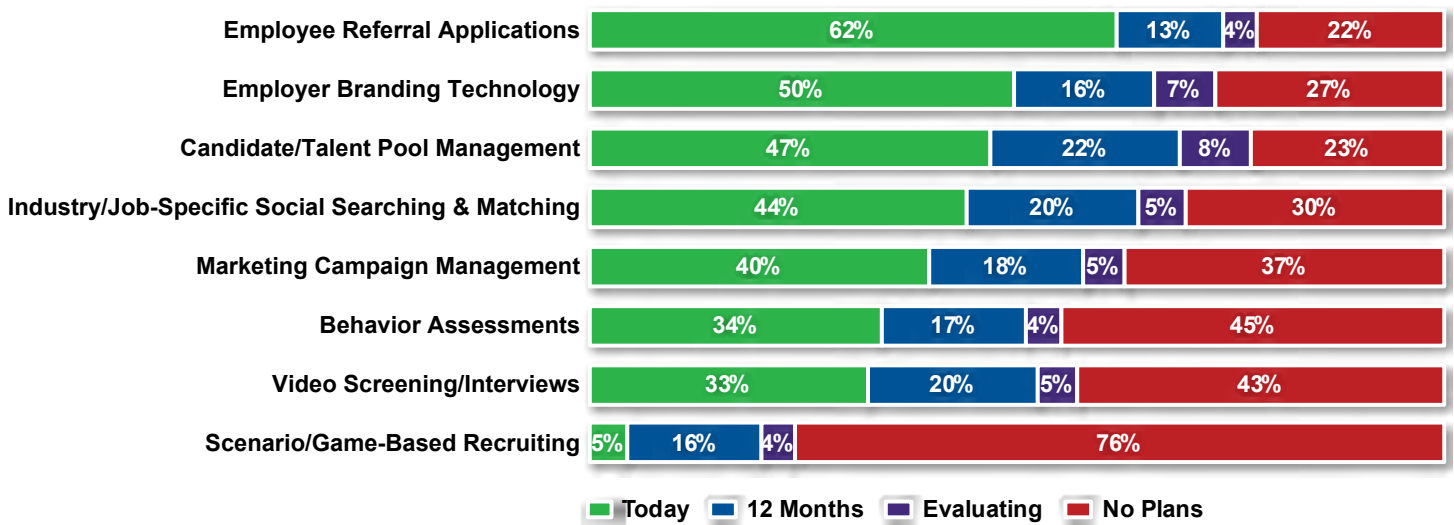
## The Evolving Talent Acquisition Ecosystem

In the last few years, we've seen a deluge of new tools supporting the Talent Acquisition industry flood the market, often backed by large amounts of venture capital funding. Increased funding has led to emergent HR Technology innovations associated with Recruiting efforts that often reach beyond an organization's internal workings.

The average tenure of a worker in the 25–34 age group is only three years<sup>1</sup>, requiring organizations to maintain an ever-flowing pipeline of qualified candidates to fill open positions. In today's consumer-driven workforce, managing the end-user's experience and understanding the unique qualities of a workforce beyond our current corporate walls is central to a Talent Acquisition strategy.

We asked organizations about their adoption of emerging Talent Acquisition technologies, and whether or not these technologies were adopted as part of an existing Applicant Tracking solutions.

**Figure 58: Exploring New Talent Acquisition Tools**

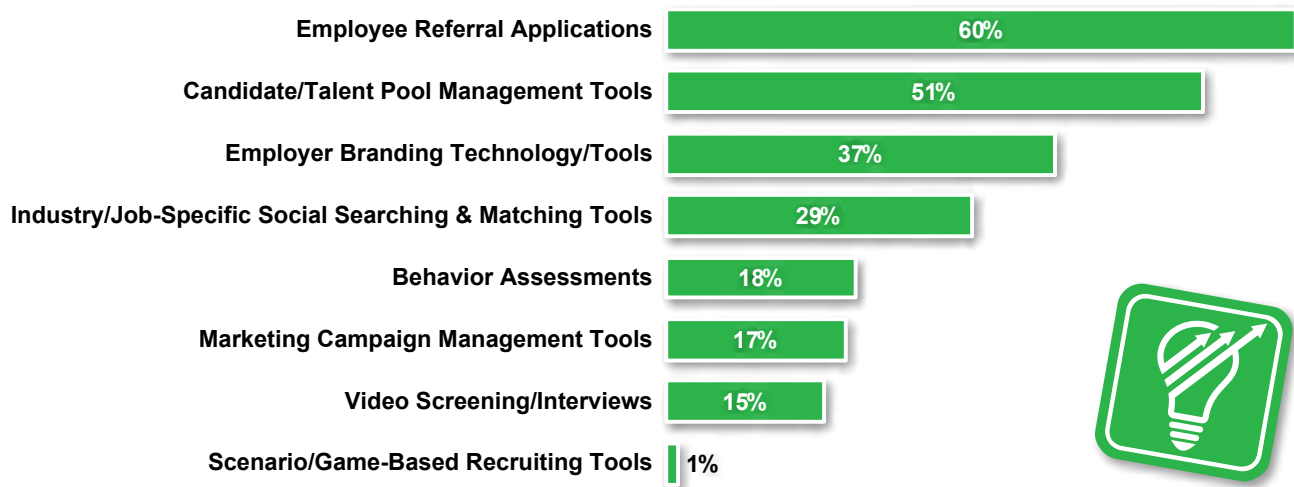


The adoption of these emerging Talent Acquisition tools has increased in all categories from last year, with the exception of Scenario/Game-Based Recruiting. A major shift has also taken place in the percentage of organizations evaluating these applications last year to organizations planning to implement these applications in the next 12 Months—organizations are three times more likely to be implementing these applications in the next 12 Months this year than they were last year.

<sup>1</sup> <http://www.bls.gov/news.release/tenure.nr0.htm>

The most popular tool for the last three years has been Employee Referral Applications, which are now used by 62% of organizations (a 15% increase over last year), with another 13% planning to implement these solutions in the next 12 months. These applications are also the most likely to be procured with an organization's ATS.

**Figure 59: Emerging Talent Acquisition Tools Purchased with ATS**

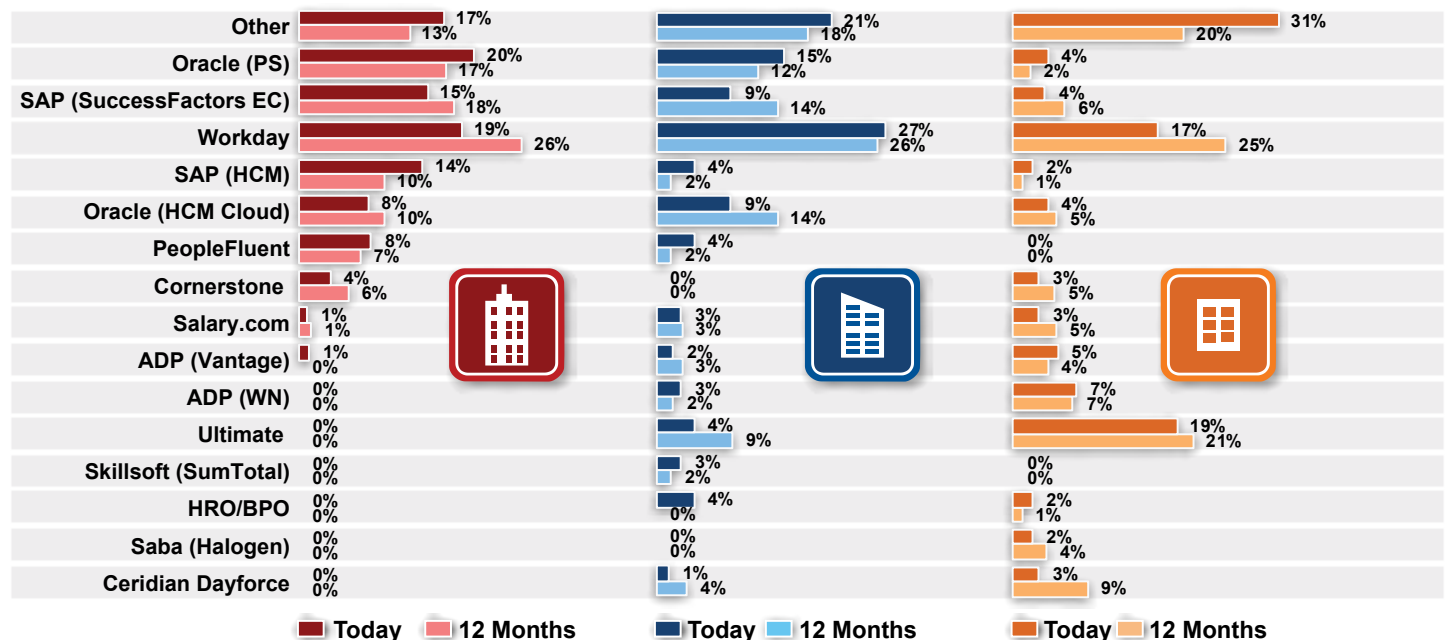


One application with high adoption percentages, but less likely to be purchased with the ATS, is the Marketing Campaign Management tool with 40% application adoption and just 17% of organizations purchasing this application with their ATS. Most companies with forward-thinking recruiting approaches own several of these individual applications, on average 3.27 applications per organization.

## Compensation Applications

Compensation Applications are generally adopted by larger, more complex organizations and are often tightly connected to services associated with Compensation benchmarking. These complex solutions play a major role in an organization's ability to forecast and plan for its future.

**Figure 60: Compensation Applications Adoption by Size**



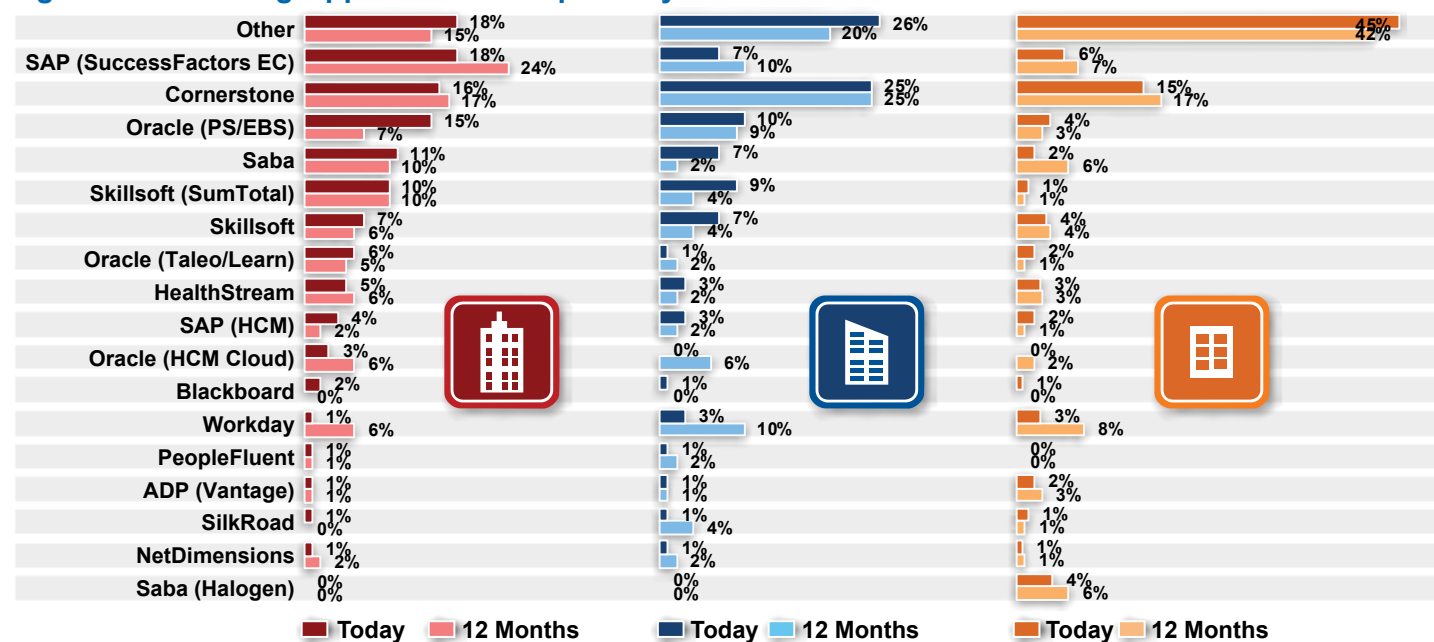
Note: columns do not add up to 100% as organizations have multiple solutions in use.

Oracle PeopleSoft continues to hold the highest adoption level for Compensation, particularly in Large and Medium organizations. Declines in Oracle PeopleSoft adoption for Large organizations, with increases in all sizes for Oracle HCM Cloud, are forecast for the next 12 Months. Platform applications Workday and SAP SuccessFactors Employee Central expect growth in all sizes, as do Talent suites Cornerstone, Ceridian Dayforce, Saba (Halogen), and UltiPro. One year since from its divestiture from IBM (Kenexa), Salary.com is doing surprisingly well as a standalone product, stabilizing the application adoption numbers and seeing increases in the Small category.

## Learning Applications

Complex learning needs often require that organizations approach Learning and Development outside of their Talent Suite solutions. Large and Medium organizations are more likely to have high levels of Learning Application adoption over Small organizations. As Enterprise Software packages continue to invest in their new Learning solutions, we anticipate continued shake-up in the Learning space. Adding to the shifting Learning landscape, many niche providers (such as Degreed) are emerging from the consumer Learning space and are working to centralize ownership of an employee's Learning record.

**Figure 61: Learning Applications Adoption by Size**



Note: columns do not add up to 100% as organizations have multiple solutions in use.

Although Cornerstone OnDemand (one of the largest providers in the Learning space) focuses heavily on its TM modules, it has the highest overall individual application adoption at 19% and is forecast to increase in the next 12 Months for Large and Small organizations. SuccessFactors Employee Central, and newcomers with recent Learning Management System (LMS) module rollouts (including Oracle HCM Cloud and Workday), expect high adoption increases, while SilkRoad, Saba (Halogen), and NetDimensions expect moderate adoption increases.

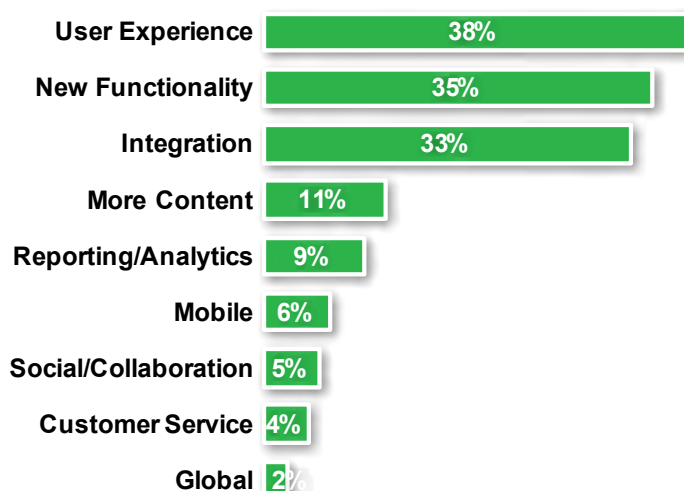
SumTotal and Skillsoft, now a combined organization, hold large adoption shares in Learning across all organization sizes. Many organizations will likely continue to use Skillsoft as a secondary Learning solution along with their Primary LMS; however, continued decreases are projected in adoption rates for both applications. Learning has one of the largest percentages of Other solution providers across all sizes, whereas we often see content providers with light LMS environments or industry-specific solutions meeting the needs of Small organizations.



We see more organizations changing or removing applications—versus increasing overall adoption—in the Learning and Development space than in the past few years. Regarding resource management, 35% of organizations report that they are planning to increase Learning and Development roles in their organizations over the next 12 months; however, this seems to contradict the data showing adoption of fewer learning applications. It becomes important to understand changes taking place in the Learning applications space—particularly from an Enterprise view.

Existing Learning and Development applications have, on average, been installed longer than any other HR application—with the exception of core HRMS and Payroll applications. LMSs have been installed for five years, compared to a four-year average for Talent Management Suites. LMSs are being considered for change at a higher rate than other applications today, with 14% of organizations planning for replacement in the next 24 months, and 24% evaluating other solutions.

### What are you Hoping to Improve with the new LMS?



## Besides your LMS, Key Learning Vendors for Your Organizations

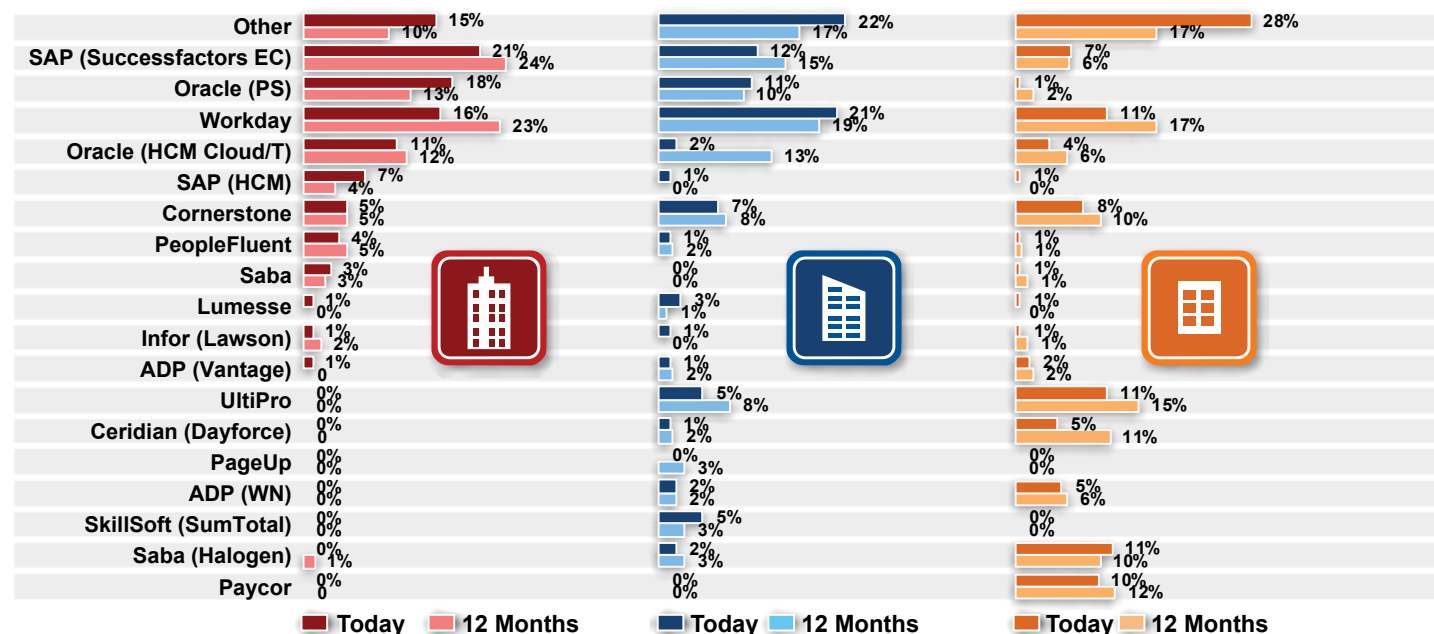


Organizations planning to change their Learning applications hope to improve UX, gain New Functionality, and achieve better Integration. We also saw that 11% of organizations making a change were specifically looking for more content from their LMS. When we asked organizations which additional vendors besides their LMS played a major role in rounding out a learning environment, content providers were at the top of the list. Beyond content, vendors that offered microlearning, collaboration tools, assessments, regulatory programs, and content management were all seen as critical elements of these Learning environments.

## Performance Management Applications

As the Performance Management space has continued to evolve with new approaches and new technologies over the last five years, we've seen some of the largest companies in the world including Adobe, Dell, Accenture, and Deloitte abandon the traditional Performance Management model. These organizations are working to replace annual ratings and merit increases with continuous feedback and immediate award models. Vendors of traditional Performance Management applications have aggressively focused on rolling out updated or brand new Performance Management modules that align with this management approach, while new platforms have emerged that are centered around engagement, rewards, and survey technology to challenge long-term players. Early adopters of this continuous model are now seeing the greatest overall gains in application adoption.

**Figure 63: Performance Management Application by Size**



Note: columns do not add up to 100% as organizations have multiple solutions in use.

SuccessFactors continues to hold the highest adoption level for Performance Management applications; with higher expectations than last year, Large and Medium organizations plan to increase adoption in the next 12 Months. We also see Workday, Oracle HCM Cloud, and Cornerstone with higher levels of adoption this year; expectations are for growth in Oracle HCM Cloud adoption in all three categories next year, and for Workday in Large and Small organizations. UltiPro, Ceridian, Halogen, and Paycor forecast slight growth for Medium and Small organizations.

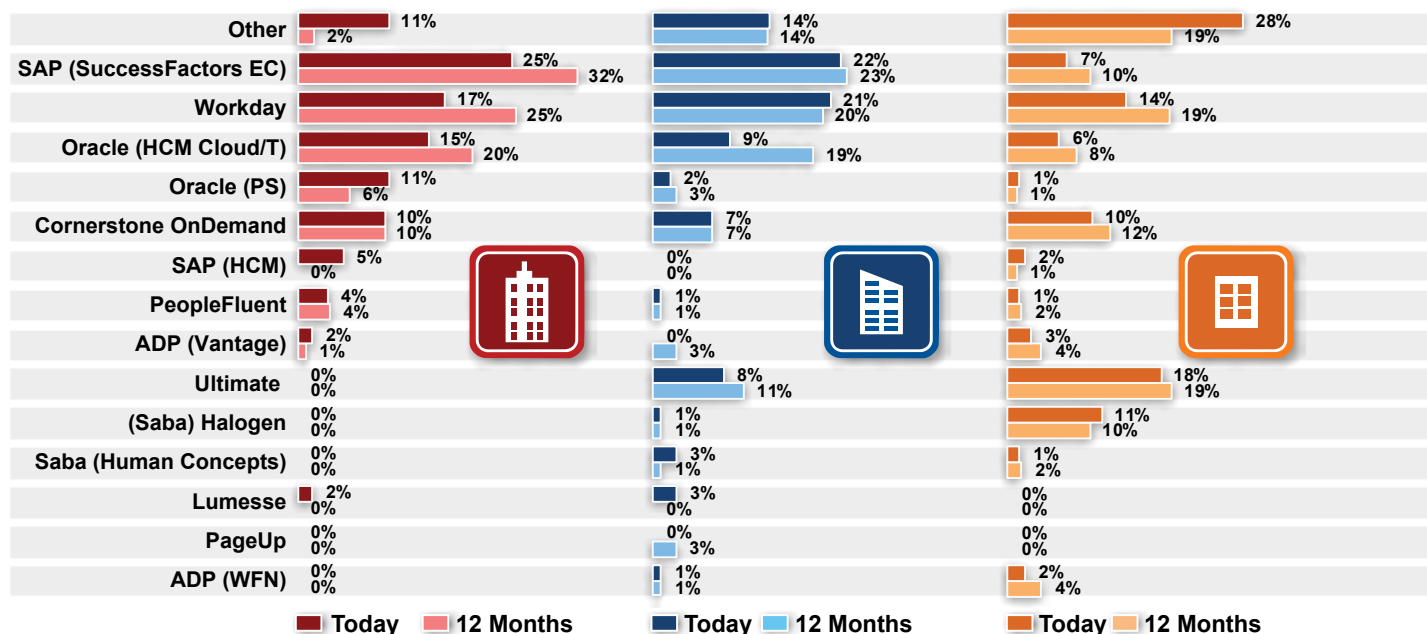
Performance Management can be central to an organization's decision-making process regarding its primary Talent Management solutions, and often serves as a key battleground for organizations hoping to attract clients who will eventually purchase future Talent modules as they are rolled out by the vendor.



## Succession Planning Applications

The highest adoption levels for Succession Management applications are within Large organizations—with 50% more Large organizations implementing Succession Management applications than Medium organizations. Succession Management is the least integrated of all of the Talent Management applications, but we see indications that many organizations are planning to integrate these solutions in the near future.

**Figure 64: Succession Management Applications by Size**



*Note: columns do not add up to 100% as organizations have multiple solutions in use.*

SuccessFactors still holds the highest application adoption levels Today in this Large organization-dominated space, and we forecast continued growth in all size categories over the next 12 Months. Workday and Oracle HCM Cloud follow closely behind with high levels of adoption growth forecast for most organization sizes.

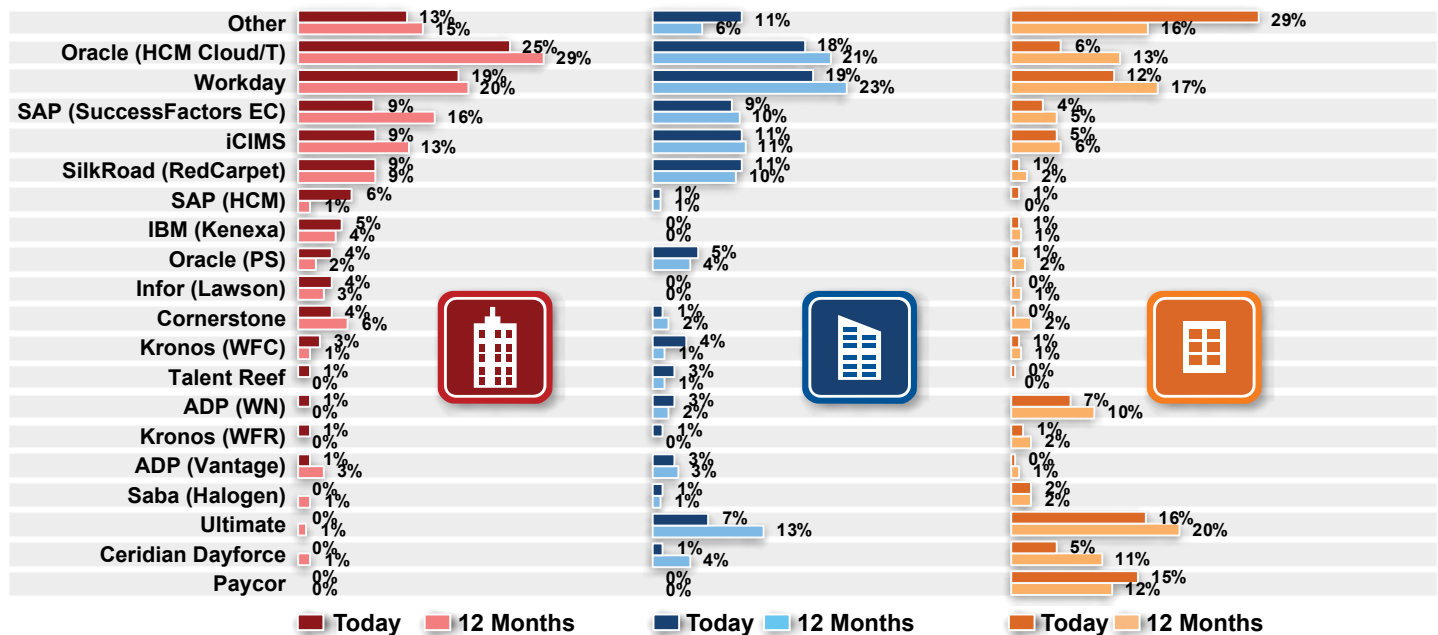
In the Small organization space, Ultimate, ADP Vantage, and ADP Workforce Now all see plans for increased adoption in the next 12 Months.

Talent Management Suites continue to hold their own in this space, with Cornerstone, PeopleFluent, and Halogen all seeing stable adoption levels from last year's numbers.

## Onboarding Applications

For the third year, we've looked at Vendor solutions that specifically meet the Onboarding needs of organizations. Increasingly, organizations are focusing not only on the compliance components of the Onboarding experience, but also on creating an engaging experience for new employees. In many cases, organizations will use multiple vendors to handle their entire Onboarding process, particularly for compliance rather than development needs. Onboarding solutions are a complex mixture of features that range from document management tools to coaching and behavior assessment solutions.

**Figure 65: Onboarding Solutions Adoption by Size**



*Note: columns do not add up to 100% as organizations have multiple solutions in use.*

Oracle HCM Cloud, Workday, SuccessFactors Employee Central, iCIMS, and Silkroad hold the highest adoption levels across Large, Medium, and Small organizations this year. UltiPro, Ceridian, and ADP Workforce Now also have high current adoption levels forecast increased growth expectations for Small organizations.

### As the Onboarding Improve

continues to mature, we expect to see increases in regional hiring requirements, leading many organizations to engage with solution providers that not only offer the Onboarding technology, but also compliance support services. Many of the new engagement, activity tracking, and workflow-based HR applications are focusing on the Onboarding market.

# Business Intelligence, HR Analytics, and Workforce Optimization

## Breaking Through the Hype, The Realities of BI/HR Analytics

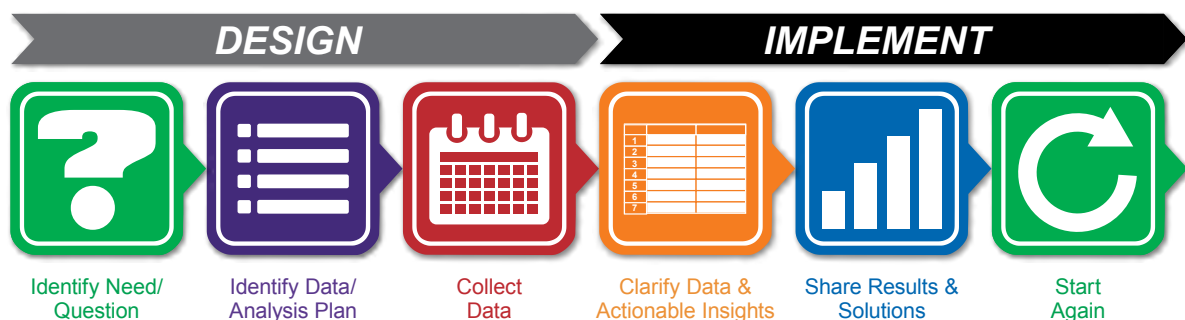
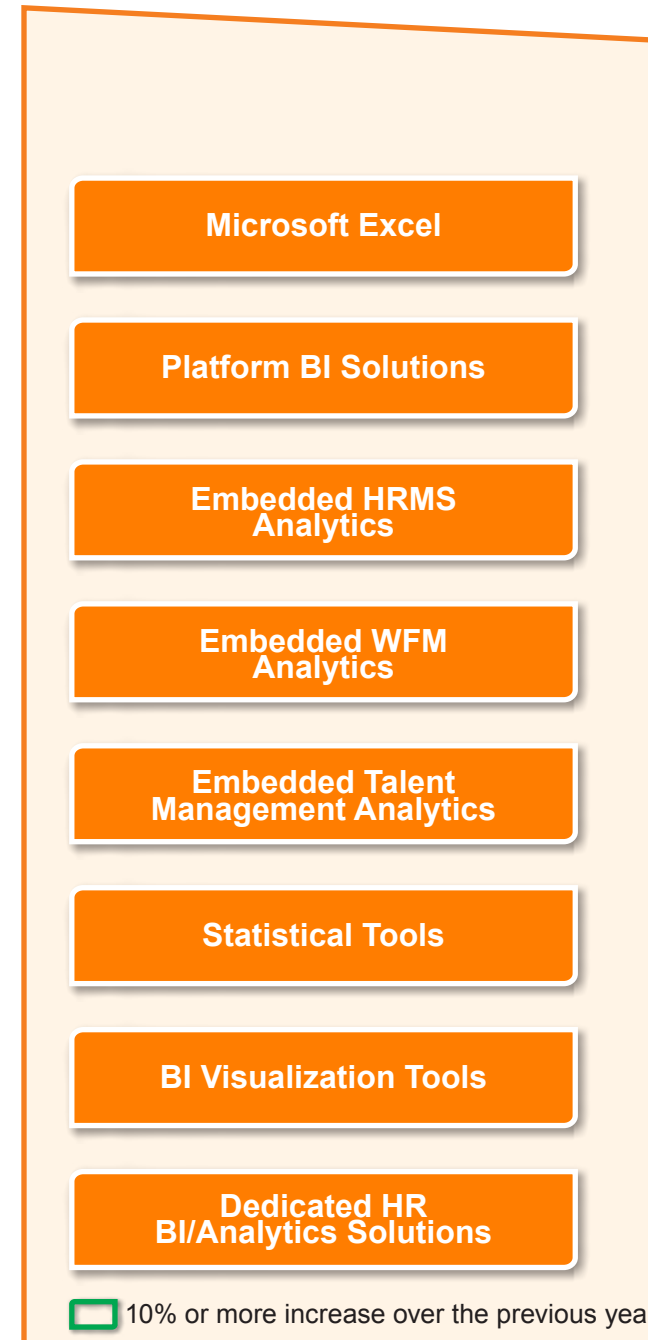
No single tool set, suite concept, or platform covers the entire space required by Business Intelligence (BI) and HR analytics efforts. In reality, a disparate mix of tools is cobbled together by end-users to accomplish a series of tasks that fall into the BI analyses process.

The first step in moving to a Data Driven HR function involves identifying the need or question—often the biggest hurdle for HR. What questions should HR be solving? Can these be answered within the guidelines of Data Privacy? Can a singular tool point to the most critical questions data can answer? Data collection may be the easier part of the process, but clarifying and cleaning the data can prove difficult with unstructured or poorly entered sources. Sharing findings in a way that is useful and engaging requires a story; the skill of knowing when to start over or rethink the entire question may be difficult to develop.

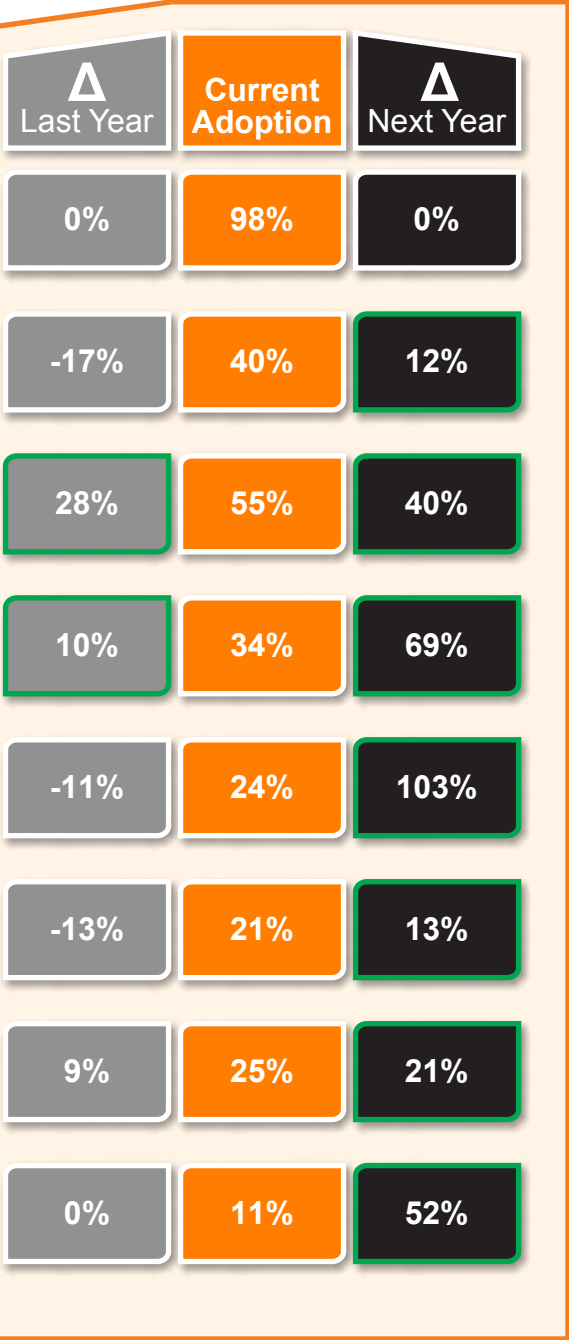
The percentage of organizations formally conducting BI/HR analytics has continued to hold steady from last year to this year. The difference in adoption by size is not as extreme as seen with Talent Management applications; however, adoption of overall BI applications is at 48% for Large organizations compared to 39% of Medium organizations and 34% of Small organizations.

Microsoft Excel remains the most popular tool for BI and HR analytics, with over 98% of organizations using it for HR efforts, compared to 40% using a platform BI solution. Platform BI solutions have the widest adoption range by size: 72% of Large organizations and just 30% of Small organizations.

Figure 66: Moving to a Data Driven HR Function



Embedded Analytics, a new and evolving category, often differs by vendor and solution. We specifically identify these as separate application modules that must be turned-on or installed; however, they are still provided by the HRMS, WFM, or TM vendor and may require an extra fee for their use. These applications do not include the



work-flow level analytics or insights that are now being inserted into many applications, and are only available as part of that application’s workflow but have no modular element to turn-on. We realize that this may still be a fuzzy line for many embedded applications and will continue to evaluate this area of research based on your feedback and the direction various vendors are heading in the BI/ Analytics space.

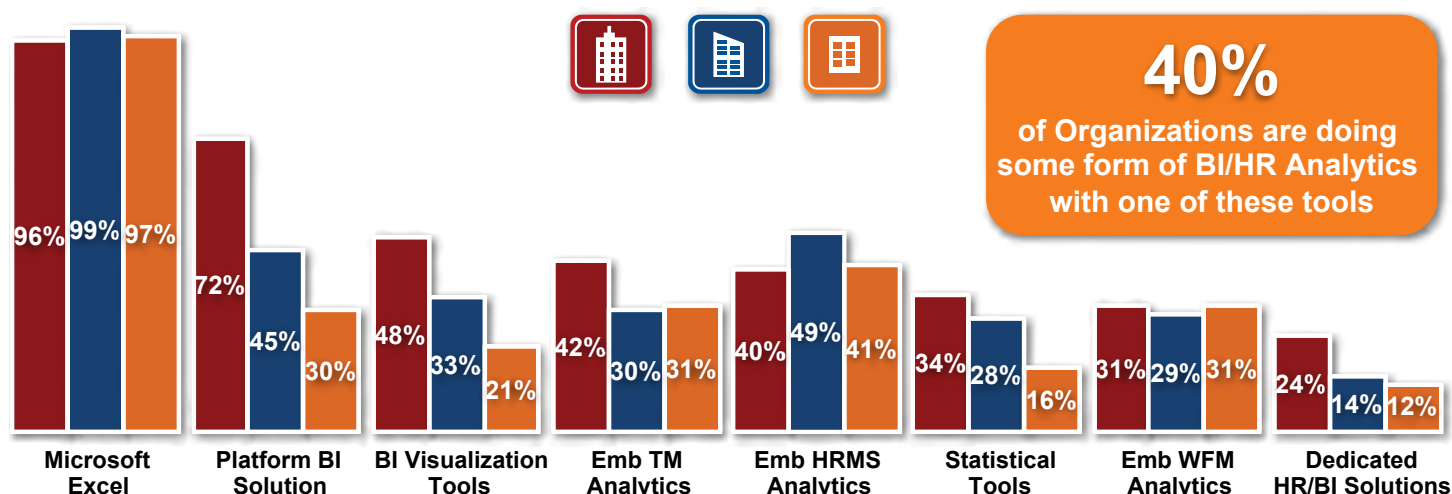
Embedded applications are often built within the same framework of the parent application or tightly integrated so that they have direct real-time access to data within a Human Resource Management System (HRMS), Workforce Management (WFM), or Talent Management (TM) application—a value proposition for many organizations. A challenge for many of the embedded applications is the inability to easily leverage outside data sources in their analysis process. These solutions are poised to continue their adoption growth trajectory in the next 36 months, as embedded TM analytics see the largest growth in adoption from last year to this year. Embedded Analytics are particularly popular with Medium sized organizations.

As Embedded solutions increase in functionality, we see a slight slowdown in the adoption of standalone statistics and BI visualization tools; however, this year we once again see a slight increase the adoption of these standalone tools used across industry and domain area. Large organizations continue to be the primary buyers for these applications.

Dedicated HR/BI analytics are a mixed category of pure software and services package applications; however, in both cases these solutions are tailored specifically for the HR community. These solutions are also multi-faceted in that they provide a wider set of features than a standard analytics tool; for example, organizations

can pull multiple data sources into these solutions, use them for their line-item cleaning process, analyze the data, and present the findings. Organizations representing pure software applications in this category include Visier, Gartner/CEB Metrics that Matter (previously Knowledge Advisors), and ZeroedIn. Organizations representing a combination of consulting services and technology solution providers include Mercer Analytics and OrganizationView—solutions based on deep consulting experience with HR analytics services. These solutions generally pull together disparate data sources from both HR and non-HR environments, and with the help of their pre-developed algorithms, can answer some of the most complex HR analytics questions.

**Figure 67: Business Intelligence/HR Analytics Tools use by Size**



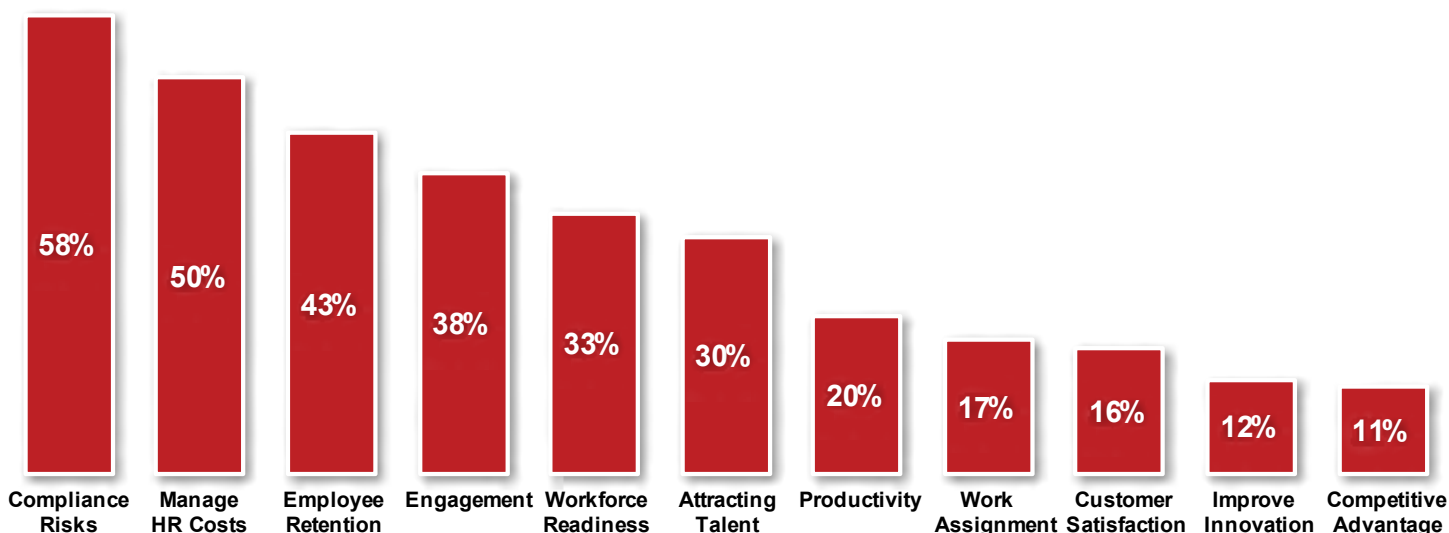
Working with BI/HR Analytics is a process and not a project; once you accept that this process requires constant adjustments, then it's possible to look at data and the tools utilized to manage it as an ever-evolving story.

## BI/HR Analytics Achieved Outcomes

After a clear picture emerged of the various tools and applications being adopted in the BI/HR space, we wanted to identify what organizations were actually trying to accomplish with their BI tools. We plan to do this by understanding the outcomes organizations strive to accomplish with their BI/HR analytics work and how they connect to the outcomes they actually achieve. In other words, does measurement help achievement? Over 50% of Survey respondents were focused on managing Compliance Issues and Risk mitigation, as well as Benchmarking for HR Cost Management. Talent Management and Business Outcomes were less often an achieved outcome from current HR BI/Analytics efforts.

*What are you currently using your HR BI/ Analytics Solutions to accomplish?*

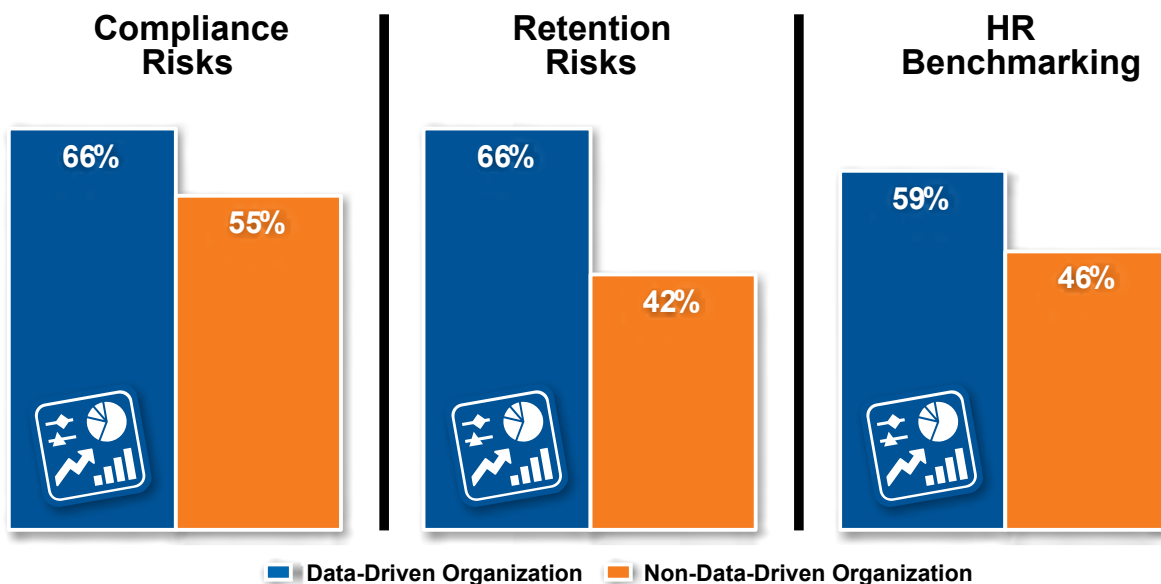
**Figure 68: Business Intelligence/HR Analytics Accomplishments**



## Data Driven Organizations and HR Analytics

When comparing our high performing Data Driven organizations to the Non-Data Driven organizations to explore the differences in what their BI/HR analytics solutions were used to accomplish, both use HR analytics to look backward, with about half using analytics to review compliance risks, retention risks, and perform HR benchmarking. **Looking Backward** is a standard practice for HR analytics efforts.

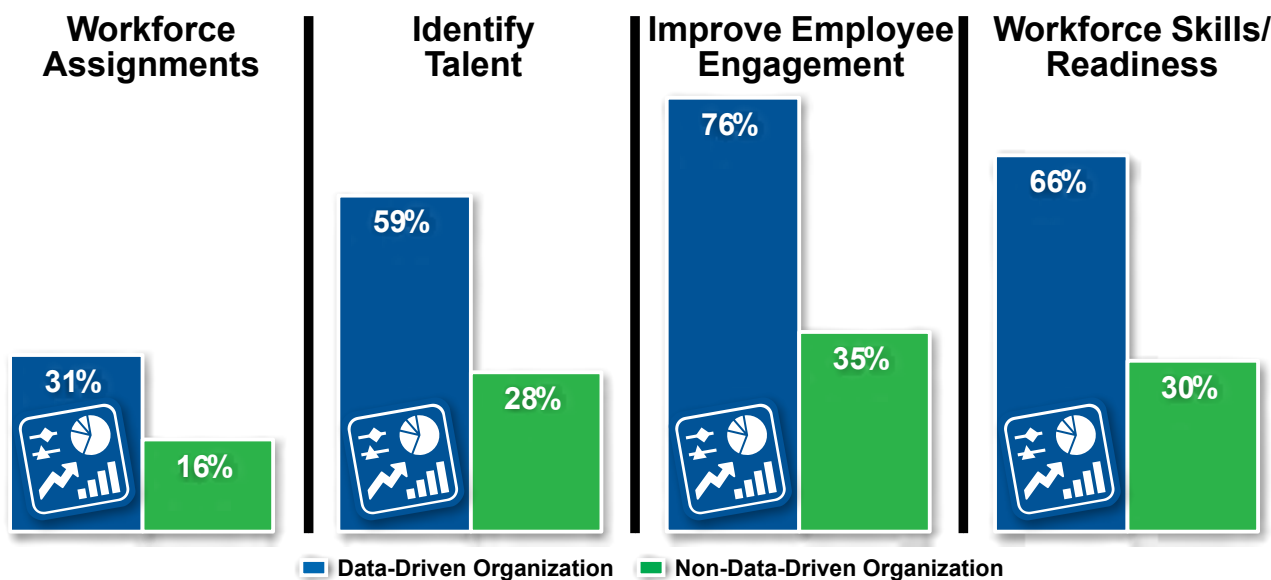
**Figure 69: Most Use HR Analytics to Look BACKWARD**



Data Driven organizations are never quite satisfied and always seem to strive for better ways to capture, analyze, and manage data. The second highest HR initiative for Data Driven organizations is BI/Analytics improvement initiatives; 52% plan to spend time and resources on in this area over the next 12 months.

Forward-looking organizations spend more time on workforce assignments, identifying talent, improving the employee experience, and focusing on workforce skills readiness with an eye to talent who can fill future roles. Data Driven organizations are twice as likely to be **Looking Forward** with their HR analytics efforts.

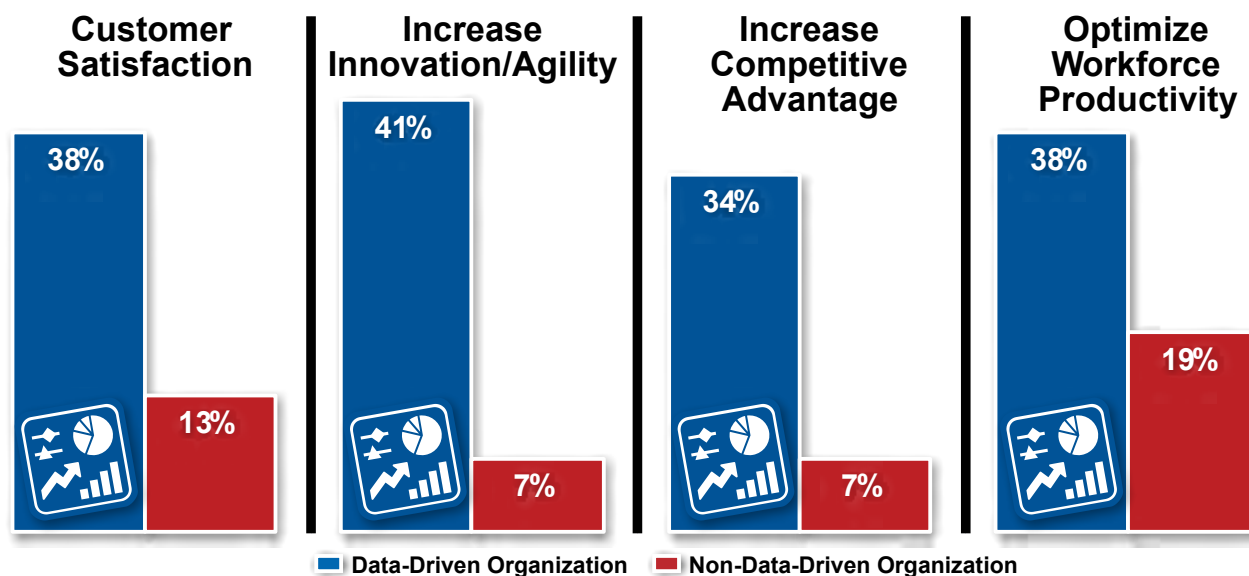
**Figure 70: Some Use HR Analytics to Look FORWARD**





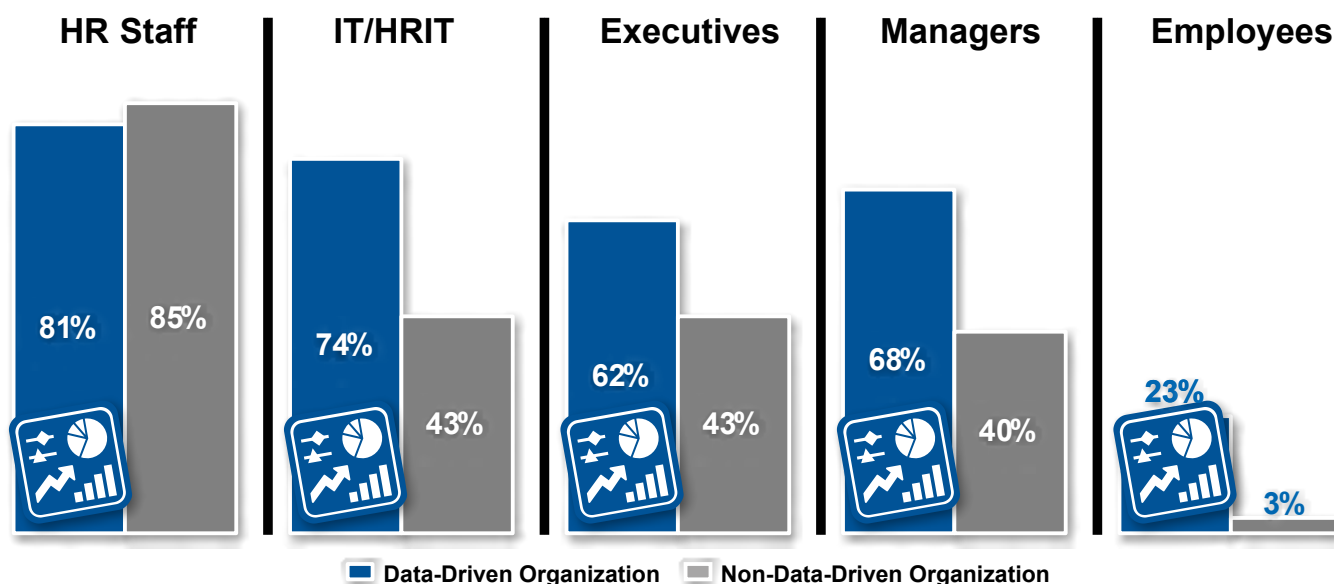
Data Driven organizations invest heavily on **Business Outcomes**—not just HR outcomes—and are considerably more likely to be working on optimizing workforce productivity, therefore increasing competitive advantage, maximizing innovation and agility, and facilitating customer satisfaction with their HR analytics efforts. HR data is analyzed against these areas for how it can impact a business. Business outcomes adoption becomes especially critical when comparing the two groups, if Non-Data Driven organizations look at business outcomes, they are doing so at lower levels. Business outlook explores a difference between the two groups; Data Driven organizations are 222% more likely to focus on business outcomes compared to their Non-Data Driven counterparts—something to keep in mind when your organization asks why it should invest in HR analytics.

**Figure 71: Data Driven organizations Also Focus on the BUSINESS**



When an organization's goal for its HR Analytics investment focuses on achieving forward-looking business outcomes, it must also consider how the data and insights should be appropriately shared throughout the organization to achieve those outcomes. Data Driven organizations not only provide access to their HR analytics for their HR functions, but also to executives, line managers, and individual employees. Overall, Data Driven organizations are 40% more likely than non-Data Driven to provide access to HR Analytics tools across all roles.

**Figure 72: BI/HR Analytics Access by User Role**

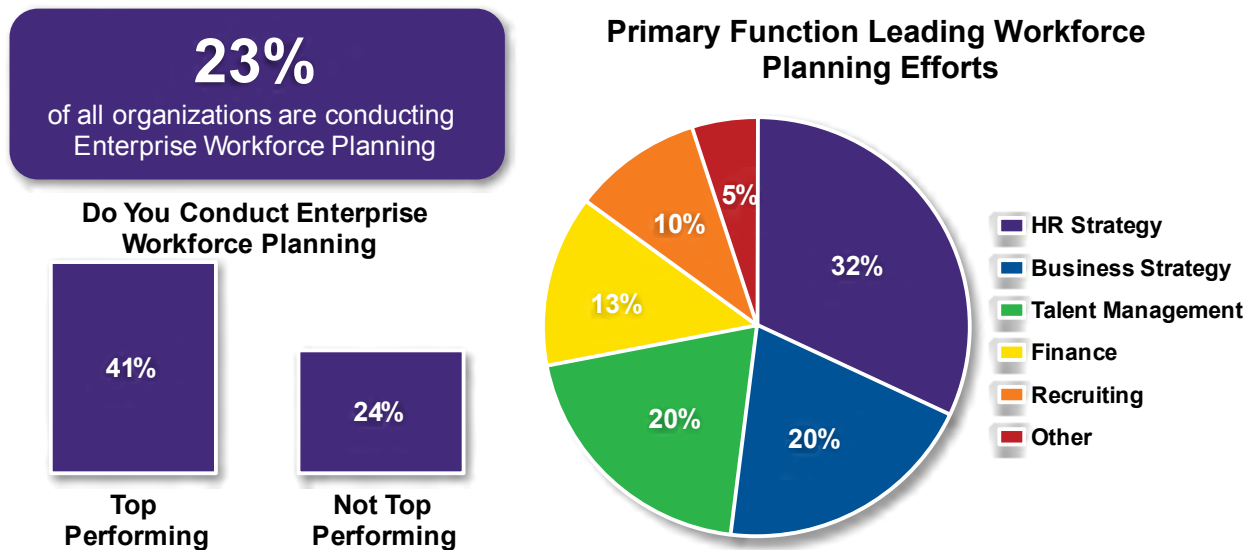




## Enterprise Workforce Planning Realities

Enterprise Workforce Planning (EWP) involves the most complex analysis efforts that any HR function undertakes. Only 23% of our Survey respondents are currently conducting EWP processes within their organizations. Large organizations are 44% more likely to conduct EWP than Small organizations. Top Performers, Talent Driven, and Data Driven organizations are more likely to conduct EWP than their comparison groups—particularly Top Performing Organizations that were 70% more likely to conduct such efforts.

**Figure 73: Workforce Planning Realities**

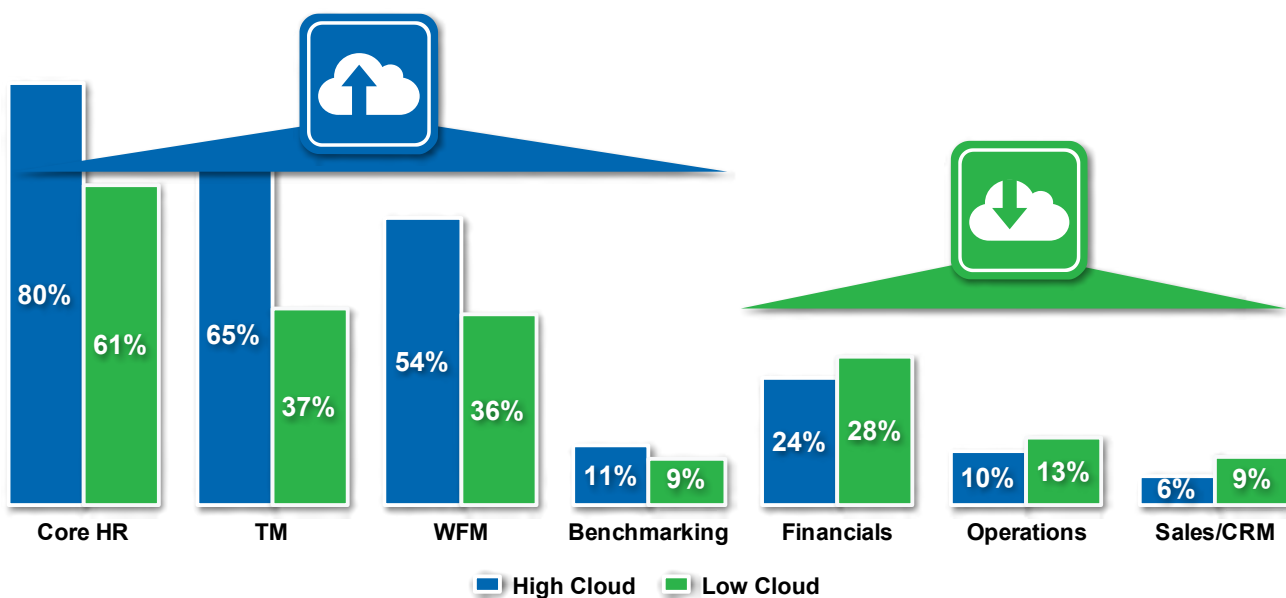


Enterprise Workforce Planning can be time consuming and fraught with challenges when trying to identify accurate and helpful data for forecasting and scenario analysis efforts. Often the most challenging aspect involves using external data, usually from government entities or shared regional data sets, to derive meaningful analyses.

When asked about their approach to Workforce planning efforts, common themes emerged from the comments:

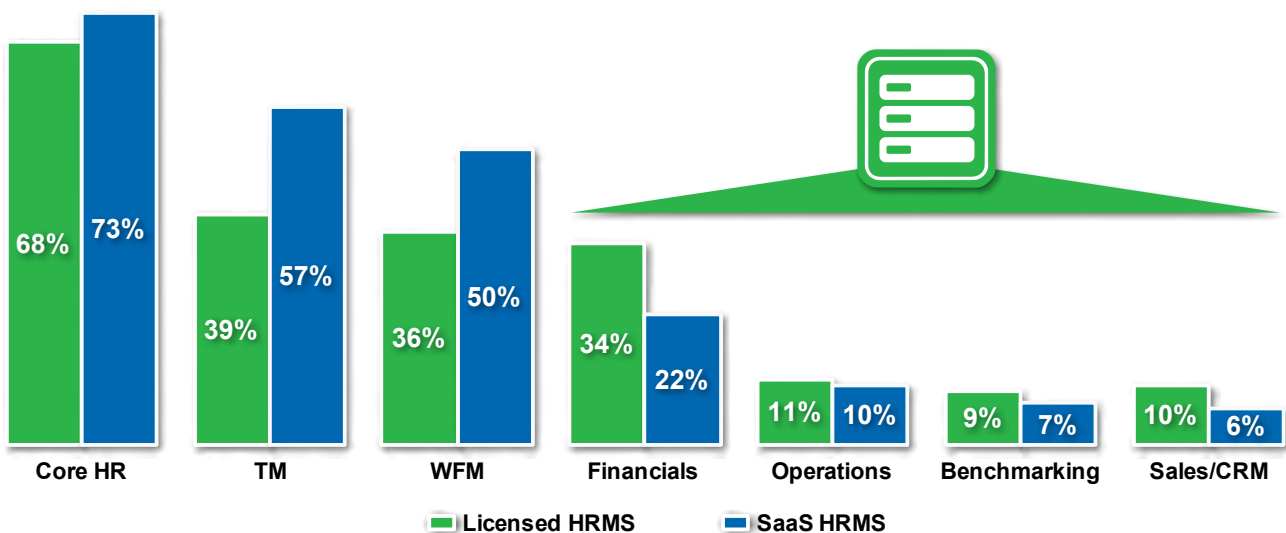
- A necessary partnership between HR and Finance
- It is common to roll up Business Unit and Regional data gathered from operational roles
- Organizations often only do Workforce Planning for key roles
- External labor data by industry and region is critical to many processes
- Annual and three-year planning efforts seem to be the most common timelines
- Multiple lines of business often require a customizable Workforce planning process
- Business risk analyses is included in many organizational approaches
- Many organizations, including large ones, still do this work manually
- Generational/demographic analyses in conjunction with retention/retirement risks and engagement
- Succession Planning was mentioned in only a few Workforce Planning approaches

**Figure 74: Data Sources Integrated into for HR Analytics by Cloud Category**



Workforce Planning efforts require the integration and analysis of multiple sets of data for forecasting purposes. Business data analyzed in a vacuum can fail to uncover the full picture of an organization. Organizations identified sources that were integrated for HR analytics; here we focused on High Cloud and Low Cloud environments. We found that 80% of the High Cloud and 61% of Low Cloud organizations integrate core HR. We also found that HR Data, TM, and WFM are more likely to be integrated for the High Cloud organizations, while Financials, Operations, and Sales data are more likely integrated for the Low Cloud environments

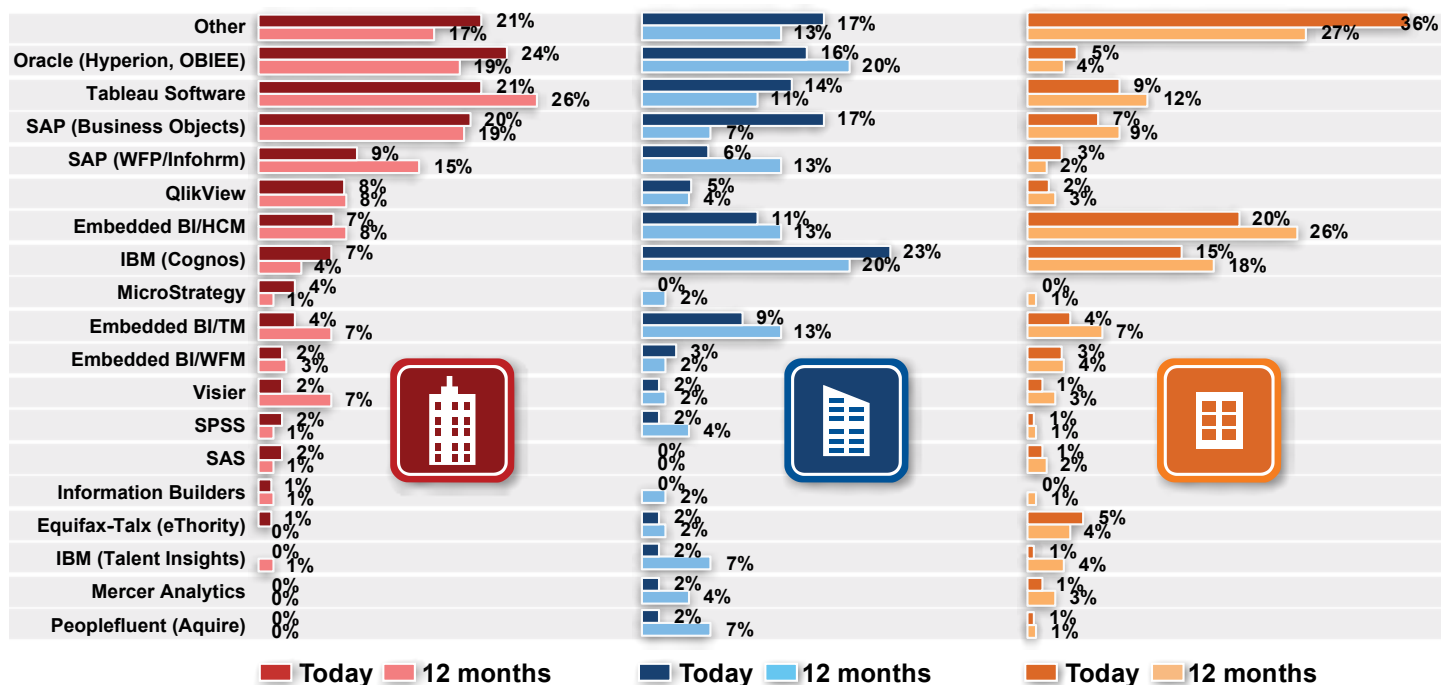
**Figure 75: Data Sources Integrated for HR Analytics**



# Business Intelligence and HR Analytics Solution Outlook

As with other vendor categories, we also look at HR/BI Analytics solution adoptions by size, and although we do see differences based on organizational size, these differences are not as pronounced as for other application areas. Large organizations are the most likely to adopt BI solutions overall and therefore have the highest vendor adoption percentages.

**Figure 76: HR BI/Analytics Solutions Adoption by Size**



Note: columns do not add up to 100% as organizations have multiple solutions in use.

Overall, the HR/BI Analytics vendor space has room to grow, and no one vendor holds a sizable market share. Oracle (Hyperion/OBIEE) has the largest market share for Large and Medium organizations; SAP Business Objects, Tableau, and SAP Workforce Planning are the next most popular vendor solutions; and Tableau expects the highest adoption gains for Large organizations over the next 12 Months.

Increases in adoption are planned for all embedded applications (HRMS, WFM, and TM); Oracle HCM, Workday, SAP, Ultimate, Ceridian Cornerstone OnDemand, and Kronos all include analytics modules. Additional adoption increases are expected over the next 12 Months for HR/BI dedicated solutions such as Visier, SAP (WFP/Infohrm), and PeopleFluent (Aquire) which are all seeing planned adoption increases over the next 12 Months. A very large category of Other solutions also compete for market share in this green space.

# The Total HR Systems Environment

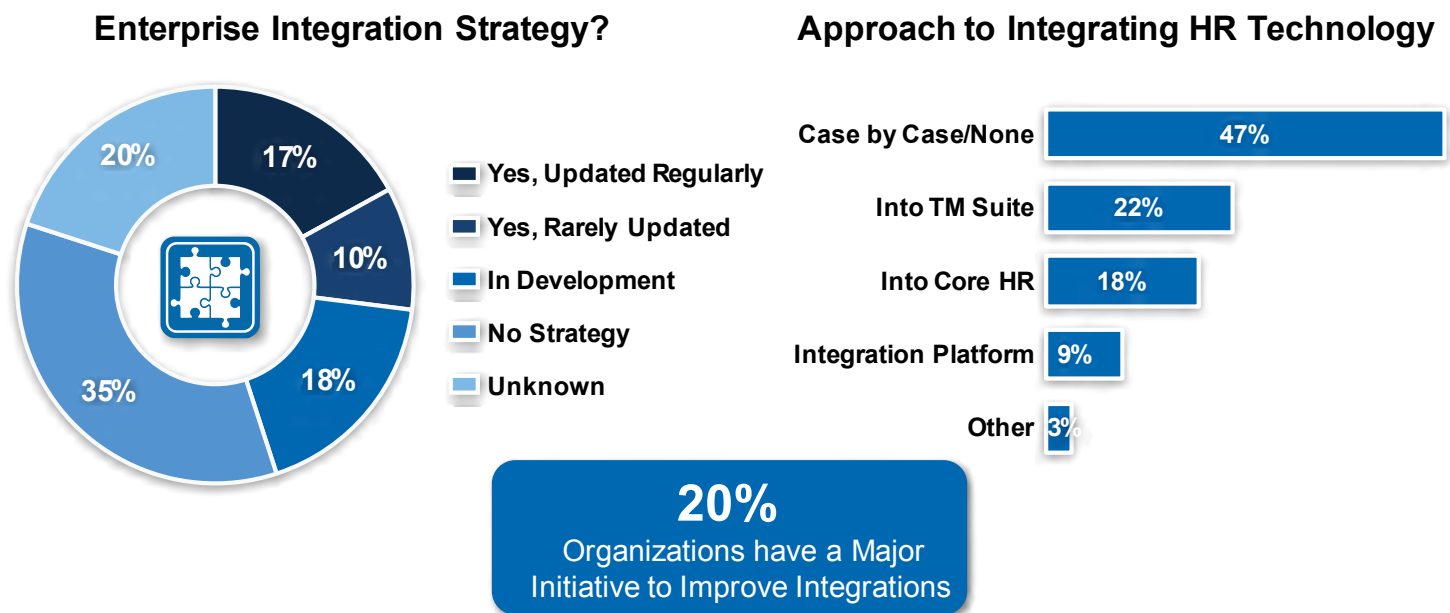
A challenge facing the HR Systems conversation involves how organizations think about HR processes and supporting tools—they often look at technology solutions in silos rather than as a total HR environment. Although breaking down silos has been a discussion point for years, the Survey results report on separate solutions and identifies roles focused on separate process areas. Within individual organizations, 34% still decide how they'll handle HR systems integrations on a case-by-case basis.

This section discusses the factors crossing all HR Technology categories impacting UX and the outcomes achieved from application adoption. Regardless of the type of HR System environments, integration management approaches, security and risk, implementation practices, solution resourcing, and ultimately vendor relationships, these internal and external factors can quickly overshadow even the best HR technology.

## Integrating the HR Experience

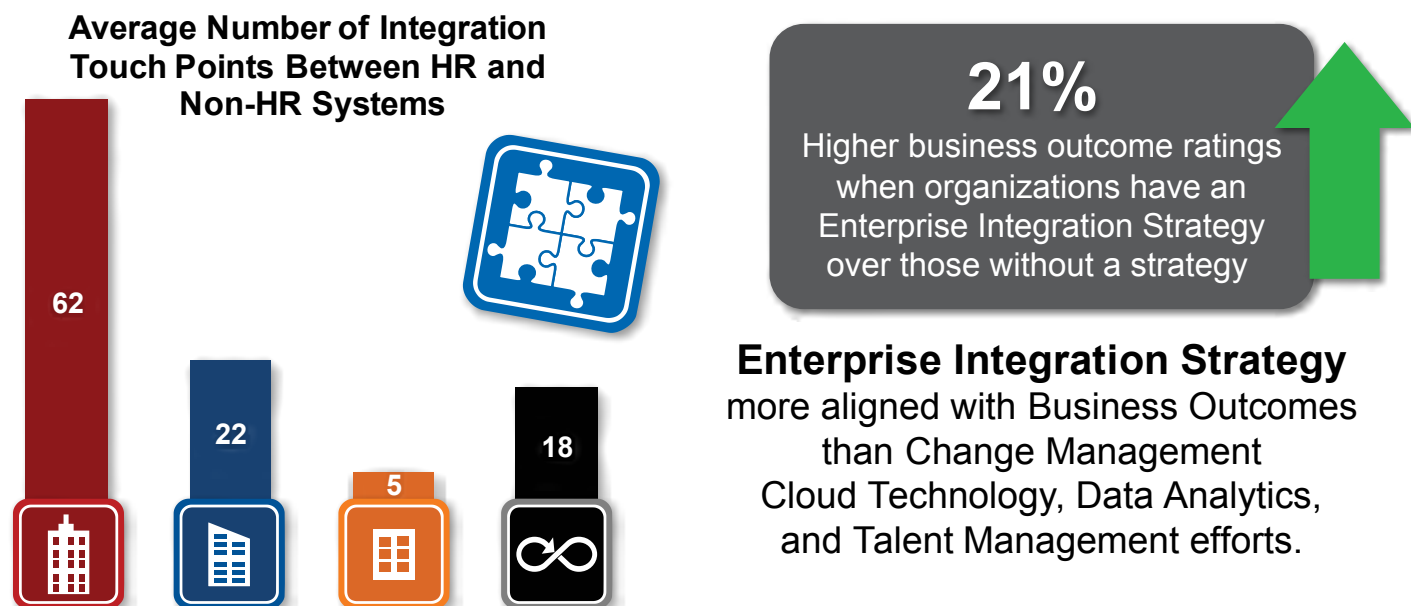
In as much as creating a holistic HR environment has its importance, not every application needs to reside on a single platform; in recent years, we've encountered organizations implementing new Cloud-based HRMS environments, and many believe that the industry as a whole may have over-hyped the reality of all-in-one solutions. Although fewer applications and increased integration facilitates more data cohesion and better UX, we'll always have some solutions that sit outside of the traditional toolset, including content providers, package services, assessments, and industry tools.

**Figure 77: Integration Strategies Matter**



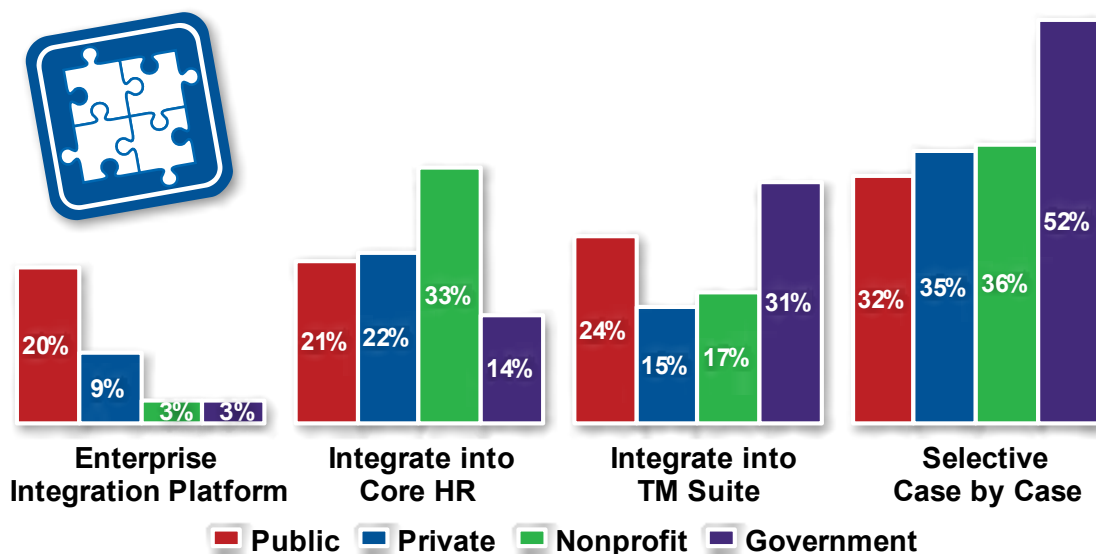
Only 17% of organizations have a regularly updated Enterprise Integration Strategy (EIS) now, although 10% are working to develop a strategy. Some organizations do focus on these strategies, however 47% of organizations have no standard approach to integrating HR Technology environments and handle these decisions on a case-by-case basis. The average organization has 18 integration touch points with its HR environments, and the average integration touch point changes based on the size and complexity of the organization—from an average of 62 touch points for Large organizations down to an average of five for Small organizations

**Figure 78: Enterprise Integration Strategy Statistics**



Are there differences in the type of organizations that leverage an EIS as compared to those organizations with a more random approach? Large organizations, with greater numbers of integration touch points, were slightly more likely to have an EIS than comparison groups; however, that doesn't always change their approach to integration standards. Whether an environment is High Cloud or Low Cloud appears to make no difference in integration practice. Data shows organization type—Public, Private, Nonprofit, or Government—influences integration standards. When controlling for size, we found that Public organizations were almost twice as likely to have a regularly updated EIS than other organizations types, and were also three times more likely to use an actual integration platform for their HR applications. Nonprofit organizations were more likely to integrate into their core HR environment, while Public and Government organizations were more likely to integrate applications into their TM Suite environments. We expect that these differences in integration approaches are based upon organizational structure reporting and budget requirements.

**Figure 79: Integration Strategies by Organization Type**



Can value be found in investing time and resources towards creating an EIS? Data shows that organizations with an EIS positively correlate with improved Business Outcomes, even more frequently than with Change Management efforts, Cloud technology, data analytics initiatives, and Effective/Efficient Talent Management processes. In fact, organizations with an EIS had 21% higher Business Outcome ratings, and those with such strategies are a key differentiator for our Top Performing organizations.

An Enterprise Integration Strategy isn't just about technology, it also includes the following factors:

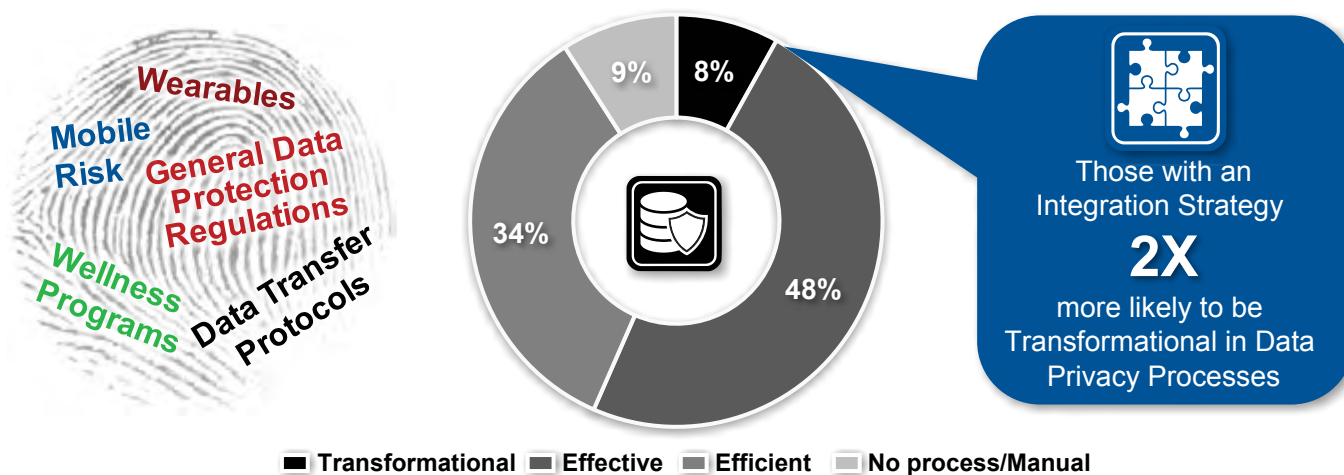
- Insights into the data shared across platforms
- Clear definitions on the data not shared across platforms
- Preferred locations and ownership for master data management
- Preferred integration approaches, APIs, Enterprise Integration Platforms, etc.
- Integration tools and skillsets in-house
- Vendors pre-vetted for integration support
- Audit and risk concerns reviewed with all integration efforts

## Security, Risk, and Data Privacy

Risk, Security, and Data Privacy are growing topics of conversation for HR and IT. Organizations that capture or transfer data of any kind must educate themselves on the latest laws and regulations concerning Data Privacy and verify that their Cloud vendors are also diligent regarding these issues. Topics such as the European courts' invalidation of Safe Harbor rules in 2015 and the new General Data Protection Regulation mandate taking effect in 2018 share headline space with the latest round of hacked consumer and business-level IT environments.

While 48% of organizations report they are Effective at handling Data Privacy Processes, growing challenges from hacked environments and increased penalties for mishandling personal data lead organizations to question their level of preparation. It may be that in today's era of brand management and hyper value of personal data, being effective at Data Privacy processes simply isn't enough—organizations should strive for transformational processes. Those organizations with an EIS are twice as likely to already have Transformational Data Privacy processes in place. As organizations continue to build personalized HR environments delivering real business insight along with personal employee information, navigating data challenges becomes a future area of concern.

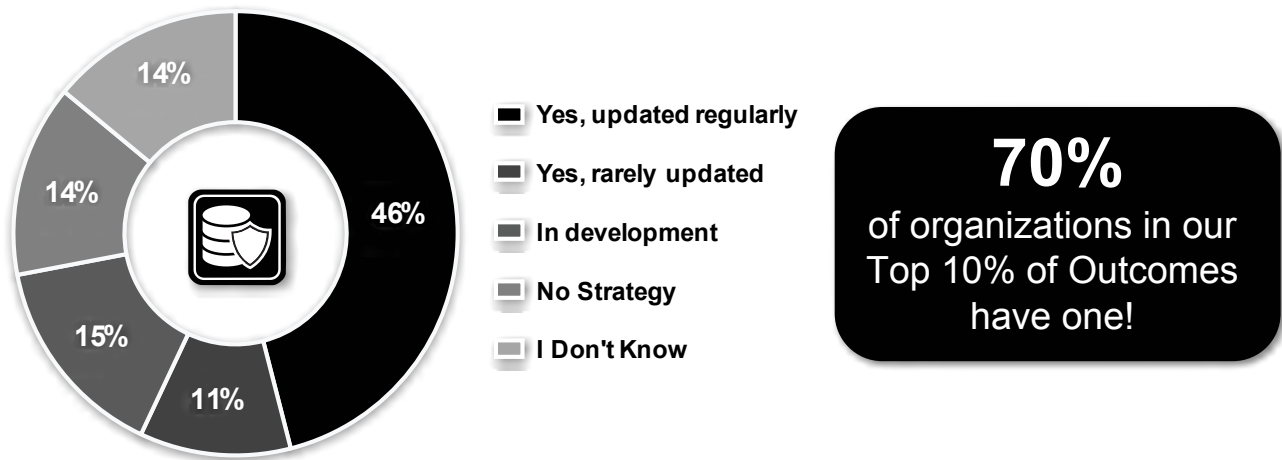
**Figure 80: Self-Reported Data Privacy Process Maturity Levels**





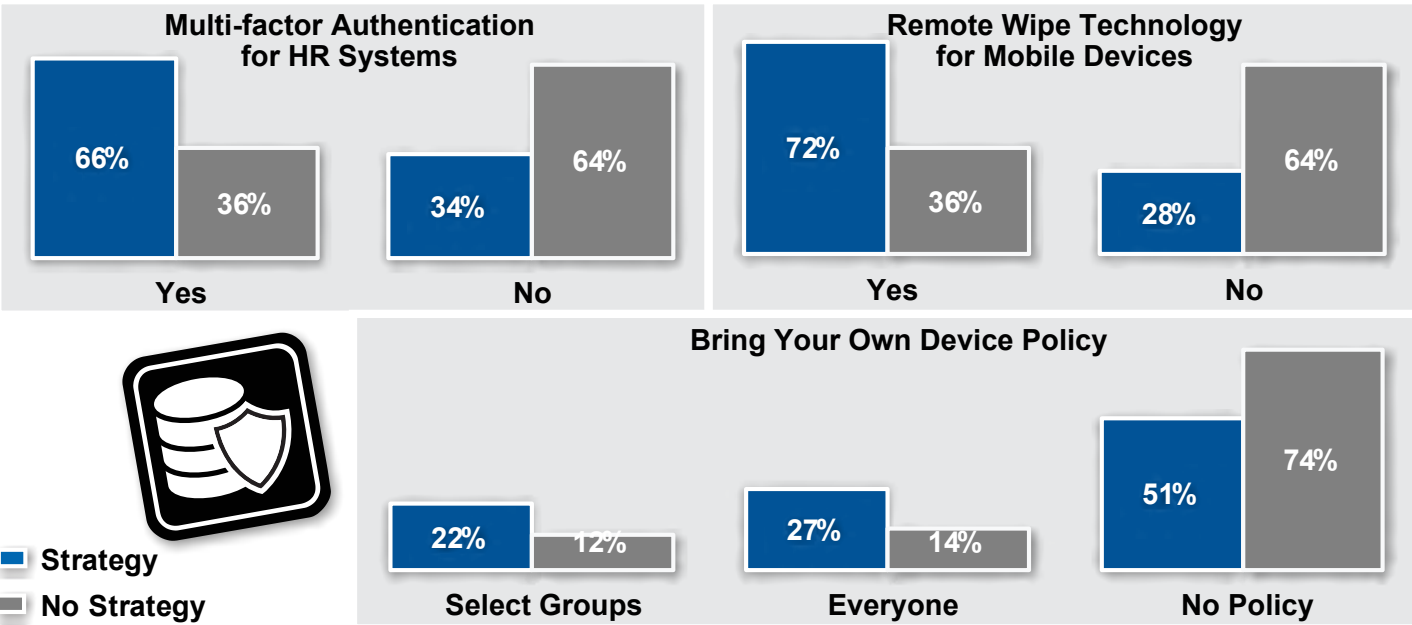
Organizations can address the issue of Data Privacy by creating a Data Risk and IT Security Strategy that includes all of their HR System environments. More than half of the organizations we survey have a Data Risk and IT Security Strategy in place, 46% of which update them regularly. Organizations with a Data Risk and IT Security Strategy are slightly more likely to be Global and Large in nature, although we still find a large number of Medium and Small organizations who invest in these practices. For the organizations in the Top 10% of Talent, HR, and Business Outcomes, 70% have a regularly updated Data Risk and IT Security Strategy.

Figure 81: Risk and Security Strategies that Include HR Technology



These organizations with an enterprise Risk/Security Strategy don't shy away from IT challenges or limit access to various technology environments. They are twice as likely to have a Bring Your Own Device (BYOD) technology policy in place—and are twice as likely to include everyone in that policy. We also know that these organizations are more likely to employ security processes and technology, including Multi-factor Authentication and Mobile Remote Wipe capabilities, to protect both the employee and their organization from outside entities accessing sensitive data. Security procedures shouldn't make the employee's job harder to access the information they need or to do their job, but rather make the data more secure by putting processes in place that will nullify software and device vulnerabilities, lost passwords, or risky employee behavior before a full breach occurs.

Figure 82: What do Organizations with Risk and Security Strategies do Differently?





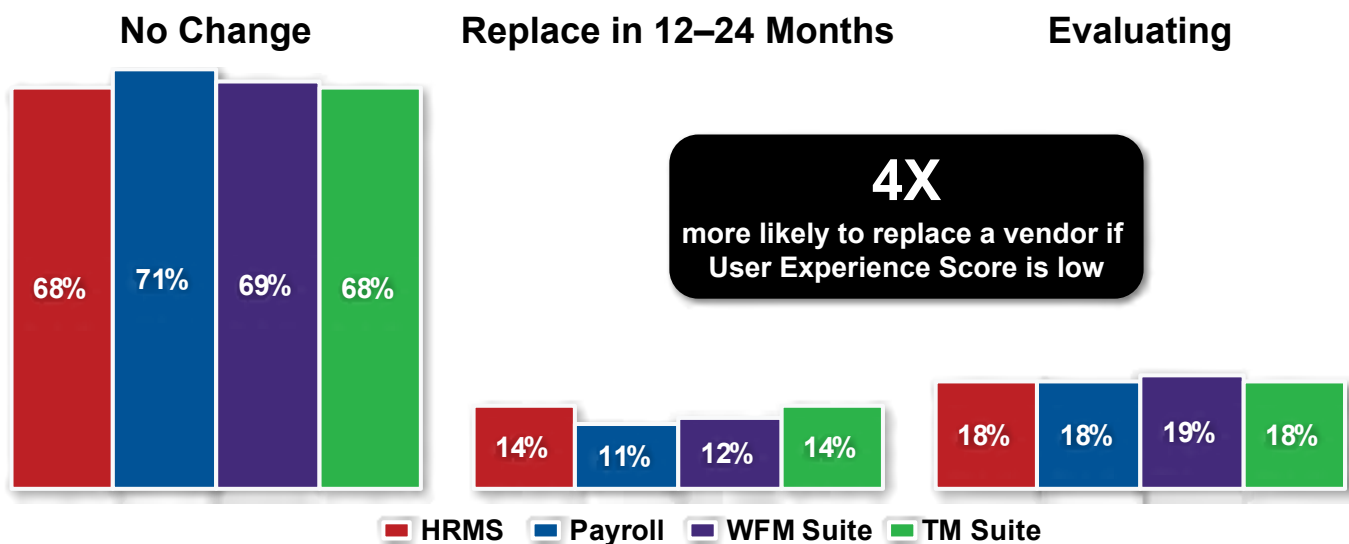
# Implementation Practices

Another area of HR and IT decision making that often impacts an organization’s perception of its HR Technology and the achieved outcomes from that technology is the overall approach to implementations. How a system is implemented can significantly influence overall adoption, data integration capabilities, and security risks.

## Plans, Timelines, and Modules

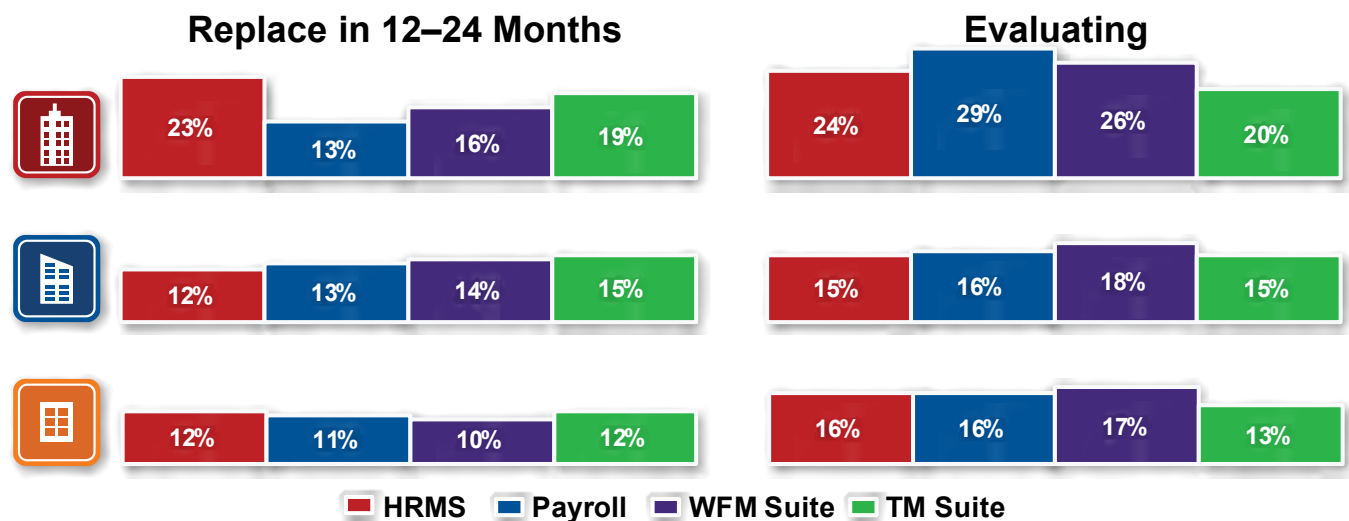
Fewer organizations are planning to make solution changes in the next 12 Months as compared to previous years—an average of 13%, but we still see organizations planning movement over the next 24 months. Organizations with low UX scores are four times more likely to have near-term plans to replace their current vendor. In aggregate, 36% of organizations working on an Enterprise HR Systems Strategy, and approximately 18% of organizations overall are currently evaluating their options across all HR technology platforms.

Figure 83: Plans for Replacing HR Technologies



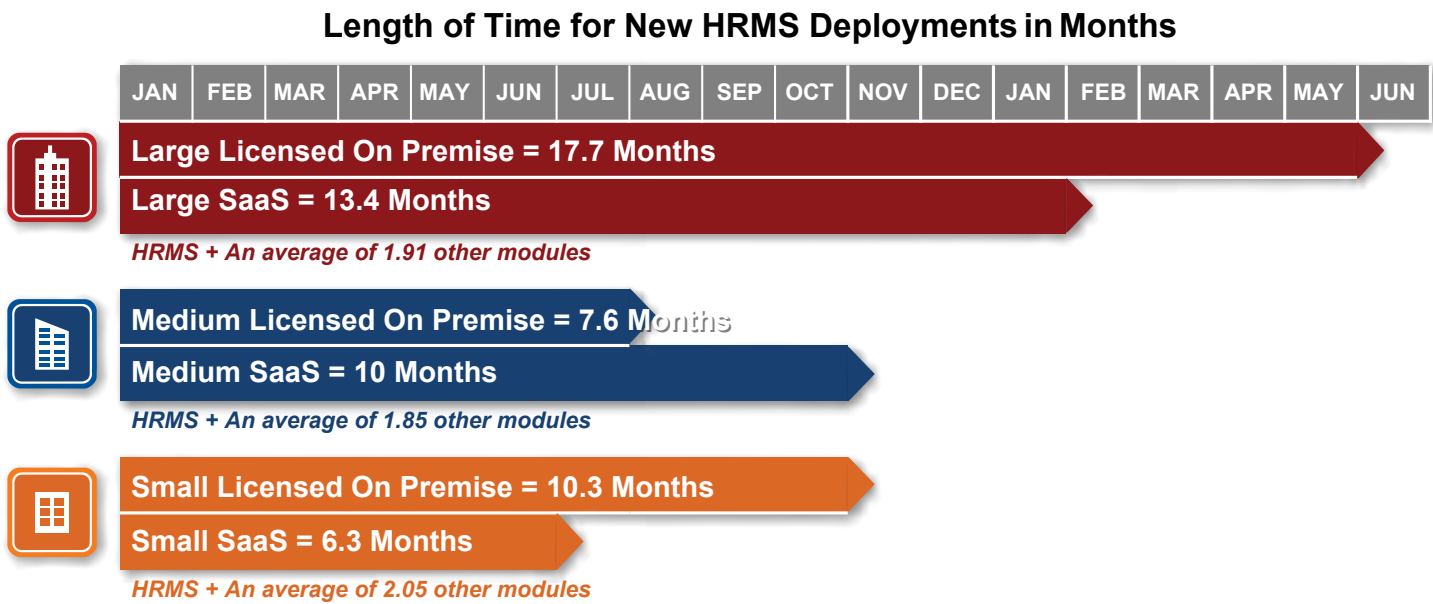
When analyzing change by size, Large organizations are the most likely to be planning for a system change, where 66% are more likely to be evaluating an HR systems change than their Small counterparts; they are also more likely to be planning a full replacement of their core HRMS environment in the next 24 Months.

Figure 84: Plans for Replacing HR Technologies by Size



Once an organization has decided to either replace or upgrade an existing solution, the next focus becomes timeline and costs. Implementation timelines have been a constant challenge for organizations dealing with On Premise solutions, particularly for Large global organizations. Two- to three-year implementation timelines for enterprise-wide HRMS environments were not uncommon for organizations, especially when these solutions were implemented alongside other enterprise-wide solutions such as Finance or Sales. With the onset of Cloud and more vanilla implementations of On Premise applications, these average implementation timelines have condensed considerably over the last few years.

Figure 85: Implementations Timelines by Size



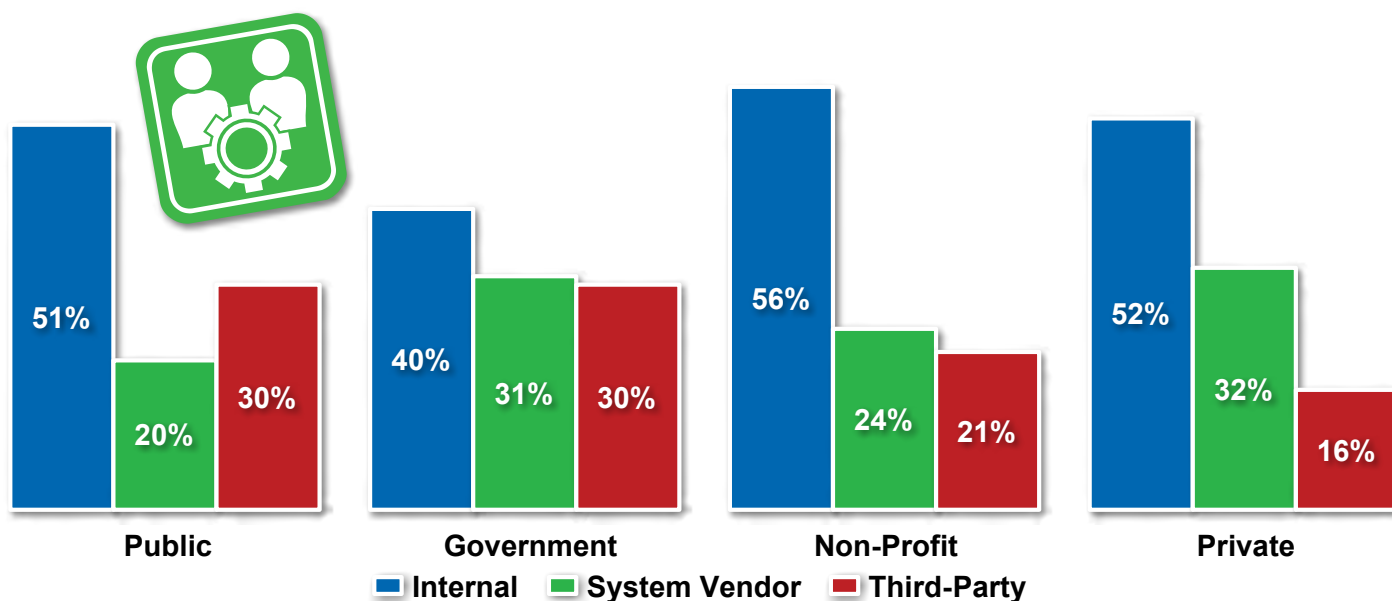
The previous figure provides insight into the average timelines for both On Premise and Cloud/SaaS implementations by size of organization, along with the average number of modules these organizations generally deploy with a core HRMS implementation. At this point, we see fewer On Premise implementations than Cloud/SaaS implementations as few vendors are aggressively selling their On Premise solutions. Vendors still sell On Premise solutions by request or for mergers and acquisitions—in some cases, organizations are choosing to re-implement standard versions of their existing solutions to reduce customization and take advantage of newer features.



## Implementation Resources

How will an organization resource the additional workload of an application selected for implementation? We show the average percentage of work completed by various resources in implementations for the last 24 Months by Organization Type. Large Public and Government organizations are more likely to leverage considerable help from Third-Party organizations, while Private organizations are more likely to seek help from the HR Technology Vendor. Organizational size plays a role in this breakout; Large organizations are more likely to leverage external resources, but they are also more likely to have internal staff on the project.

**Figure 86: Implementation Resources, Who Does the Work? By Organization Type**

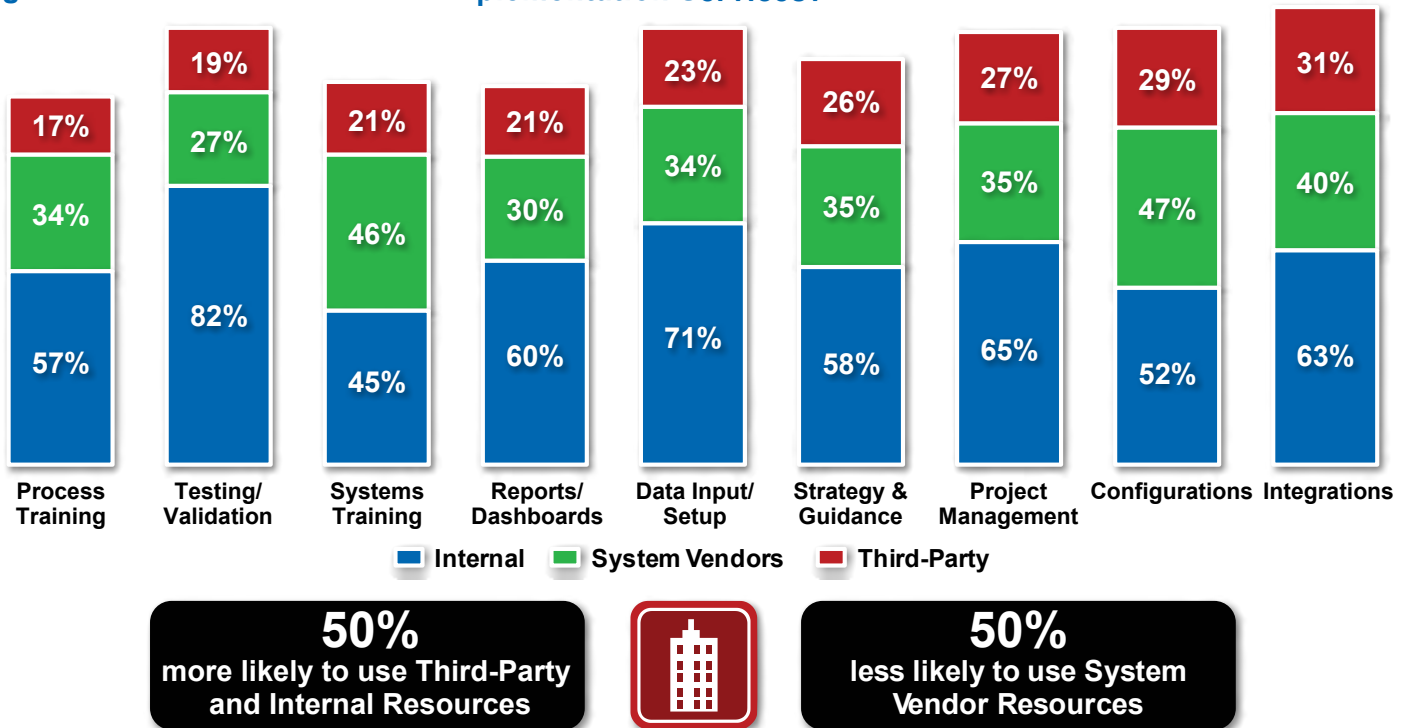


Last year we analyzed this data by Cloud and On Premise implementations and found that, overall, Cloud implementations leveraged a larger percentage of System Vendor and Internal Resources than On Premise implementations to conduct analysis statistical significance. We also reviewed the various types of system implementations, including core HRMS, Payroll, WFM, and Talent Management applications and found very little difference in the resourcing makeup.

This year we see an overall reduction in the time investment vendors make in their Cloud/SaaS customers' implementation projects, particularly for those creating strong third-party partnerships; however, some vendors have no third-party implementers and highlight this as a differentiator in their sales process. For implementations, 51% of organizations report using mostly their own internal resources.

We also wanted to explore the specific implementation services provided by System Vendors, Third Party organizations, and Internal resources, so we asked organizations to identify which resources were involved in various implementation tasks. More than 50% of the organizations had internal resources involved in almost every aspect of the implementation process. System Vendor resources were most often involved in System Training, Configuration, and Integration tasks, while Third-Party resources were most often involved in Integration and Configuration, as well as more strategic tasks such as Project Management and setting Strategy and providing guidance for the implementation efforts.

**Figure 87: Who Provides These Implementation Services?**



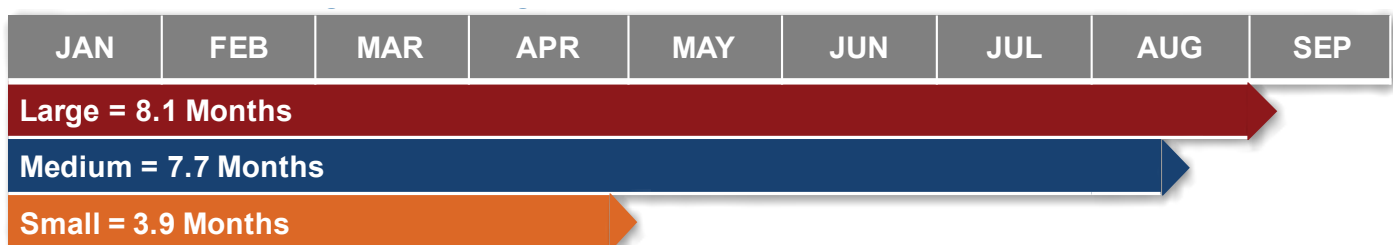
## Ongoing Maintenance, Upgrades, and Updates

For On Premise/Licensed deployments, upgrades are still a major part of organizations' HR technology strategies:

- 60% – on the most current release of their core HRMS solutions
- 11% – not on the current release and have no plans to update
- 18% – not on the current release but plan to update their solution within one year

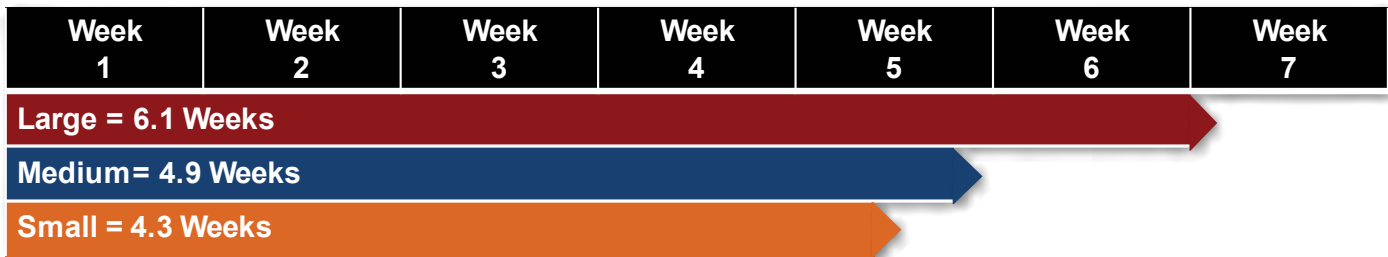
Timelines for On Premise/Licensed upgrades vary greatly by organization size. For Cloud/SaaS solutions, vendors generally release two-to-three major updates a year, along with some regular patch and minor system updates between major updates. Although Cloud/SaaS solutions require that updates be completed regularly, vendors have different approaches to rolling out major updates. Vendors can provide various ways to test and model the impact of updates before organizations go live, and in many cases, vendors will release a major update with all features initially turned off, allowing clients to turn on preferred features at their own pace. History with Cloud-based TM solutions warns us to be careful of these small gifts. Organizations can often forget features or ignore certain updated features that could provide better UX if those features are not turned on right away. About 5% of organizations identified major gaps with their HR solutions which include a lack internal capabilities and resources to use and maintain the consistent updates being made to their new Cloud/SaaS solutions.

**Figure 88: Licensed HRMS Upgrade Average # of Months**



Major SaaS updates still require anywhere from three to six weeks for testing and Change Management efforts. Small organizations may require more time for updates, as they often have fewer resources to apply to such efforts.

Figure 89: SaaS HRMS Update Average # of Weeks



## HR System Expenditures

HR technology environment discussions require some understanding of total HR technology expenditures. Although total expenditures are difficult to identify without clear benchmarking parameters, we have attempted to provide a general view of this year’s HR Technology expenditure data by organization size and complexity of the HR Systems environment.

Our research found that, on average, total HR technology costs per employee can range from \$159–\$460 per employee annually. These numbers change dramatically based on the number of systems implemented, amount of internal resources versus outsourced resources, global scope of an organization, and the complexity of an organization’s service and support needs. These aggregate numbers are generally helpful only as a ballpark figure, but do provide us with a lens through which to review year-over-year annual expenditures per employee. This year, we see a slight increase in expenditures for Large and Small organizations; Large organizations are implementing new solutions more often this year, and Small organizations are adopting more applications overall.

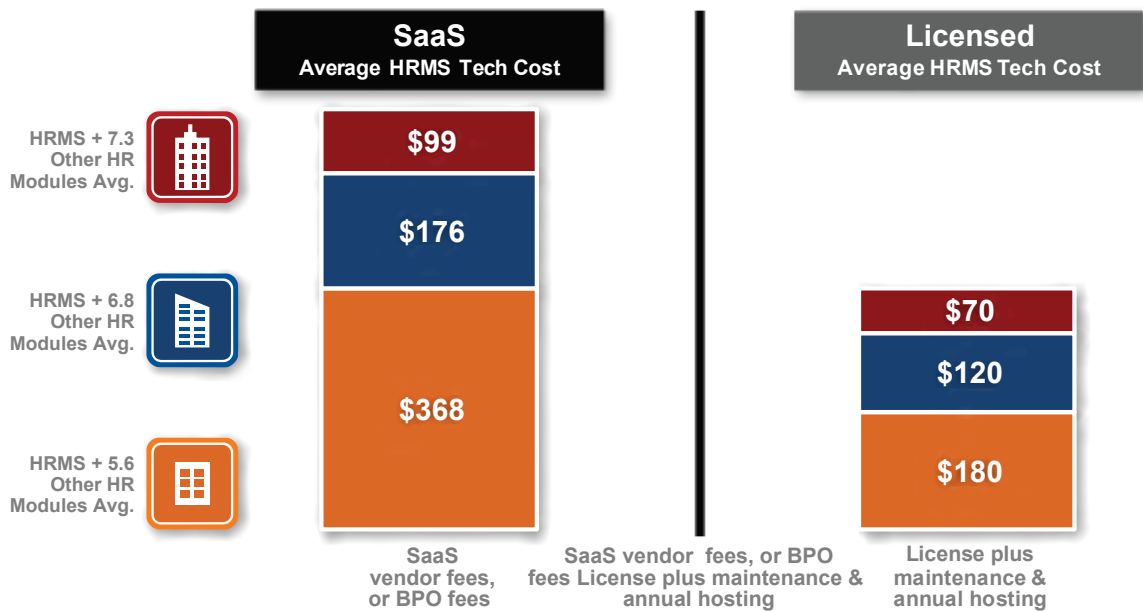
Figure 90: Total HR Technology Costs per Employees by Size



Another way to look at HR Technology expenditures is to compare organizations that are slightly more aligned in their overall HR Technology makeup, size, and deployment models. We provide an overview of annual expenditures for HR technology costs by size and deployment method and with similarly complex HR technology environments.

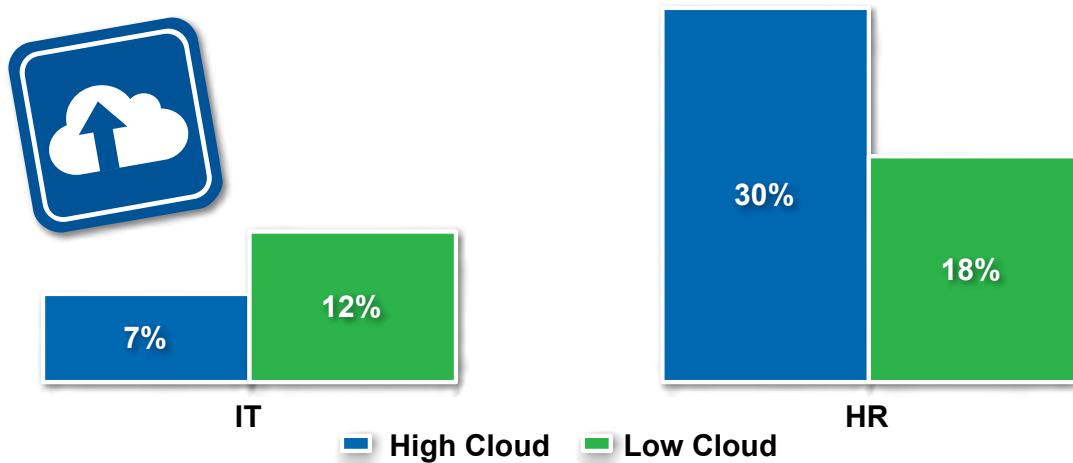
As organizations continue move to Cloud applications and fewer remain in On Premise environments, we see overall costs associated with On Premise deployments decrease as organizations stretch the lifespan of these systems and carefully manage their expenses. To justify losing the cost benefits realized from their current environments, many organizations will require a wide range of added benefits before making significant changes.

Figure 91: System HR Technology Costs per Employees by Size and Deployment Model



Another way to look at HR Technology spending is as a percentage of an organization’s overall IT or HR Budget. This view provides not only an understanding of increasing expenditures, but also a shift in the ownership of budgets. The percentage of budget allocation can range widely based on size, industry, and finance strategy, but where the HR Technology budgets sat was less ambiguous in the past—squarely in IT. Last year we noticed that High Cloud organizations seemed to allocate larger percentages of their HR Technology budget as a part of the HR budget versus the traditional IT budget—a shift that denotes the movement from IT decision making to functional decision making for Cloud applications.

Figure 92: Allocation of HR Technology Budgets



# Voice of the Customer on Core HRMS, WFM, and TM

Understanding the relationship organizations are developing with their current vendor solution has become another lens through which to view the total HR Environment. For HRMS applications, primary TM applications, and primary WFM applications, we capture both UX and Vendor Satisfaction scores from our Survey participants. Individual answers were given for each vendor solution on a scale from one to five. Individual vendor solutions receiving at least 20 individual responses were included in the average analyses data. Over 960 individual organizations provided data in this area of our Survey, and many of these responses included scores for multiple solution providers. For further insights into Vendor Satisfaction and UX, we also asked organizations to provide insight into which factors had the greatest impact on their ratings for each solution. Below we've shared the findings from this analysis for all three categories.

## Core HRMS

Looking at the HRMS vendor marketplace, no single vendor solution achieved an average rating which exceeded expectations in either vendor relationships or UX scores—every solution has opportunities to improve. The newer Cloud solutions continue to have the highest average scores in both UX scores and Vendor Satisfaction. Even for vendors with multiple solutions, respondents are more satisfied with the overall relationship for the newer Cloud solutions when compared to other deployment types; however, the overall spread is very close for all solutions and five percentage points higher than last year. As noted earlier, people are simply happier with their current HRMS applications.

Figure 93: HRMS Vendor Satisfaction and UX



The close UX and Vendor Satisfaction scores in the HRMS space between new and traditional solutions continues to be a challenge for many vendors that invest heavily in differentiating new applications from traditional applications. Many organizations that were truly unhappy with their previous solutions became early adopters












of the new Cloud solutions. The investment in Cloud-based HRMS environments can still be quite costly and require a great deal of change on the part of each organization. Written comments from our respondents show that these clients have higher expectations of the vendors and technological capabilities of Cloud solutions—in other words, they expect more.

This year, we see other vendors closing the gap between themselves and the Vendor with the highest UX and Vendor Satisfaction scores. The HRMS Technology space exemplifies the value of competition in a market; many would say the HRMS space was stagnating while TM applications were offering greater innovation and an alternative UX. The narrowing of the satisfaction gap isn't due to lower ratings at the top—in fact, the highest ranked organizations all saw increases in their overall ratings. New products are entering the space and existing vendors are continuing to innovate to drive market competition.

**Organizations evaluating an HRMS change:**  
On Premise – 28%  
Cloud/SaaS – 11%

Another factor in UX and Vendor Satisfaction is the complexity of the organizations a solution serves. Below, we compare the average profile of the type of organizations that responded to our Survey for each solution. The following categories are included: average employee size, average number of employees served for each HR employee, the percentage of the organizations that are global (and for global companies, the average number of countries where they do business), the number of integrated non-HR systems, average voluntary turnover, average amount of time the current system has been in place, percentage with a Shared Service Center, and the average implementation time (in months) of that solution.

**Figure 94: Solution Average Client Complexity Analysis**

	 EE + Cont.*	 EE/HR	 % Global	 # Countries*	 # Int. Non-HR Systems*	 Vol. Turnover*	 Time owned*	 % Shared Service Center	 Imp. in Months*
<b>Aggregate</b>	13,610	141	43%	25	0.82	20%	6.08	65%	9.98
<b>Oracle (PSFT)</b>	34,236	137	50%	20	1.4	15%	11.94	73%	10.92
<b>SuccessFactors (EC)</b>	31,210	116	68%	29	1	12%	3.43	80%	15.91
<b>ADP (GV/E)</b>	29,032	113	69%	16	1.06	20%	8.6	60%	8.53
<b>SAP (HCM)</b>	22,145	472	73%	31	1.12	15%	9.52	73%	14
<b>Workday</b>	18,180	122	71%	29	1.02	22%	2.77	80%	11.45
<b>Infor (Lawson)</b>	14,490	131	14%	5	1.15	21%	10.9	83%	15.17
<b>Oracle (HCM Cloud)</b>	13,029	113	54%	15	1.4	18%	4.13	18%	15.25
<b>Kronos (WFC)</b>	12,322	138	48%	23	0.86	20%	7.58	73%	7.72
<b>Ultimate (Ultipro)</b>	10,650	99	38%	5	0.42	22%	4.06	65%	6.83
<b>ADP (Vantage)</b>	6,780	171	83%	49	1.5	30%	3.33	50%	8
<b>SumTotal SS</b>	4,345	67	60%	17	0.8	11%	6.8	80%	13
<b>SilkRoad</b>	3,990	101	56%	32	0.75	15%	3	37%	3.5
<b>Kronos (WFR)</b>	3,113	180	45%	36	0.88	40%	2	56%	8
<b>Ceridian Dayforce</b>	2,460	97	41%	9	0.23	19%	1.95	55%	6.63
<b>ADP (WN)</b>	2,457	107	37%	11	0.61	19%	5.34	57%	5.67
<b>Paycor</b>	317	89	10%	7	0.25	20%	2.5	N/A	4.2
<b>Sentric</b>	147	66.5	N/A	N/A	N/A	17%	3.8	N/A	2

\* Average

## Workforce Management Suites

Figure 95: Workforce Management Vendor Satisfaction and UX

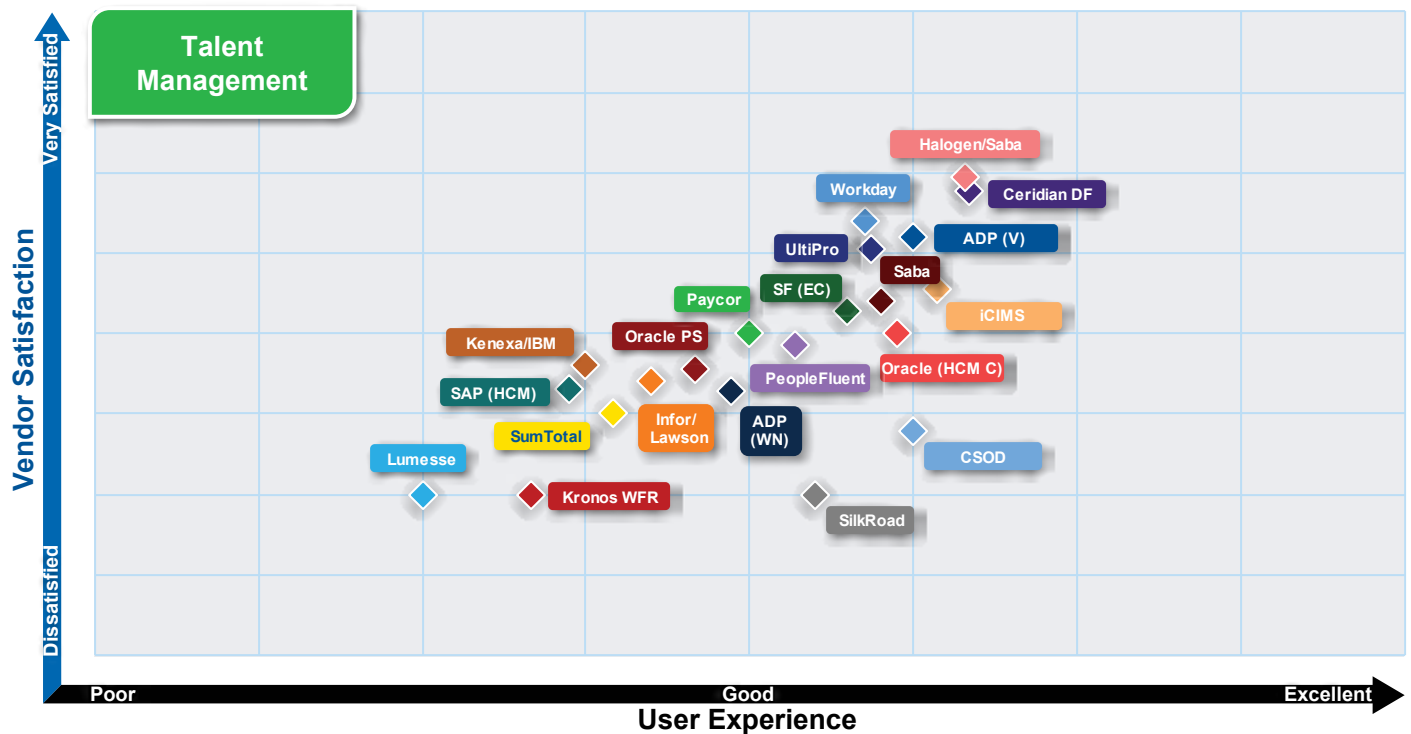


For the second year, we've conducted an analysis similar to the one done on HRMS respondents for the UX and Vendor Satisfaction ratings of an organization's primary WFM solution. In general, WFM solutions that have invested heavily in their compliance expertise, as well as sophisticated scheduling capabilities like Ceridian Dayforce and Workforce Software, continue to receive higher-than-average UX and Vendor Satisfaction scores; Workday has also increased its UX score in WFM.

Most of these vendors are only a few decimal points away from each other on UX and Vendor Satisfaction ratings; and everyone has room to improve as no one has achieved an average score of excellent. This evolving space should see increased changes as new vendors begin to emerge and enterprise systems look to improve their existing solutions that are currently offering limited capabilities.

## Talent Management Suites

Figure 96: Talent Management Vendor Satisfaction and UX



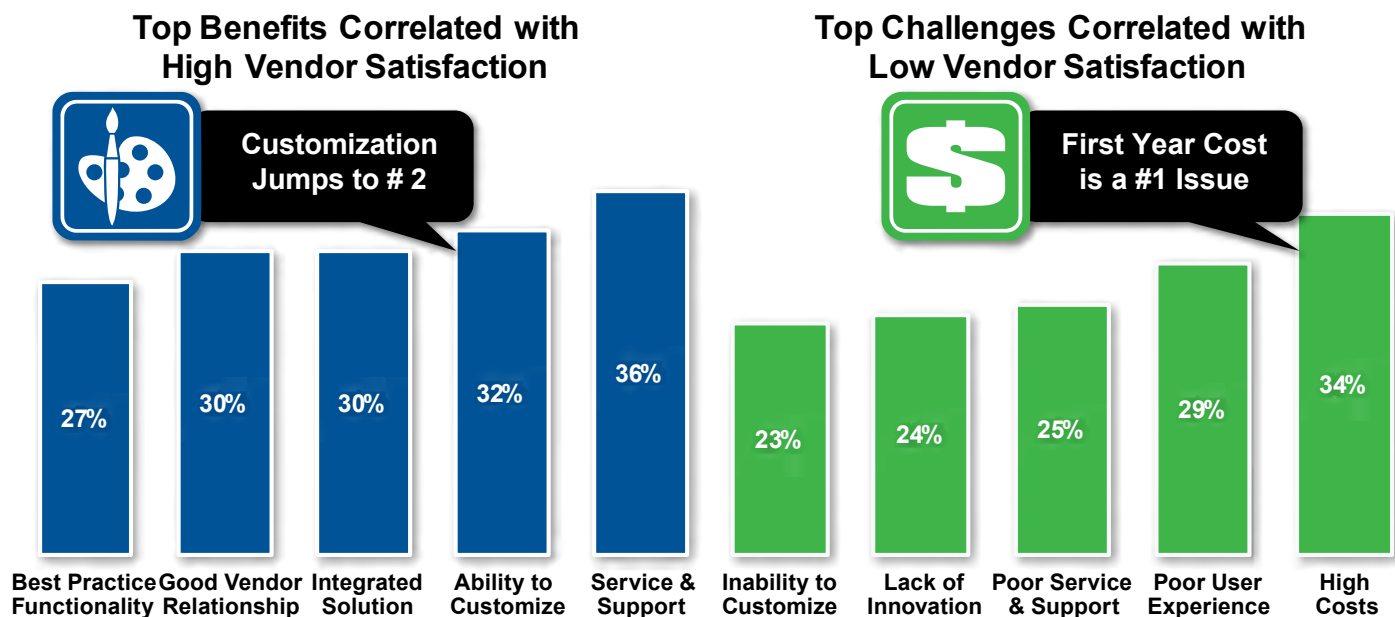
Mirroring the analyses for HRMS and TM, we look at the respondents' UX and Vendor Satisfaction ratings for their primary TM solution. This vendor environment changes dramatically from year to year, but once again we are seeing Enterprise Software average scores comparable to TM Suite average scores. Halogen and Ceridian Dayforce achieved the highest UX and Vendor Satisfaction scores, closely followed by iCIMS, ADP Vantage, and Cornerstone OnDemand. These vendor solutions are identified by Survey respondents as their Primary TM solutions; but of the top four, only Cornerstone OnDemand has a full complement of integrated Talent solutions for complex Learning, Performance, and Recruiting on a single platform.

Many organizations with High UX received lower Vendor Satisfaction scores than last year; the TM space is ripe for disruption, and many organizations have shifted focus from rapid growth in this area to ongoing maintenance and measurement.

# Vendor and Buyers Opportunities

For further insights into Vendor Satisfaction and UX, we also asked organizations to provide details into which factors had the greatest impact on their ratings for each solution. When the HR community talks about the importance of UX and Vendor Satisfaction, it is almost always done with the hopes of influencing change in the market. No two vendors are alike, and each organization has something unique that it can offer to individual clients. Our goal in capturing and providing Vendor Satisfaction data is to provide a voice for the HR community in the areas for which they would like to see improvements from their solution providers. We find that most buyers and users are satisfied with their current solutions and relationships, but would prefer to see one or two items adjusted.

Figure 97: High and Low Vendor Satisfaction Drivers



This year, our analyses of the key drivers associated with High and Low Vendor Satisfaction see Poor UX relinquish its top challenges spot to High Cost. Comments referencing Poor UX also generally mention either Integration Issues, Lack of Mobile Capabilities, or Older Interfaces. Service and Support does not seem to be as much of a challenge in 2017 as seen in previous years; however, this year, Service & Support and Customization did show up on both charts as key reasons for low scores and the positive factors leading to high Vendor Satisfaction scores. Although this may appear to be contradictory, traditional On Premise HRMS users are still very satisfied with their current vendor. Organizations investing heavily in customized On Premise Solutions often value those Customizations as unique differentiators.

For vendors focused on creating standardized Cloud HR technologies, but hoping to convince these On Premise organizations to head to the Cloud, the business case will need to include some way to recreate or find similar capabilities through PaaS models or Marketplaces filled with innovative partners. These trends emphasize the willingness of organizations to make their buying decisions on relationship factors rather than on gaps in functionality, highlighting that cost could quickly become a major concern.

## Vendor Solution Details

We provide the top three benefits and challenges selected for each Vendor Solution by the largest overall percentage of their current customers. This is aggregate data, and a benefit to one organization may be a challenge to another. Findings from this analysis are for core HRMS solution providers only.

**Figure 98: Percentage of Vendor Benefits and Challenges Selected by End-Users**

	HCM Top Three Benefits	% Chosen	HCM Top Three Challenges	% Chosen
ADP E	Good Service & Support	56%	Inability to Customize	33%
	Good Vendor Relationship	53%	High Costs	26%
	Best Practice Functionality	25%	Poor UX	26%
ADP GV	Global Functionality	57%	Inability to Customize	62%
	Good Service & Support	43%	Lack of Innovation	37%
	Best Practice Functionality	43%	Poor Service & Support	25%
ADP WFN	Integrated Solution	36%	Poor Service & Support	56%
	Good Service & Support	33%	Poor Handling of Upgrades	33%
	Good Vendor Relationship	31%	High Costs	31%
Ceridian DF	Integrated Solution	60%	Poor Service & Support	40%
	Good Service & Support	55%	Lack of Industry Functionality	33%
	Ability to Customize	45%	High Costs	27%
Infor/Lawson	Ability to Customize	47%	Lack of Innovation	58%
	Good Service & Support	35%	Poor Handling of Updates	42%
	Integrated Solution	35%	High Costs/Poor Service & Support/UX	26%
Kronos WFC	Good Vendor Relationship	37%	High Costs	42%
	Good Service & Support	34%	Poor Handling of Updates	27%
	Best Practice Functionality/Positive UX	31%	Poor Service & Support/UX	23%
Oracle (HCM Cloud)	Good Service & Support	41%	Poor Service & Support	50%
	Ease of Configuration	41%	Poor UX	37%
	Best Practice Functionality	35%	Inability to Customize	31%
Oracle (PS)	Ability to Customize	71%	Poor UX	50%
	Integrated Solution	29%	High Costs	45%
	Best Practice Functionality	26%	Lack of Innovation	38%
Paychex	Good Service & Support	50%	Poor Service & Support	44%
	Integrated Solution/Positive UX	30%	Lack of Innovation	44%
	Low Costs/Ease of Integration	30%	Poor UX	33%
Paycor	Good Service & Support	54%	Inability to Customize	42%
	Good Vendor Relationship	41%	Poor Service & Support	28%
	Low Cost	33%	Poor Handling of Updates	28%
SAP (HCM)	Ability to Customize	61%	Poor UX	53%
	Integrated Solution	45%	High Costs	49%
	Best Practice Functionality	39%	Lack of Innovation	47%
Silkroad	Positive UX	45%	Inability to Customize	37%
	Good Service & Support	36%	Lack of Innovation	25%
	Good Vendor Relationship	27%	Poor UX/Handling of Updates	25%
SuccessFactors EC	Best Practice Functionality	50%	High Costs	38%
	Good Vendor Relationship	43%	Poor Service & Support	34%
	Ease of Upgrades	40%	Inability to Customize/Lack of Integration	24%
Ultimate	Good Service & Support	51%	High Costs	37%
	Integrated Solution	49%	Poor Service & Support	32%
	Good Vendor Relationship	37%	Inability to Customize	24%
Workday	Positive UX	43%	High Costs	64%
	Ease of Configuration	39%	Lack of Industry Capabilities	35%
	Integrated Solution	39%	Inability to Customize	30%

# Emerging Technologies and Innovations

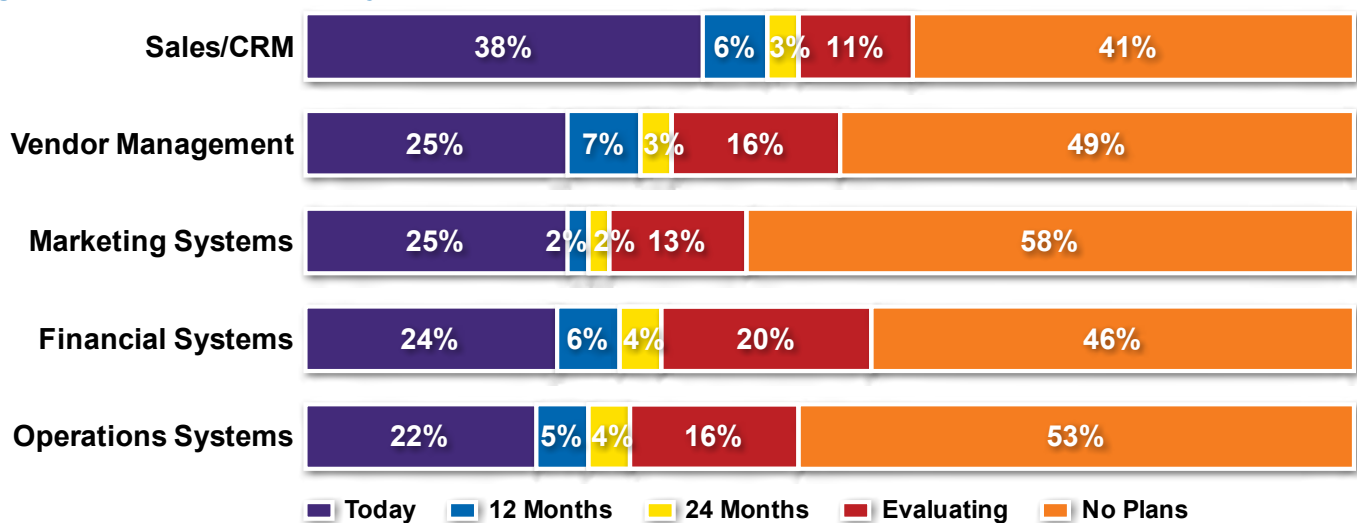
Each year, we track emerging HR technologies that may eventually impact an organization. This year, we look at the following categories of emerging technologies:

- Total Enterprise Cloud Movement
- Social Responsibility
- HR Going Mobile
- Social Applications in HR
- Storage and Application Development: IaaS and PaaS
- Emergence of Intelligent Systems: Fiction or Fact?
  - Wearables
  - Benchmarking Technologies
  - Machine Learning
  - Sentiment Analyses

## Total Enterprise Cloud Movement

The continued movement to Cloud and consumer-driven solutions is almost a foregone conclusion for HR technology Today, as large vendors have discontinued On Premise offerings and Employee and Manager Self Service are a major part in any selection process. While this transformation effort may have seemed slow and sometimes painful, in tech terms it was quite speedy. Within twenty years, we saw the focus of HR applications shift from administrative tools to end-user engagement platforms; within ten years, we went from Cloud as a concept to 50% of organizations having purchased a Cloud-based HR application. In this environment, we have a unique perspective as HR was an early adopter of Cloud technology—at face value, this may seem implausible, but for mature organizations, it may prove enlightening to understand current Finance, Marketing, or Operations systems. These applications may still be deployed in On Premise environments with a focus on administrative tasks and with minimal investment in the UX.

**Figure 99: 2017 Business Systems – On the Move to Cloud**



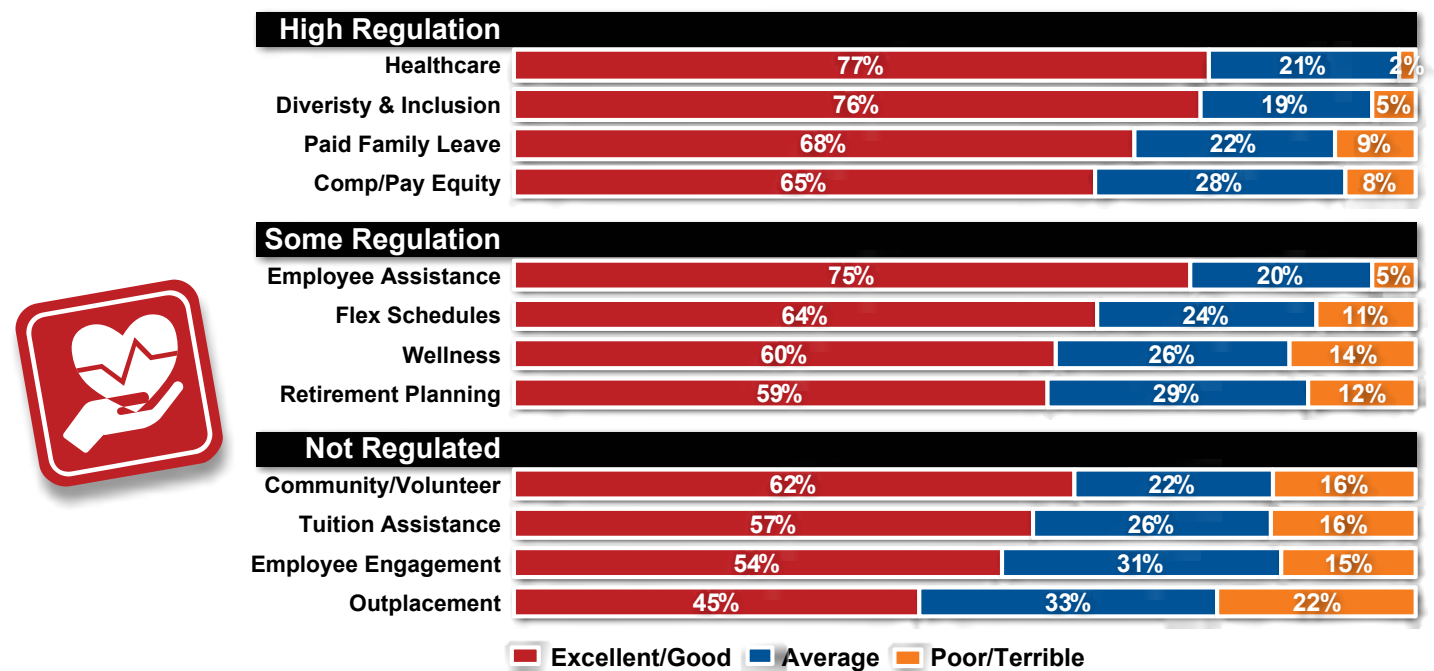
Due to HR's unique position of experiencing the positive shift to consumer-driven 24x7 access with modularized HR environments, other organizational business systems are following suit. Which business systems (Sales/CRM; Vendor Management; Marketing, Financial, and Operations Systems) are joining HR in the Cloud? Our data shows that by far the most common non-HR system deployed in the Cloud today is a Sales/CRM solution, which we see at 38%, a transformation effort spearheaded by organizations like Salesforce.com. These first products resembled traditional solutions with the same pitfalls of complexity and compromised UX, while today's more modern solutions offer beyond just a move to the Cloud, employing best practices and delivering better UX.

While less than 10% of companies had other business solutions in the Cloud in 2015, all other areas have also seen healthy gains for 2017, both meeting expected adoption levels from 2017 and planning for increased expansion in 2018 and 2019. The largest projected gains for the next 24 months are for Financial Systems and Vendor Management Systems.

## Social Responsibility Shines a Light

We investigate the adoption of applications that have an impact on an organization's overall Social Responsibility by asking organizations to rate themselves from Excellent to Terrible on how well their organization addressed a variety of Social Responsibility initiatives. As seen in last year's data, highly regulated initiatives are more likely to be handled well by the organizations surveyed.

**Figure 100: Social Responsibility in a Technology World**



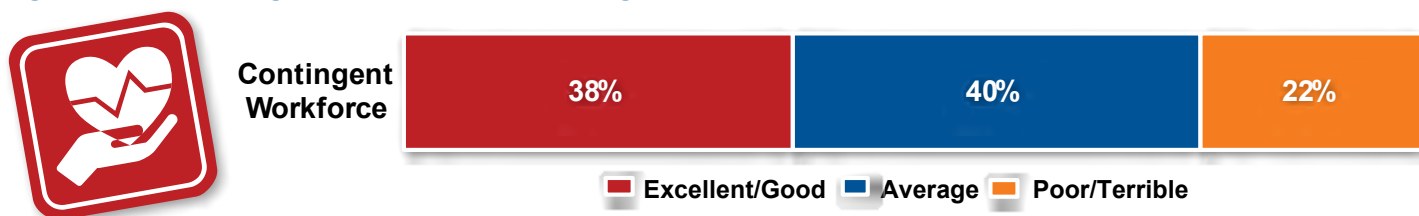


This year, we also identified a group of organizations by their top ten percent ranking in overall approach to social responsibility issues and labeled them as Socially Responsible. These organizations were found, on average, to have higher Return on Equity, improved overall business outcomes, and HR functions viewed as strategic business partners. However, we found no connection between generational workforce makeup, standard HR Technology environments, delivery models, or HR Technology vendors that correlated with Socially Responsible organizations, but we did identify the Top 10 Socially Responsible Organizational Characteristics listed below.

Top 10 Socially Responsible Organizational Characteristics		High Social Responsibility	Low Social Responsibility
1	Value of Emerging Voice-based User Interfaces	2.66 (Valuable)	1.97 (Less Valuable)
2	Enterprise-wide common HR processes	17 Shared Processes	15 Shared Processes
3	Effective Career Planning processes	44%	14%
4	Effective Performance and Compensation Processes	65%	28%
5	Effective Workforce Planning and Reporting processes	35%	15%
6	Effective Onboarding processes	56%	26%
7	Effective Talent Profile Management processes	43%	19%
8	Enterprise-wide Employee Self-Service Rollout	92%	80%
9	Scenario/Game Based Recruiting In Use	17%	3.5%
10	Recruiting Marketing Campaign Management In Use	63%	37%

One High Regulation initiative that didn't quite fit our model was the management of Contingent Workforce; only 38% of organizations reported managing this audience in the Excellent or Good categories. On average, 24% of our Survey respondent's workforces were identified as Contingent. Organizations may struggle with understanding regulations and the role of HR in dealing with Contingent Workforces, which often leads to the HR function disregarding this group. In some cases, operations or procurement handles hiring, onboarding, security, communications, and contract management for what essentially becomes a shadow workforce.

**Figure 101: Contingent Workforce Handling**



Only 60% percent of organizations with contingent workers track 100% of them in their HRMS today, although 75% expect to do so in the next 12 months. Many HRMSs are not equipped to address the complex needs of managing a contingent workforce today. Organizations that identified themselves as Excellent/Good versus Poor/Terrible at managing these workers were found to use multiple solutions, both in HR and outside of HR, to connect, communicate, and manage this workforce in an effective manner.

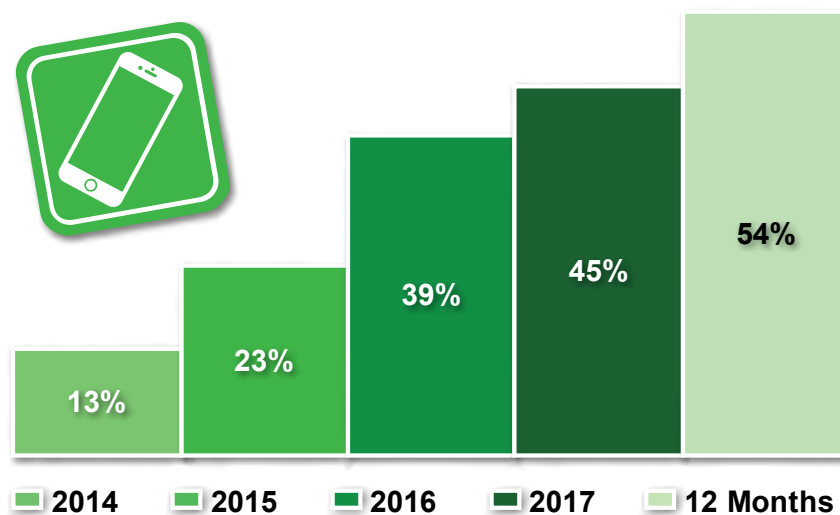
What % of your Contingent Workforce is managed through these systems? (Mark all that apply)		
	Excellent/Good (Avg)	Poor/Terrible (Avg)
Core HRMS	77%	62%
Procurement/Vendor Management System	63%	56%
Stand-Alone Contingent System	58%	45%
Outsourced Solution	48%	29%

**24%**  
the average % of  
an organizations  
workforce that is  
contingent today

## HR Going Mobile

Mobile technology adoption in our personal lives is almost universal and a large part of how individuals interact and communicate with the world around them. We look to Mobile devices as a means of facilitating connections with our workforce anytime, anywhere. Mobile goes beyond phones in a world where tablets, headsets, Wearables, and even Internet of Things (IoT) technologies are all part of the Mobile conversation, allowing organizations to think less about any one device and more about the optimization of information and communication for multiple delivery devices in a wireless environment.

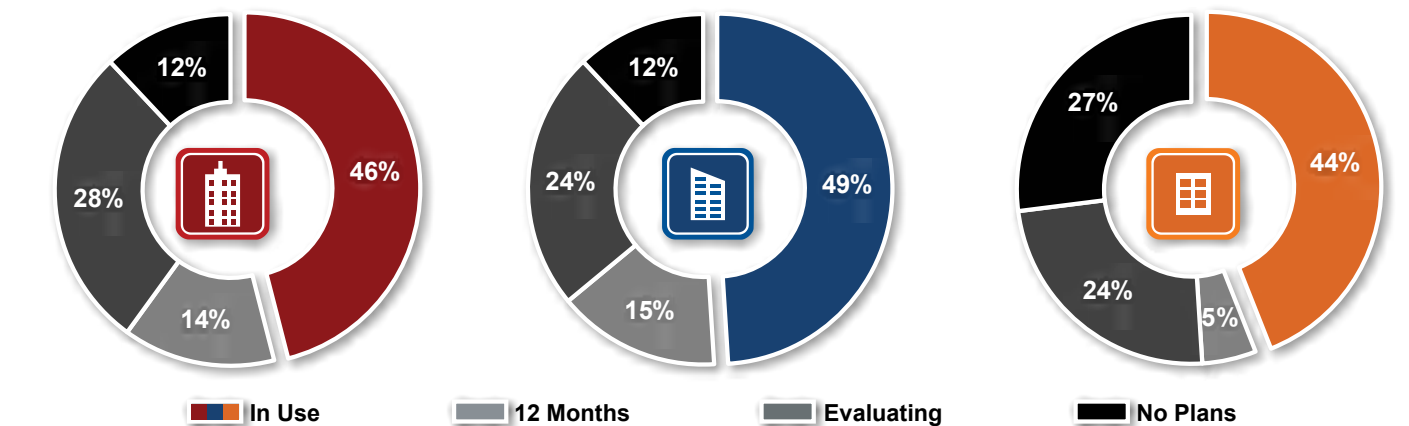
**Figure 102: Mobile-enabled HR Technology Use**



Survey responses indicated a 15% increase in Mobile adoption from last year and another 20% growth is forecast for next year; again, these growth percentage increases aren't as extreme as seen in previous years due to a much larger base adoption level. In 2018, we expect to surpass 50% adoption for Mobile-enabled HR processes, a significant increase from 13% in 2014.

When looking at Mobile-enabled HR process growth by organizational size, we see that the overall In Use numbers don't vary much; however, Small organizations are still more than twice as likely to have No Plans for Mobile adoption compared to Large organizations. Those organizations with No Plans to enable Mobile are twice as likely to have responded that their HR function has no credibility within the organization, while organizations with Mobile-enabled HR are three times more likely to be viewed as a strategic business partner. A lack of Mobile investment has a major impact on HR's ability to reach both executives and employees who obtain a great deal of information today via Mobile devices.

**Figure 103: Mobile Adoption for HR Solutions by Size**



**3X**

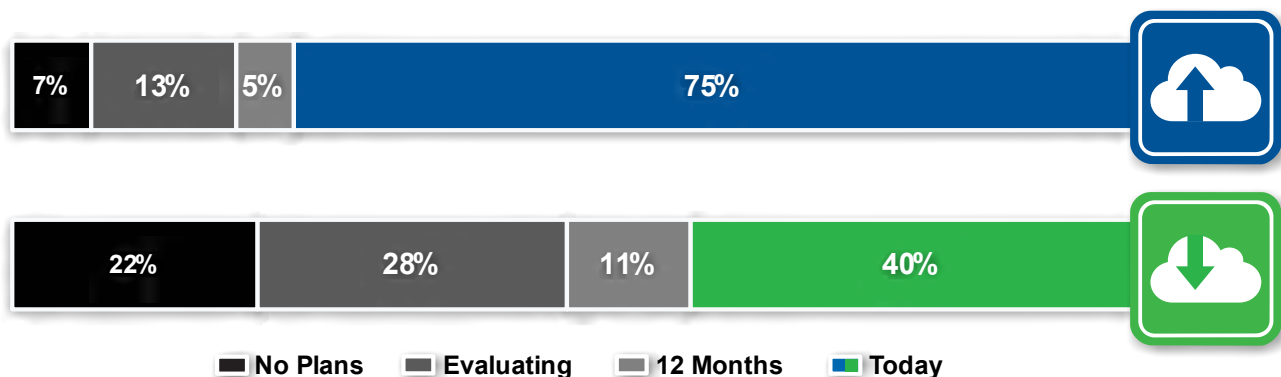
### Mobile HR Increases Strategic Value of HR

Organizations with Mobile Enabled HR are three times as likely to be viewed by all levels of management as contributing strategic value, versus organizations with no Mobile HR.

When digging deeper into the Mobile data, we also see the following:

- High Cloud organizations are one-and-a-half times more likely to have Mobile-enabled technology Today than Low Cloud organizations.
- Organizations with an equally spread or younger workforce were slightly more likely to have Mobile-enabled HR technology than organizations with an older workforce.

**Figure 104: Mobile-enabled HR Process Adoption – High vs. Low Cloud**



Looking at Mobile-enabled HR technology adoption by individual product areas provides additional insight into the adoption approaches that organizations are taking towards Mobile technology. The most frequently adopted Mobile processes are in the areas of HR Management/Recordkeeping and Time and Labor; Leave Management, Payroll, and Talent Acquisition are the next most frequently adopted Mobile processes. The greatest areas for increased adoption plans are Payroll, Performance Management, Learning, and Time and Attendance.

HR Application		% Using Mobile Today	% Planned Mobile 12 Months
1	Core HRMS	67%	72%
2	Time and Attendance	59%	70%
3	Absence/Leave	49%	56%
4	Payroll	48%	54%
5	Recruiting/Talent Acquisition	38%	47%
6	Performance Management/Goal Management	32%	43%
7	Onboarding	32%	41%
8	Talent Management	29%	37%
9	Portal Applications	21%	26%
10	Learning Management	20%	31%
11	Call Center/Help Desk	13%	18%
12	Workforce Scheduling	12%	19%
13	Succession Planning/Succession Management	9%	16%
14	Business Intelligence	9%	17%

## Social Applications in HR

Adoption of Social Media technology as a strategic HR solution continues to experience slow overall growth. For many organizations, solutions such as LinkedIn and Collaboration tools have become almost standard enterprise technologies, as adoption levels for Strategic HR use reaches over 65%. The strategic use of Facebook and Twitter technologies for HR has also become the norm for many organizations, both reaching 50% adoption for business use last year. In addition to the dramatic increase in the existing Social technology platforms over the last several years, we also include a series of newer Social technologies (Instagram, Snapchat, Tumblr) with limited initial use both this year and last year.

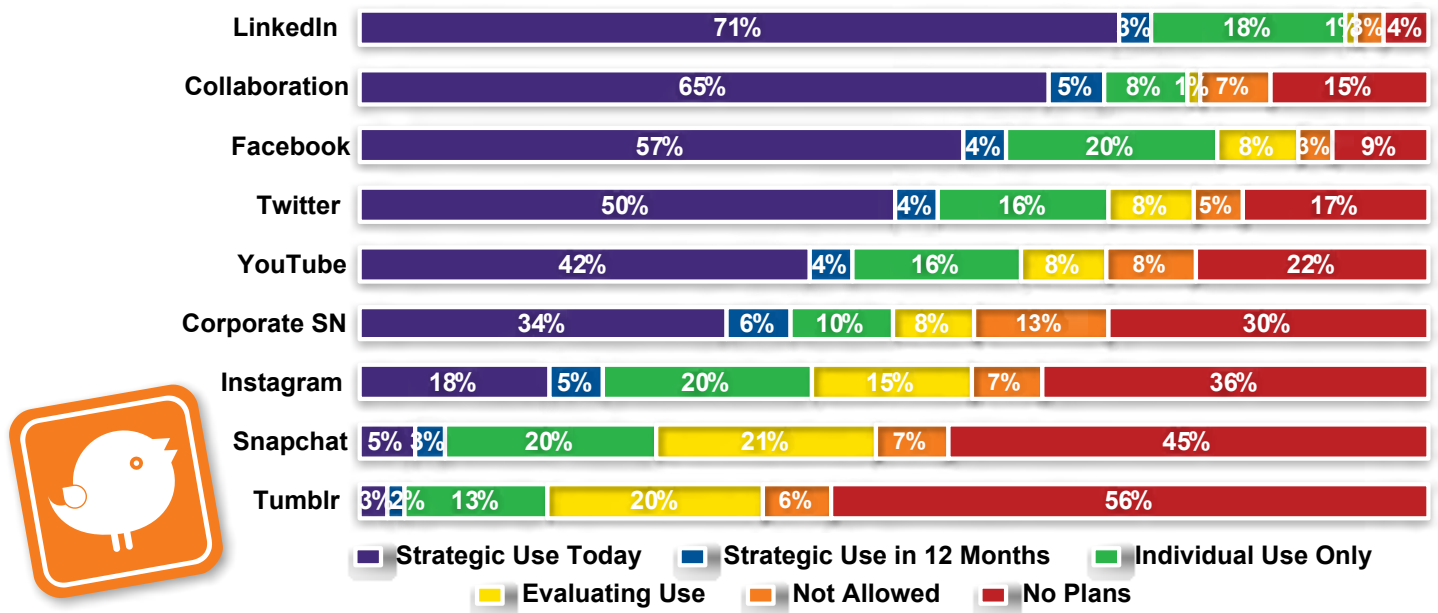
We make a distinction between the Social Tools allowed for individual use as opposed to those used strategically within an HR organization for areas including Recruiting, Branding, and Service Delivery. An interesting aspect of our Social Application usage data this year is in the Not Allowed and Evaluation categories. Between last year and this year, evaluations for strategic HR use have doubled for Facebook, Twitter, and YouTube, and tripled for Tumblr, Snapchat, and Instagram; last year, over 20% of organizations said they were Not Allowed to use these platforms for HR purposes, while this year we saw a 70% reduction in the Not Allowed category for all areas.

## New Social Applications Approaches

**70% fewer Not Allowed to Use Social Media**  
**3X more Evaluating New Platforms**

Candidate perceptions are heavily swayed by Social media interactions, and enterprise brands are constantly being judged in the marketplace on having a strategy—or lack thereof. A marketing strategy addressing the use of Social applications within an organization is crucial, as is a plan for dealing with inevitable negative perceptions and/or information on Social media.

**Figure 105: Social Tools Use and Plans**



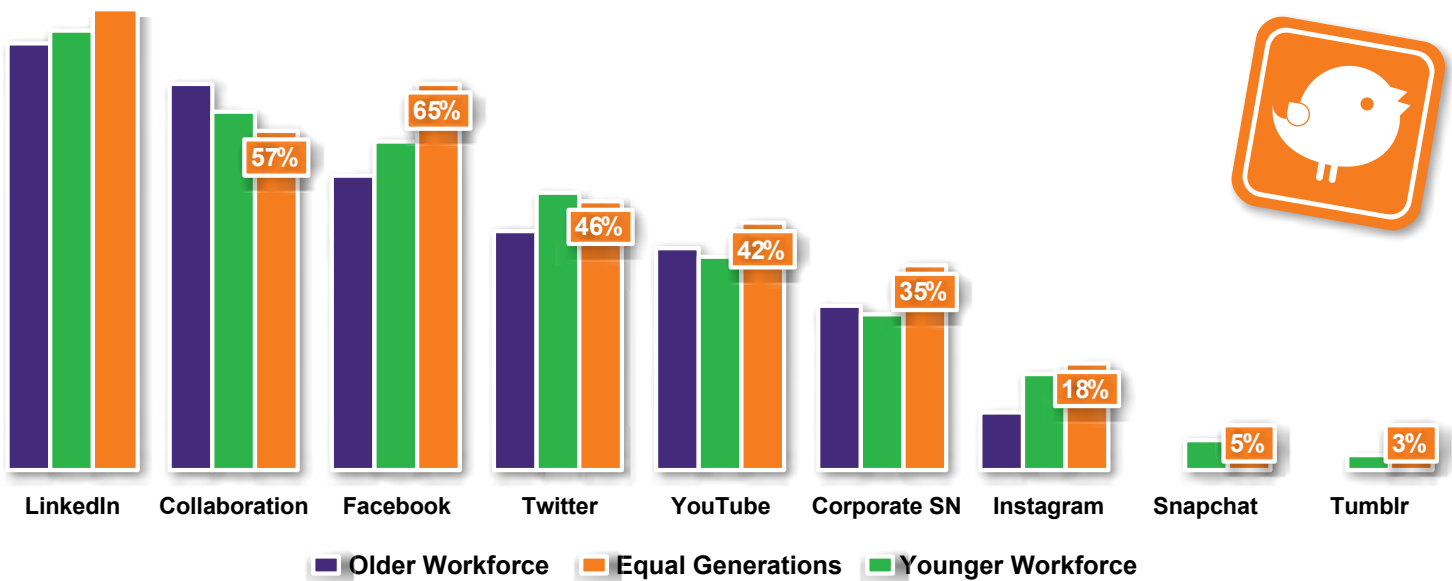
Workplace collaboration and Social channels have become an area of considerable growth and experimentation, with some organizations claiming to do away with email entirely<sup>1</sup> and replace it with other Social Tools. As workplaces become more geographically distant and new technology becomes more available, the manner in which people choose to communicate and collaborate will continue to be part of the HR conversation.

Another conversation for Social involves comparing Tools in use by the generational makeup of an organization's workforce. When taking the average workforce makeup into account, we can assess the average adoption level of various HR technologies. We analyzed a number of organizational characteristics by various generational workforce mixes and found few stand-out data points, with one exception: Social technology. The traditional, more established, and less time-sensitive, activity-driven Social tools (LinkedIn, Collaboration tools) see high strategic use by HR across all generational types; the more constantly interactive communication tools, such as Facebook, Twitter, and YouTube, were more likely to be adopted for strategic use by organizations with a younger and equally spread workforce.

We see significant generational differences regarding newer Social tools (Corporate Social Networks, Instagram, Snapchat, and Tumblr), with the workforces more heavily oriented toward younger generations to be far more likely using these tools strategically than organizations with an older workforce.

<sup>1</sup> <https://hbr.org/2016/06/some-companies-are-banning-email-and-getting-more-done>

Figure 106: Strategic Social Technology Use by Generations



Companies ignoring Social media as a critical communication method do so at their peril. The strategic use of these applications for most of these organizations now goes beyond recruiting alone and expands to general HR communication practices that include benefits, employee assistance, policies, and engagement. For organizations hoping to engage transitioning generational workforces, an investment in various Social technology strategies could be a critical element in HR, Talent, or Business outcomes.

## Storage and Application Development

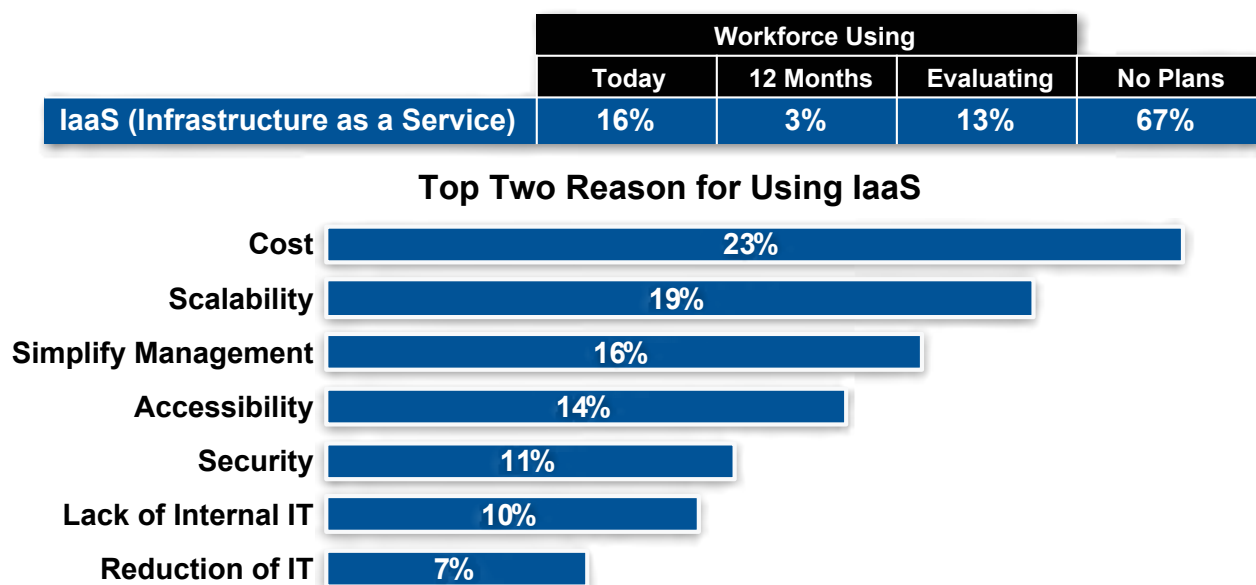
### Infrastructure as a Service (IaaS) and PaaS

At one point, Cloud technology was considered emerging for enterprise applications, and yet a mere seven years from the first time Cloud technology was mentioned in one of our Annual HR Systems White Papers, almost every technology application on the market today has a Cloud-based option. The next big question facing many business and IT leaders is, “Whose Cloud should we use or trust?” As the overall cost of data storage space continued to drop and the expectations increased for continuously available and secure access to Cloud solutions and supporting data, IT leaders and vendors alike began to realize that maintaining the infrastructure and hardware required for Cloud or Cloud-like environments was an expense they no longer needed to incur. More importantly, as their employees on the Cloud environments increased, they could no longer scale fast enough to meet the 24x7 demands. Large global public hosting organizations such as Amazon Web Services (AWS), Google Computer Engine, Microsoft Azure, and Oracle Cloud Platforms originally only offered Cloud space for small vendors and businesses unable to pay for their own storage. Today these same Vendors offer unimaginable levels of space, scalability, extensibility, support, and security at a fraction of the cost of maintaining an organization’s own data center.

**IaaS** – a category of Cloud computing that provides virtualized resources such as servers, storage, network and operating systems – as an on-demand service rather than purchasing physical servers, software, datacenter space, or network equipment.



**Figure 107: IaaS (Infrastructure as a Service) Adoption and Reasons for Using**



Since not all data or applications will ever be housed by third-party vendors, we asked organizations whether they were currently investing in their own IaaS environments or were planning to do so in the future. Currently, 16% of organizations are licensing an IaaS environment for their organization, with another 13% evaluating this option. Organizations provided details concerning the business value received by leveraging IaaS environments, and reported that their top value propositions included lower costs, higher levels of flexibility, management needs, and security.

## Platform as a Service (PaaS)

PaaS, in its more modern incarnation, was pioneered by organizations like Google with their App Engines and development toolkits. It increases the development of third-party applications available through existing specific browser and technology infrastructure. There are multiple forms of Public, Private, and Hybrid PaaS environments, but the more common model discussed in reference to HR technology is rapid development PaaS, made famous by Salesforce.com and its Force.com PaaS environment; this environment was designed to provide licensed developers with access to the platform and tools needed to quickly create complex multi-tenant applications.

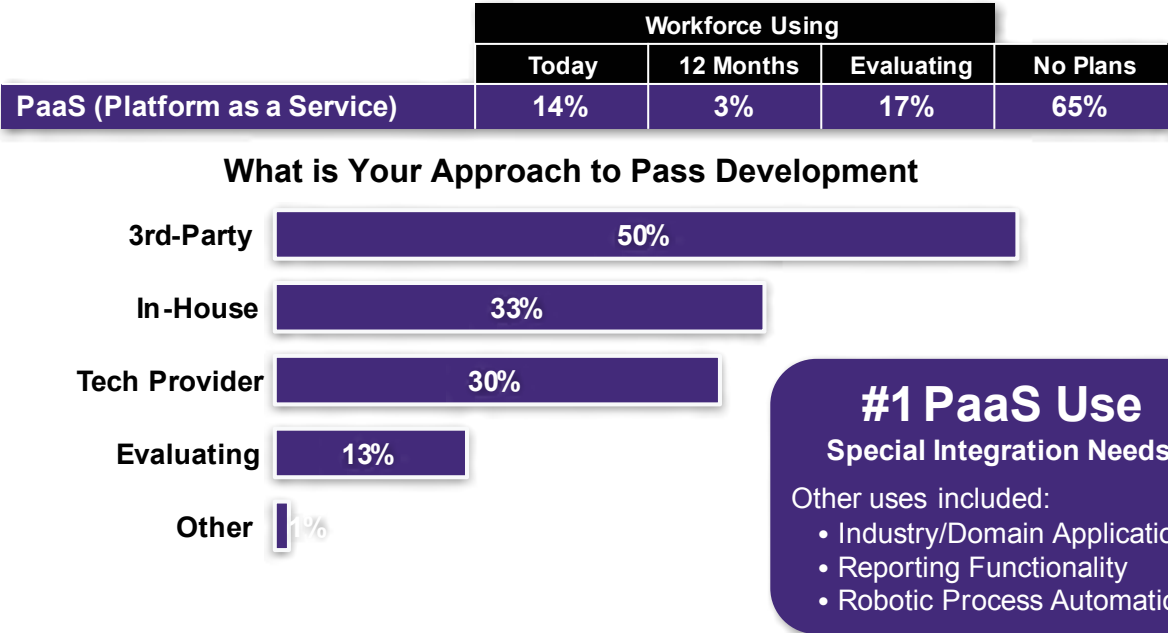
These applications can be purchased from within the PaaS application market and will extend the capabilities of the original program. In this Cloud environment, all of this is accomplished while the application itself and the supporting infrastructure can still be updated and maintained as it always has been, without breaking custom codes. In this way, PaaS allows a vendor a

**PaaS** – a category of Cloud computing services that provides a platform allowing customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure typically associated with developing and launching an application.

way to offer customizations (industry or business need specific) to a SaaS/Cloud environment. Examples of PaaS environments for HR exist today with Oracle, SAP, Cornerstone, and Workday. Other organizations like Ultimate, ADP, and Ceridian choose to carefully control development and integration on their platforms, and instead work with hand-selected partners to create large marketplaces where third-party solutions offer pre-developed applications that can be purchased directly from the marketplace, offering extensibility to the existing SaaS solution while assuring low-hassle integration with their applications.

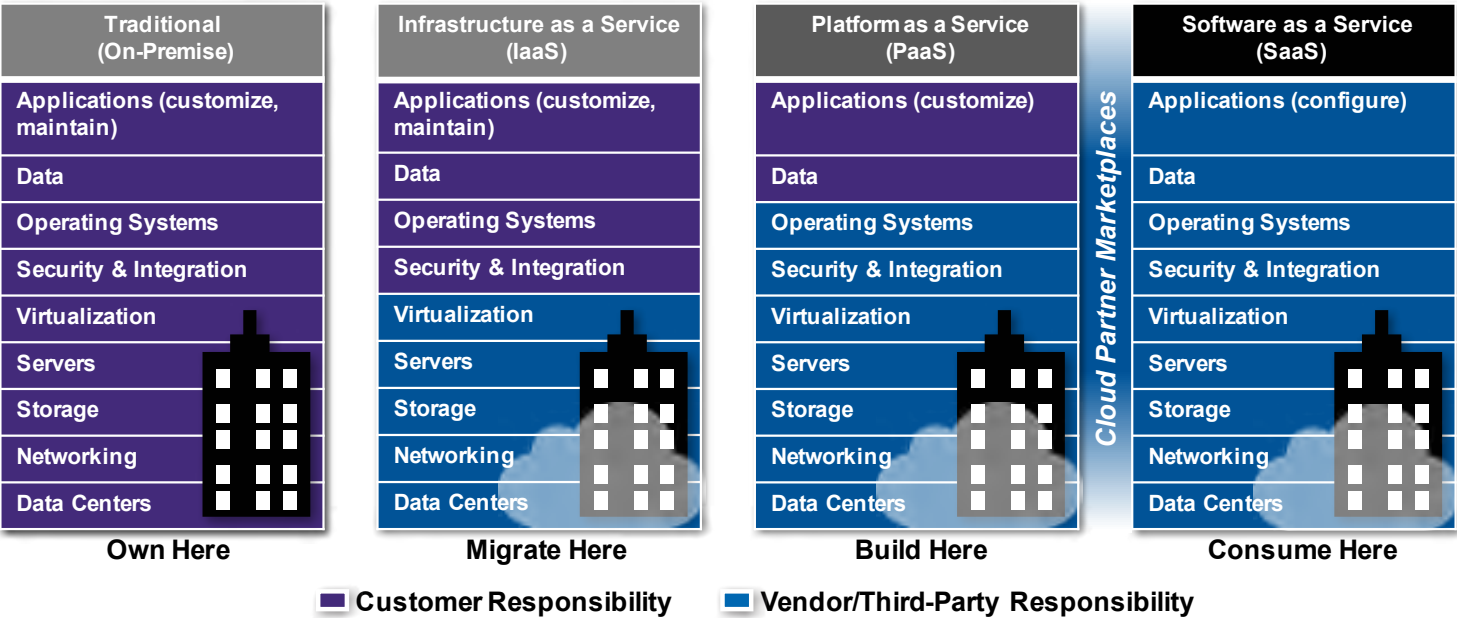


Figure 108: PaaS (Platform as a Service) Adoption and Development



Of particular interest to organizations with highly customized On Premise HR solutions which may include custom bolt-ons designed for their unique business requirements, PaaS technology provides a pathway for a potential move to the Cloud while still meeting custom requirements. Today, 14% of organizations are leveraging PaaS infrastructure technology in conjunction with their HR systems, with another 17% evaluating other technology. For organizations leveraging PaaS today, over 50% are engaging third-party vendors for their current development work. Those organizations also report that addressing special integration needs is the most common use of their PaaS deployment.

Figure 109: Cloud Partner Marketplaces



# The Emergence of Intelligent Systems: Fiction or Fact?

When we look beyond the immediate future of today's technology, it is easy to imagine that we have stepped into a science-fiction novel as we discuss driverless cars, household appliances that run our lives, and shopping environments that know more about us than our own parents. The future is now. We expect frequent technology changes in our lives that are designed to inform decisions, simplify activities, and be ubiquitously invisible.

The Survey explores current adoption plans and perceived value of various emerging technologies in the HR context that are the precursors or building blocks of what will be tomorrow's intelligent systems.

**Figure 110: Intelligent Systems Building Blocks, Use and Perceptions**

Intelligent Systems Building Blocks	Workforce Using			
	Today	12 Months	Evaluating	No Plans
Benchmarking Databases	20%	5%	24%	52%
Wearable/RFI (IoT)	8%	1%	9%	82%
Sentiment Analysis	6%	4%	15%	75%
Machine Learning	3%	2%	22%	73%
Predictive Analytics	76% Feel It is Valuable to Extremely Valuable			
Artificial Intelligence	40% Feel It is Valuable to Extremely Valuable			

## Benchmarking Databases

Benchmarking, a comparison exercise that organizations undertake against competitors or peers, uses a data set obtained from interviews, surveys, or simple observation by an entity that chooses to keep that information. One of the key benefits of using multi-tenant Cloud technologies is that, with permission, vendors have the ability to aggregate their client data to perform an analysis that can provide more accurate and broader benchmarking efforts in many areas, including metrics, activities, usage data, and key practices.

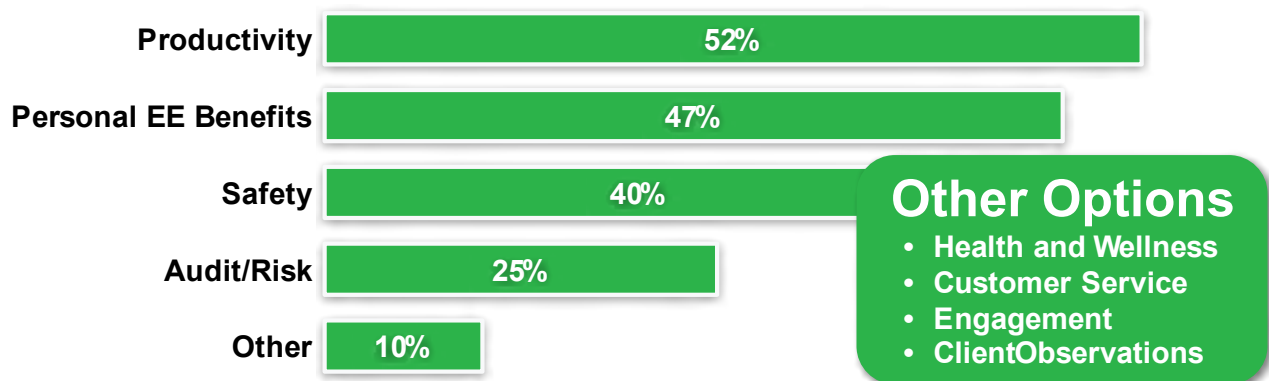
Currently, 20% of organizations are leveraging Benchmarking databases as part of their HR technology, with another 24% evaluating these tools. One of the current challenges of Large enterprise benchmarking efforts is that only categorized and comparable data can be used for analysis, removing the ability to analyze unstructured data such as written comments, notes, or even uncategorized fields. Large contextualized benchmarking databases with data that spans multiple timelines are part of the structured data required for training and validation of effective intelligent systems of the future.

## Wearable Technology

For many, the new fashion accessory is some version of a Wearable fitness tracker or watch that doubles as a phone. Individuals have the ability to tracking movement and heart rate with technology, or make calls from their wrist like old cartoons of Inspector Gadget, but can these technologies be leveraged for corporate use? Wearables are devices that leverage Wearable/RFID/Mobile-tracking technology to analyze data from the person carrying or wearing the device. Data from these devices can be used to capture an employee's location, vital signs, habits, experiences, environment, and a continuously growing list of items based on the innovation of sensor development.

Survey respondents report that 8% of their organizations are using Wearable technology, with another 9% evaluating Wearables for business use. We also asked what the perceived value was from their wearable initiatives and over 50% shared that one of the major values was improved productivity.

**Figure 111: Wearable Adoption and Value of Initiatives**



## Sentiment Analysis

Sentiment analysis, sometimes referred to as opinion mining, is the use of natural language processing tools and various forms of text-based analysis tools to determine attitudes, perspectives, and opinions of large data sets. Often analyzing unstructured data that is required for predictive analytics over time, these tools provide richer context to benchmarking analyses data and other employee engagement efforts. Today, only 6% of organizations have adopted any form of sentiment analysis and another 15% are evaluating their options.

## Machine Learning

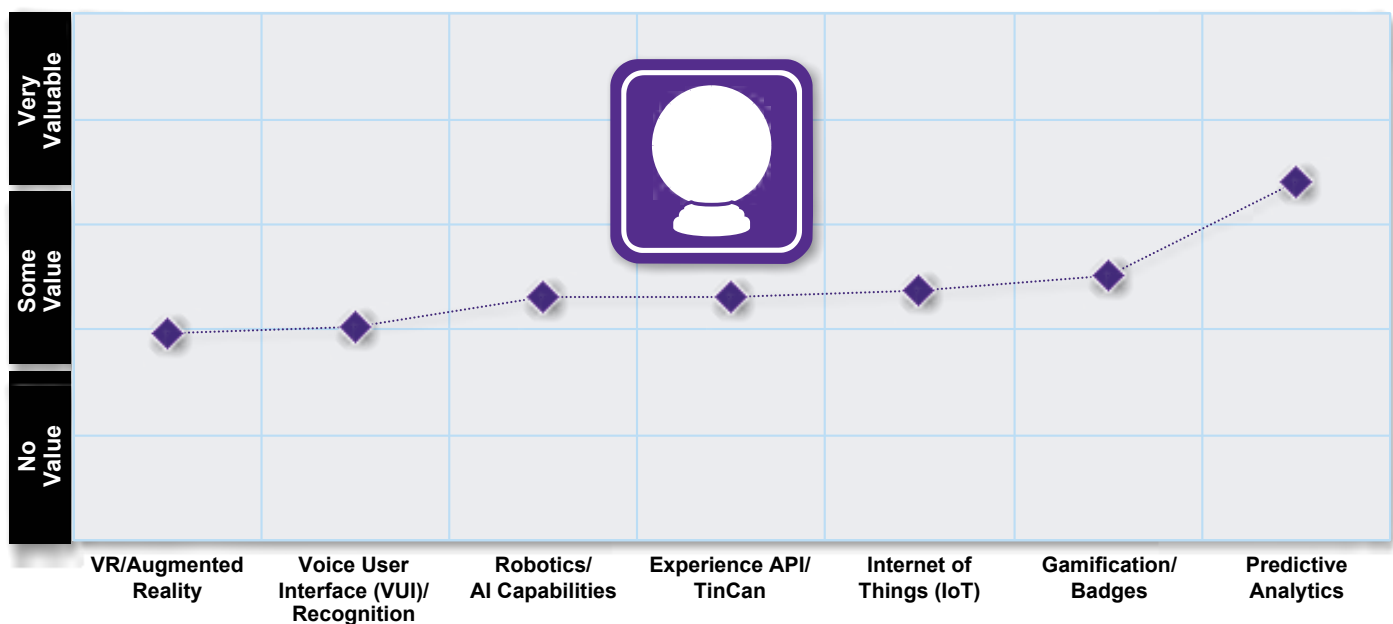
Machine learning is a specific type of system algorithm that provides computers with the ability to change their own parameters based on changing data and input to either take action or provide data. The goal is to develop technology that can grow and teach itself continually as long as it is receiving enough data. Currently in HR, we see organizations investing in Machine learning for Recruiting, Performance Management, and even health and wellness programs, along with operations-specific requirements. Only 3% of organizations have explicitly adopted Machine learning today, although it may be embedded in existing technology over time, and 22% are evaluating the technology for future use. Much of what is currently being called Artificial Intelligence or Intelligent Systems in HR technology environments today are early forms of Machine Learning.

## Value Placed on Emerging Tech

Keeping the focus on intelligent systems, it's important to understand the value organizations placed on these various emerging technologies in which vendors have begun to invest both time and money. Organizations currently perceive the most value in predictive analytics: over 76% of organizations report that it is Valuable or Extremely Valuable technology. In comparison, when organizations were asked about their perception of Artificial Intelligence, only 40% report that it is Valuable or Extremely Valuable future technology.

Other areas we investigate include Gamification, Learning's Experience API/TinCan<sup>1</sup>, Internet of Things (IoT), VR/Augmented Reality, and Voice Recognition technologies. Voice Recognition technology was rated with one of the lowest values to future HR requirements—and yet almost all major platform and best-of-breed applications have announced initiatives to rollout Voice User Interface (VUI) interfaces within the last twelve months.

**Figure 112: The Value Placed on Emerging Tech Features**



In this emerging generation of intelligent systems, the technology itself becomes less important than its connection to the broader work environment, including how information is captured, shared, and ultimately categorized for future learning algorithms. Today's Artificial Intelligence (AI) or Machine Learning is still in its infancy, like a young child who can understand patterns but has only limited judgment. The technology is only exposed to the information provided by its environment, which means it can develop biases, make poor judgment calls, and misinterpret human behavior to the same extent as a human being—but 100 times faster. Intelligent systems also analyze and read more data than a human being could comprehend when making decisions, and has the potential to improve our lives exponentially when applied to health, workforce, and economic challenges.

<sup>1</sup> <https://www.adlnet.gov/adl-research/performance-tracking-analysis/experience-api>

When making emerging technology purchasing decisions, we recommend understanding the vendors' perspective and critical regulations associated with each type of technology purchase.

## Five Questions When Buying Emerging Intelligent Systems

1. If the Machine/Software makes a recommendation, who is liable?
2. Can changes be made to all captured data? How is the data changed?
3. What happens when we turn off an intelligent system using organizational data across multiple environments?
4. Do we own what the machine learned from us? How do we take that data with us?
5. What are the startup costs, resources, and supervision? How much time and resources are required to train the intelligent system?

The future of technology is not something to hide from or fear, but rather walk into with eyes open, clearly evaluating the risks, rewards, limitations, and possibilities inherent in any technology adoption.

## Going Beyond the Data, Future Walking

What are some of our predictions for the future of HR?

- The Infrastructure and Platform wars will heat up and become major bargaining chips for technology buyers over the next 12 months.
- Rapid user-friendly integration tools will extend the life of On Premise applications, while expanding the value of new Cloud applications across multiple business areas.
- Risk assessments on Cyber security gaps will drive the need for more sophisticated IT environment management tools and well defined system strategies.
- Consumer-level expectations for Trust and Transparency will reshape Finance, Marketing, Operations, and Sales Technology environments just as they have in HR.
- Data Privacy movements will become the biggest challenge to creating individual UX.

As we continue to track technology, we apply a historical perspective to our future predictions; twenty years of Survey history gives Sierra-Cedar long-term insights into the trends with staying power in today's HR marketplace. Organizations no longer operate HR from a filing cabinet or recruit from the yellow pages; technology has radically changed the HR space. In the beginning of this research effort, our quest was to prove the value of HR technology; today the need for many HR systems is no longer a debate, and our research focuses on helping organizations to choose, use, maintain, connect, and harness the power of various systems to achieve outcomes most relevant to them. The future of HR technology is here and now, but we will always be asking, "What's next?"

*We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten. Don't let yourself be lulled into inaction.*

**Bill Gates**

All emerging technologies have a place in history, but not all of them will have enterprise-wide impact for HR over time. This section of our research is an ever-evolving list of technology topics based on feedback we receive from our research community. We welcome input on additional emerging technology trends or other research areas you'd like to see included in our Survey at [HRSystemsSurvey@Sierra-Cedar.com](mailto:HRSystemsSurvey@Sierra-Cedar.com).

# Survey Methodology and Approach

Sierra-Cedar conducts the longest running, most widely distributed, and most highly participative research effort in the HR industry. Since 1997, this invaluable resource has been a catalyst for the HR technology community, providing insight and guidance to practitioners around the world.

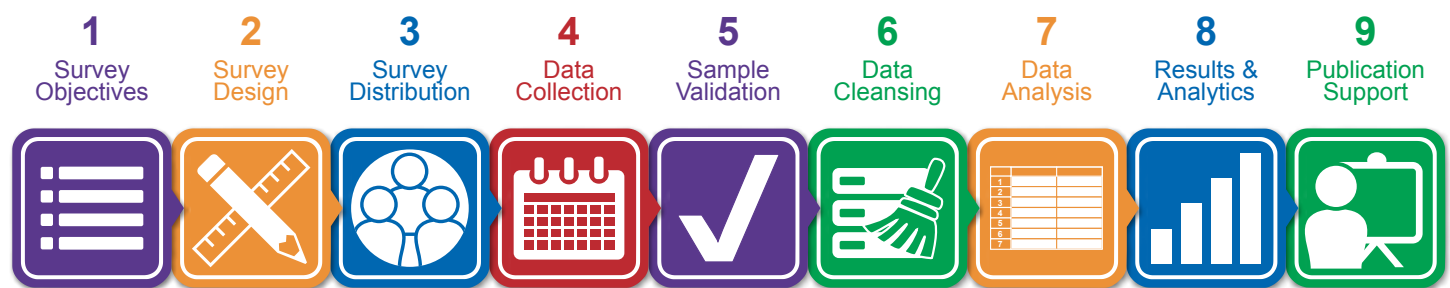
## The Depth and Breadth of the Research

Each year, over 1,000 organizations around the world complete the *Sierra-Cedar HR Systems Survey*, providing valuable research data from organizations of all sizes and industries. Survey participants come from multiple distribution sources, with only 5% from the Sierra-Cedar client base. This promotes a broad and varied audience group when gathering data on technology adoption and usage metrics, as well as safeguards against data bias towards any particular vendor or user community, so that the data is truly representative of the overall HR technology environment.

Participating organizations answer in-depth enterprise HR systems questions across multiple topic areas:

- Technology adoption for core HRMS, Payroll, Talent Management, Workforce Management, and Business Intelligence/Analytics solutions
- Deployment roadmaps
- Integration and implementation practices
- HR resources and system budgets
- Emerging and innovative HR technology
- Enterprise outcomes and business details related to HR systems adoption

Target Survey participants are HR and IT practitioners and leaders at the center of HR technology decisions, implementations, or Change Management efforts. Many organization executives and business leaders who focus on workforce technology issues also find the Survey of interest.



Sierra-Cedar follows rigorous standards in the form of our nine-step [Survey Methodology](#), independently validated by the Mercer Survey Quality group. Each year, this annual reach provides a wealth of knowledge that is shared openly with the HR systems community. All participants are kept strictly anonymous, and only aggregate data is used.

# Outcome-Driven HR Methodology

Sierra-Cedar strives to conduct research that provides insight to the HR Technology community's most challenging questions, such as adoption, cost, and value. To accomplish this goal, we ask a wide range of questions concerning an organization's demographics, HR technology environment, and the organization's business or mission. We also independently gather publicly available data on an organization's key financial metrics. It is important that we understand the current state of an organization's business and financial outcomes when correlating HR practices and technology. This allows us to provide some insight into which practices or technology correlate to outcomes that would be considered positive.

## Financial Outcomes

Sierra-Cedar independently gathers the following financial data on each of our participating organizations from publicly available data:

- Revenue numbers
- Profit margin numbers
- Operating Income Growth
- Return on Equity

## Non-Financial Outcomes

Our non-Financial outcomes fall into three categories and each Survey respondent is asked to identify if—over the last year—its HR, Talent, and Business Outcomes declined, stayed the same, or improved on a scale of 1–5.

**Figure 113: HR, Talent, and Business Outcomes**

	Strongly Declined		Declined		Neutral		Improved		Strongly Improved		Not Applicable	
	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
HR Outcomes												
HR alignment with business strategy												<div></div>
HR cost efficiency												<div></div>
Employee engagement												<div></div>
Employee and manager productivity												<div></div>
Talent Outcomes												
Ability to develop a highly qualified workforce												<div></div>
Availability of workforce data for decision making												<div></div>
Talent mobility												<div></div>
Ability to attract top talent												<div></div>
Retention of top talent												<div></div>
Business Outcomes												
Market share												<div></div>
Organizational profitability												<div></div>
Customer (constituent) satisfaction												<div></div>
Competitive advantage												<div></div>
Innovation												<div></div>



The analysis of this data allows us to perceive variations in how organizations approach both their business and technology decisions and patterns in how various organizations achieve positive outcomes in multiple different ways. This year we've looked at three different types of organizations:

- Top Performing organizations
- Talent Driven organizations
- Data Driven organizations
- Socially Responsible organizations<sup>1</sup>

Our ability to conduct an annual research effort that spans multiple decades allows us to share a current and historical perspective in our research.


## Top Performing Organizations




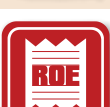
We focus on finding high value from HR technologies and associated best practices by looking at Top Performers—those organizations with high financial performance—which are reviewed annually and assessed on a year-over-year basis in the following areas:

- Revenue per employee
- Profit margins per employee
- Operating income growth for the previous year
- Return on equity

When assessing these organizations, there is no right or wrong approach to HR technology investment. The focus for Top Performers is often one of financial outcomes, which may be realized at the expense of long-term planning. This year's Top Performers were selected because they fell into top quartile of all four of specific financial metrics. The average level of our aggregate Top Performing organization's financial metrics compared to the remaining public organizations are detailed below.

**Figure 114: Top Performing Organizations**



		Top Performing Top Quartile	Non-Top Performing
Revenue Per Employee		4,943,450	2,330,395
Profit Per Employee		997,189	272,429
Operating Income Growth (1 year)		41%	1%
Return On Equity		48%	15%

<sup>1</sup> See page 91 in the Emerging Technology section, Figure 100: Social Responsibility in a Technology World.


## Talent Driven Organizations






Talent Driven organizations are entities that support an environment of Talent Driven decision making through their HR practices. When identifying these organizations, we use a unique index of qualifiers that will provide us with a year-over-year review of these cohorts:

- **Career Planning Process Maturity.** High levels of Process Maturity in Career Planning, a function of TM in a way that is effective (aligned, best practice, strategically focused) or transformational (unique, stands above others, and contributes to competitive advantage financially and enables the organization to be an employer of choice).
- **Succession Planning.** Organizations conduct the process of Succession Management in a systematic manner.
- **HR Analytics Outcomes.** Organizations leverage HR analytics to accomplish key talent outcomes. These organizations must identify at least one of three key talent outcomes which they are leveraging their HR analytics efforts to achieve:
  - Employee Engagement
  - Employee Retention Risks
  - Identifying Top Talent

The average level of our aggregate Talent Driven organizations key Talent practice compared to the remaining non-Talent Driven organizations are detailed below.

**Figure 115: Talent Driven Organizations**



		Talent Driven	Non-Talent Driven
Better Career Planning Process Maturity		3.13 Effective	1.32 Manual
Succession Planning		100%	32%
HR Analytics to ID Top Talent		61%	17%
HR Analytics to ID EE Retention Risks		64%	25%
HR Analytics to ID EE Engagement		63%	21%


## Data Driven Organizations





Data Driven organizations are entities whose HR practices support an environment of Data Driven decision making. When identifying these organizations, we use a unique index of qualifiers that will provide us with a year-over-year review of these cohorts.

- **BI Process Maturity.** Organizations having high levels of Process Maturity use Workforce Analytics, a function of Business Intelligence, that are effective (aligned, best practice, strategically focused) or transformational (unique, stands above others, and contributes to competitive advantage financially and enables the organization to be an employer of choice).
- **Direct Access by Line Managers.** HR analytics and Business Intelligence are used directly by managers to support their workforce decision making.
- **More Data Sources.** Additional workforce data, including core HR, TM WFM, financials, sales, and various operational systems, are integrated into an HR analytics process.
- **More Categories of HR Metrics.** These help organizations make informed business decisions and optimize their workforce. We included six categories in our Survey: Recruiting, Absence, Learning, Compensation, Performance, and Productivity.

The average level of our aggregate Data Driven organizations key Data Driven practices compared to the remaining Non-Data Driven organizations are detailed below.

**Figure 116: Data Driven Organizations**



		Data-Driven	Non-Data-Driven
Better BI Process Maturity		3.2 Effective	1.5 Efficient
More Manager BI Access to Analytics		78%	42%
More BI Data Sources		4.5	1.9
More Categories of Metrics Tracked		5.94	3.71

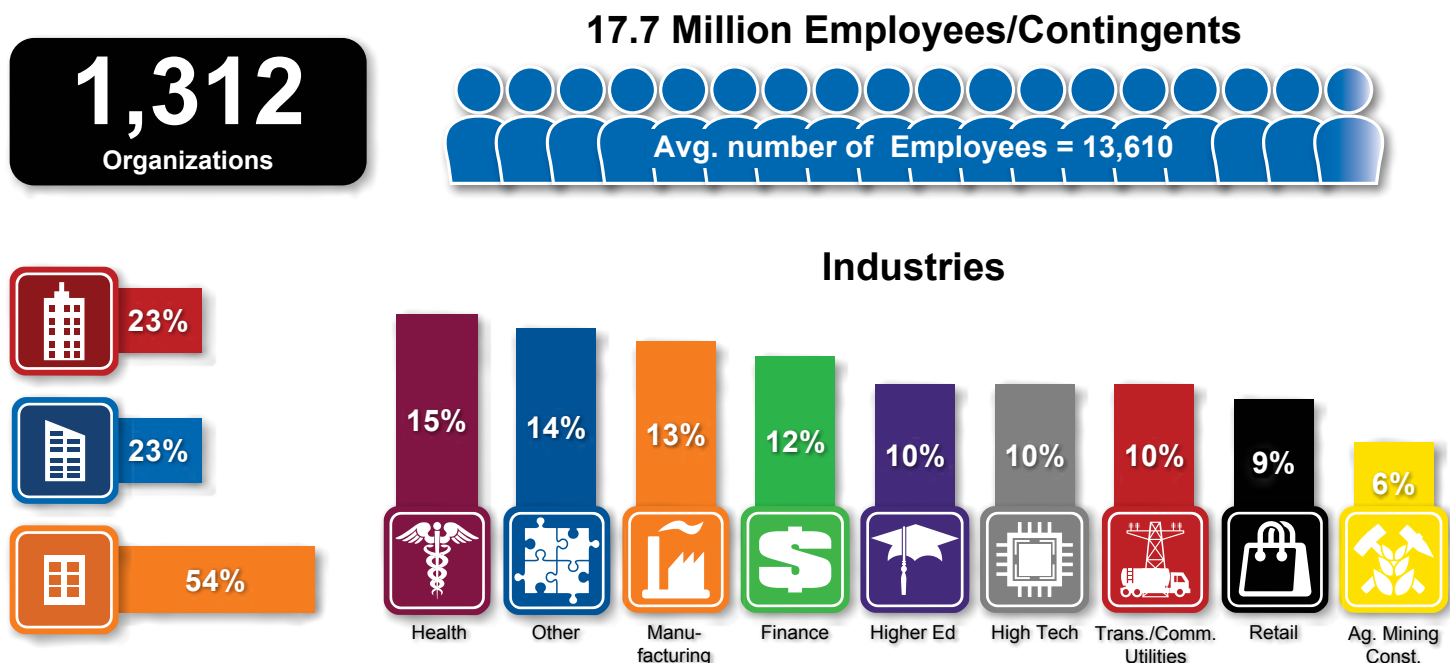
# 2017–2018 Survey Demographics

The *Sierra-Cedar 2017–2018 HR Systems Survey, 20<sup>th</sup> Annual Edition* was conducted from May 4<sup>th</sup> through July 7<sup>th</sup>, 2017. **For this edition, 2,351 individuals participated in our Survey.** Responses are subject to an extensive cleansing process that removes duplicates, incomplete submissions, and extremely Small organizations, resulting in the final totals below.

The *Sierra-Cedar 2017–2018 HR Systems Survey White Paper* is based on unique organizations representing a total workforce of 17.7 million employees and contingent workers. Survey data is divided into three organization sizes:

- 23% Large, 10,000+ employees
- 23% Medium, 2,500 to 10,000 employees
- 54% Small, less than 2,500 employees

**Figure 117: Demographics Information: All Respondents**



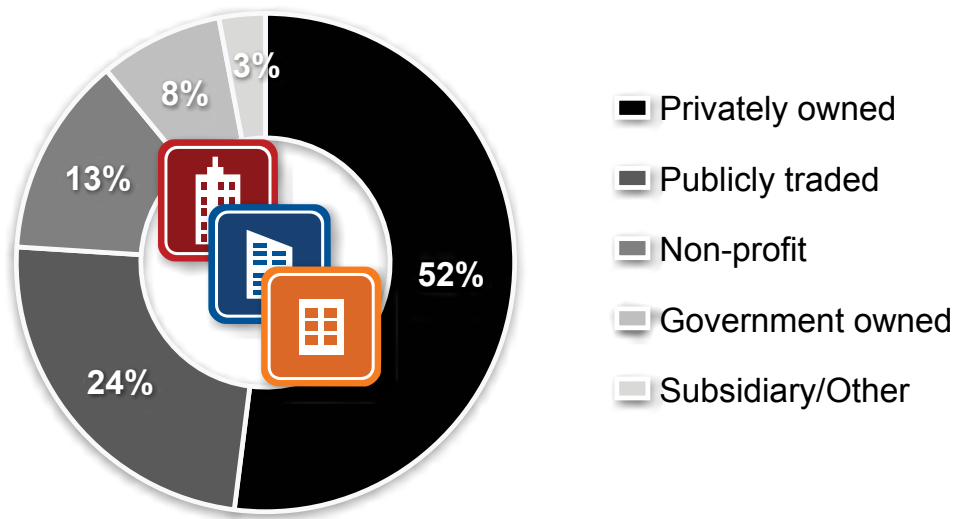
The 2017–2018 data set includes Small organizations down to 30 employees because organizations at this size are leveraging enterprise-level HR technologies at early stages in their growth trajectory.

A wide range of organizations participate in the Survey annually; the data is categorized into nine primary industries.<sup>1</sup>

<sup>1</sup> Survey data is closely aligned in both size and industry percentages with the Bureau of Labor Statistics for the U.S. Outside the U.S., data is considered indicative only due to Small sample sizes. We will publish subsequent reports identifying the size of these groups.

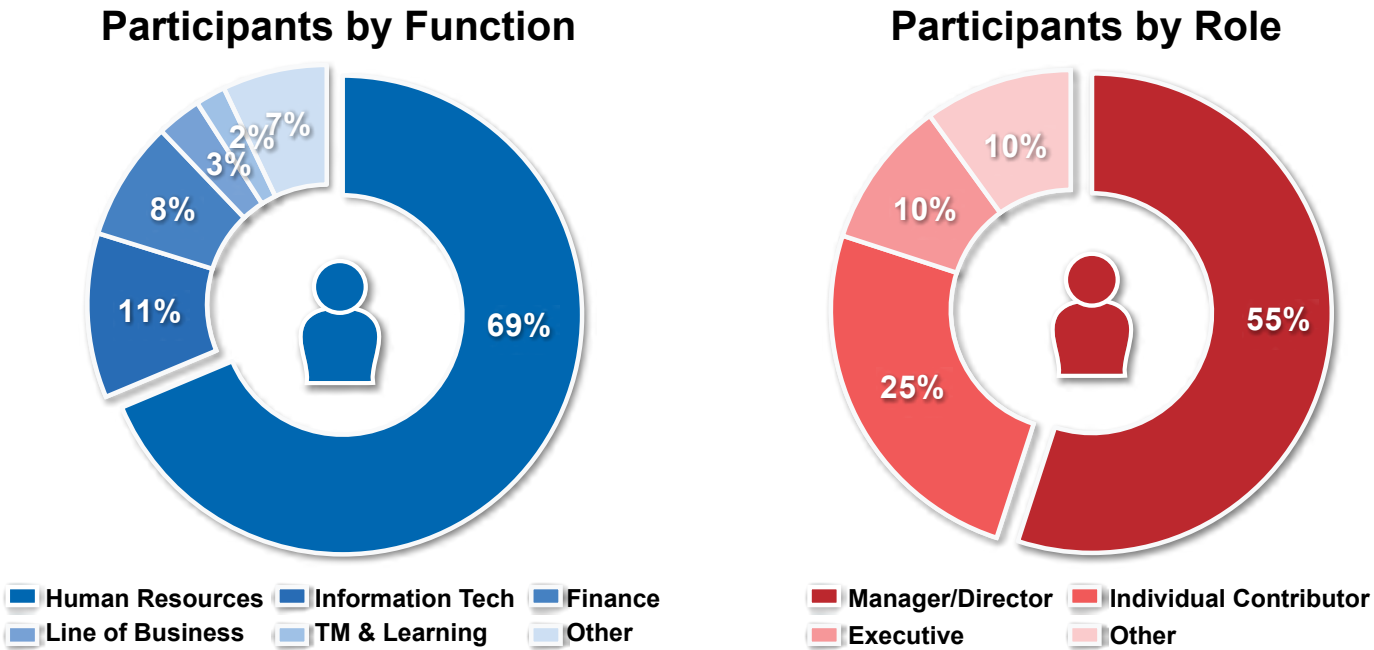
The 1,312 organizations represent multiple organization types.

Figure 118: Survey Participants Organization Types



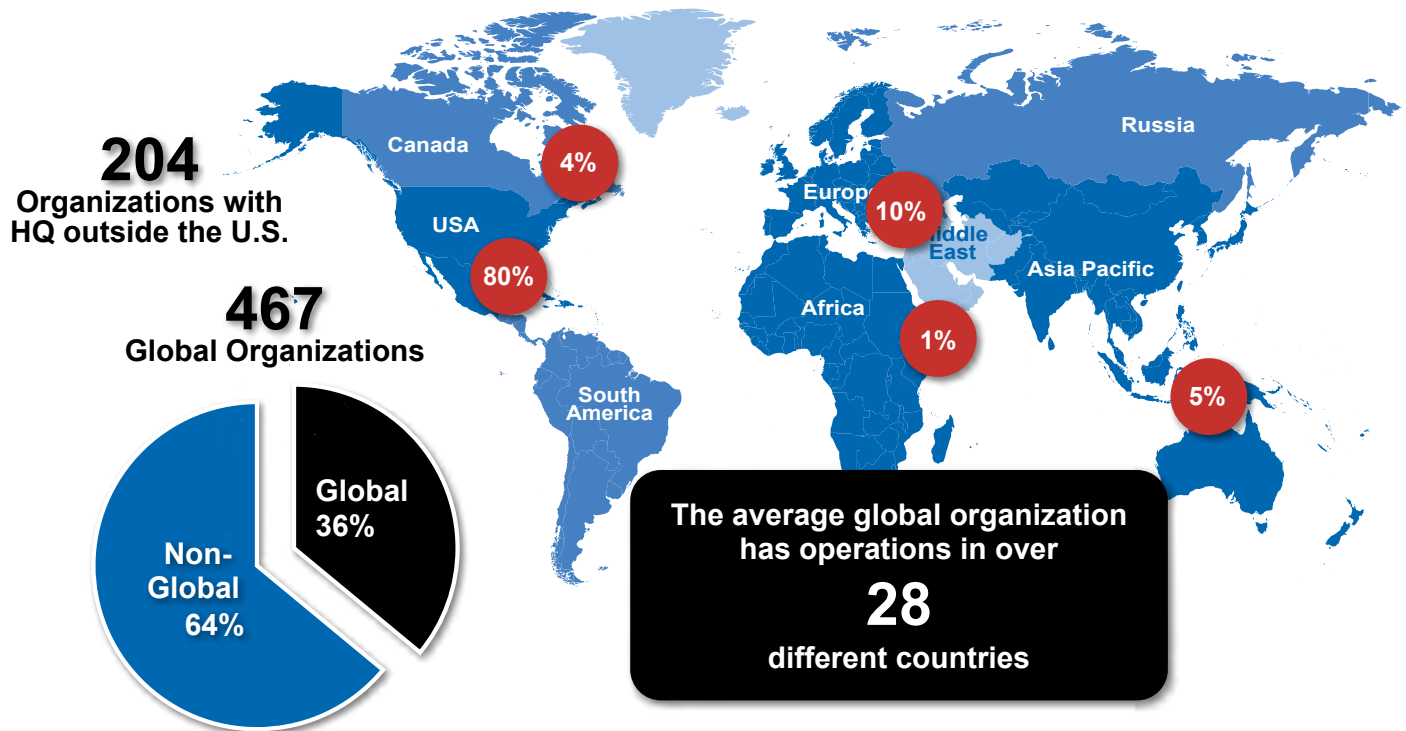
The Survey respondents are a mixture of HR and IT practitioners and leaders at the center of HR technology decisions, implementations, and Change Management efforts. These respondents are intimately involved as HR technology decision makers. A breakout of participants by function and role is seen below.

Figure 119: Survey Participants by Function and Role



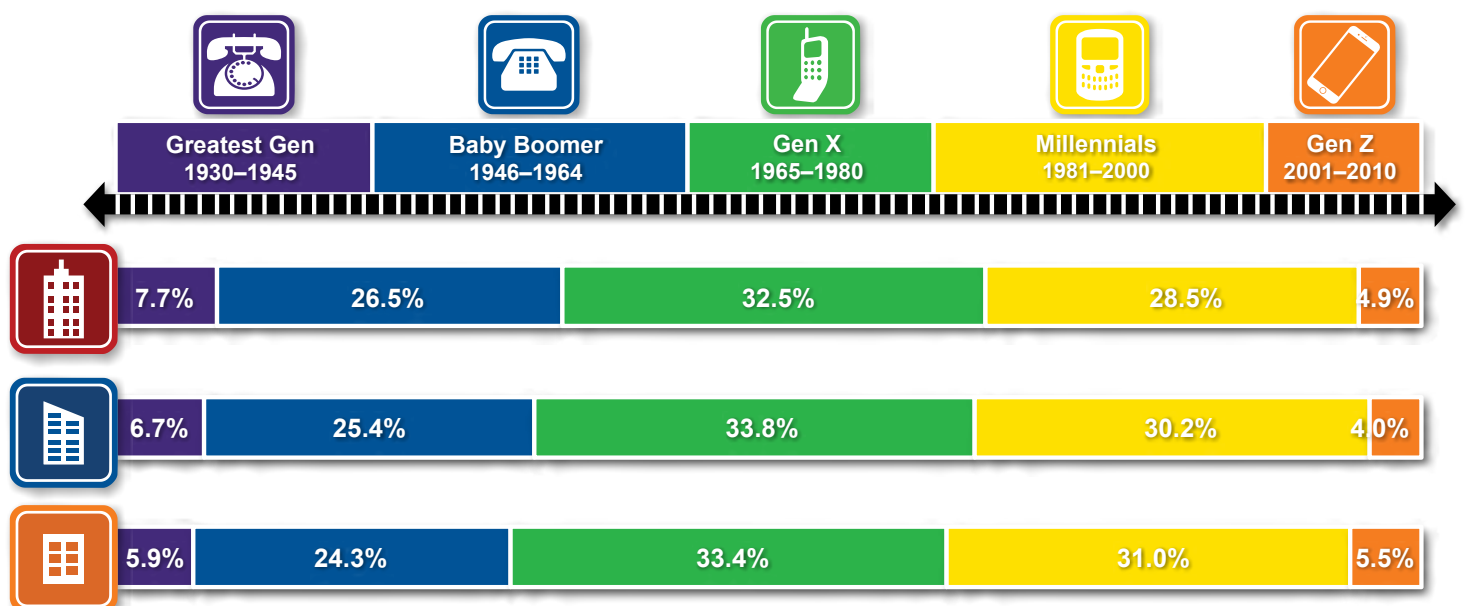
The *Sierra-Cedar HR Systems Survey*'s worldwide audience includes 467 global organizations operating in multiple countries outside their headquartered country: the average global organization has operations in over 28 countries, with an average workforce size of 21,925; 204 organizations are headquartered outside of the U.S., which is 17% of the Survey population.

**Figure 120: Demographics – International and Global Organizations**



In order to gain additional insight into technology adoption within organizations, we asked Survey respondents to describe their generational makeup by estimating the workforce percentage in each age group. We show those breakouts by size below, and conducted further analysis on generations within the paper. In particular, we categorized organizations into those with an older workforce, younger workforce, or those equally spread across all generations.

**Figure 121: Generations**









## About Sierra-Cedar

Sierra-Cedar helps clients navigate their application and technology roadmap, whether to modernize their existing portfolio or move to emerging technologies by integrating industry knowledge, deep technology capabilities, breadth of service offerings, and global delivery model into best-value solutions. Our services are categorized into industry-based consulting services and industry-agnostic shared services.



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