Information contained in this Survey analysis is compiled and analyzed by Sierra-Cedar as part of the organization’s commitment to provide thought leadership on Human Resources technologies, trends, and the impact their adoption has on Business Outcomes. This report cannot be publicly posted in its entirety without explicit permission; however, Sierra-Cedar encourages customers, media, partners, analysts, and other readers to quote from and share liberally the information found herein with appropriate credit provided to Sierra-Cedar. Please credit all quotes and references from this publication as “Sierra-Cedar 2019–2020 HR Systems Survey White Paper, 22nd Annual Edition” on first reference. All subsequent references should read “Sierra-Cedar 2019–2020 Survey White Paper.” Please contact us for review and approval if you would like to use a graphic image contained in this publication.

To participate in next year’s research and receive an early copy of the Annual HR Systems Survey White Paper, please submit your email address in the form at www.Sierra-Cedar.com/hr-systems-survey.

To request a media interview, please email us at HRSystemsSurvey@Sierra-Cedar.com.

To learn more about additional research efforts conducted by Sierra-Cedar, please visit the Research section of our website at www.Sierra-Cedar.com/research.
The Sierra-Cedar 2019–2020 HR Systems Survey White Paper

22nd Annual Edition

Conducted by

Stacey Harris, Vice President of Research & Analytics
Amy L. Gurchensky, Senior Research Analyst
# Breakout Legend

## Organization Sizes
- **Small** (<2,500)
- **Medium** (2,500–10,000)
- **Large** (10,000+)
- **Aggregate**

## Generational Compositions
- **Greatest Generation** (1930–1945)
- **Baby Boomers** (1946–1964)
- **Gen X** (1965–1980)
- **Millennials** (1981–2000)
- **Gen Z** (2001–2010)

## Outcome Driven Organizations
- **Data Driven**
- **Emerging Tech**
- **Talent Driven**
- **Socially Responsible**

## Deployment Platforms
- **All Cloud**
- **Hybrid**
- **On Premise**
- **Other**

## Replacement Plans
- **No Plans**
- **Evaluating**
- **Replacing in 12 Months**
- **Replacing in 24 Months**

## Regions
- **North America**
- **Europe, Middle East, Africa**
- **Asia Pacific**
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Executive Summary

The Sierra-Cedar 2019–2020 HR Systems Survey White Paper, 22nd 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, Voice of the Customer vendor feedback, 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
- Workforce Intelligence applications
- Emerging Technology applications

Additionally, we cover insights on supporting HR practices:

- HR Systems Strategy
- Adoption Blueprint
- Integration practices
- Service Delivery models
- Security & Data Privacy
- Implementation practices
- Change Management practices
- Expenditure & Resourcing strategies

The Survey was conducted from April 9th through June 10th, 2019. The Sierra-Cedar 2019–2020 HR Systems Survey White Paper is based on 1,892 unique organizations representing a total workforce of 22.2 million employees and contingent workers.
2019–2020 HR Systems Survey Key Themes

**Strategy**

- **Achieve Repeatable Outcomes.** Elevating the perception of HR and investing in specific approaches to HR technology strategy, integration, and change management correlate to 15% year-over-year increases in overall outcomes.

- **Measure Outcomes that Matter.** Approximately 80% of organizations regularly report on Employee Turnover metrics, while less than 25% report on Performance, Learning, or Productivity.

- **Plan to Utilize HR Technology.** Organizations that conduct Enterprise Workforce Planning are 50% more likely to leverage their HR technology environments to inform Business Strategy and influence Workforce Decisions.

**Culture**

- **Realize the Value of HR.** Efforts to transform the perception of HR over the last five years have resulted in a 20% increase in respondents who view HR functions as contributing strategic value (46%) to organizations, with Executives 25% more likely to view HR as strategic than HR Directors or Managers.

- **Mandate Communication.** New HR technology provides more employee communication tools, yet 90% of organizations primarily use email. Emerging Technology organizations use 60% more tools, with higher adoption in Portals, Surveys, Call Centers, Live Chat, Social Networks, and Chatbots.

- **Update Your Talent.** TM applications continue to experience the highest percentage of functionality gaps and the lowest vendor User Experience scores of all applications, with 31% of organizations evaluating or planning to replace these applications in the next two years.

**Data Governance**

- **Know Your Data.** Organizations are capturing employee data from an average of 3.2 non-HR sources, including Wearables, Social Media, Mobile Devices, and Artificial Intelligence (AI) tools. Yet, only 12% of organizations have a strategy to manage the Employee Data Footprint.

- **Assign Ownership.** In all Cloud HR environments, the Human Resource Information Technologist (HRIT) or Human Resources Information Services (HRIS) role is three times more likely to be responsible for governing Data Privacy and Content Security than IT or Functional roles.

- **Build for the Future.** Organizations continue to lay the foundation for Intelligent Platforms with building blocks consisting of Benchmarking tools, Predictive Analytics, Machine Learning, Robotic Process Automation (RPA), and Blockchain technology. In the last year, adoption of RPA tools increased 50%, and Predictive Analytics is expected to see the largest increase over the next year.
Sierra-Cedar Human Capital Management

Sierra-Cedar HR Systems Survey & HCM Blueprint

For the Sierra-Cedar 2019–2020 HR Systems Survey, our questions fell into six primary categories and 54 individual application areas detailed in the Sierra-Cedar Human Capital Management (HCM) Blueprint. The Survey also gathered details concerning HR System Strategies, processes, vendors, implementation, Change Management, security practices, expenditures, and supporting resources.

Figure 1: Sierra-Cedar HCM Blueprint
As we’ve followed respondent organizations through their annual plans over the last two decades, we’ve seen pathways emerge for adopting and 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. Each organization should take the path that best suits its individual situation based on organizational Strategy, Culture, and unique approach to Data Governance when navigating an HR Systems Blueprint. In 2018, we updated the Sierra-Cedar HCM Blueprint to more accurately reflect recent shifts in the technology ecosystems we’ve followed since the Survey’s inception 22 years ago.

Square One: Strategy, Culture, Data Governance

Three foundational elements are at the center of the HCM Blueprint:

- Strategy
- Culture
- Data Governance

It becomes necessary to have an Enterprise HR Systems Strategy for the adoption, integration, and configuration of HR Systems as they shift from administrative support tools to strategic instruments finely tuned to engage and optimize the workforce. Organizations should consider the long-term impact that systems will have on their workforce as HR applications are now at the center of an organization’s ability to manage workforce productivity and enterprise Culture, while also governing the use of highly valuable but sensitive workforce Data. The overarching management of these foundational elements throughout the organization requires an Enterprise Strategy.

Organizations often focus solely on specific functionality desired from HR technology and supporting processes but may overlook how that functionality will actually work within their unique Culture. Technology is worthless unless it’s used—it must fit within the context of how an organization operates to optimize the organization’s investment. HR application adoption requires significant energies—including executive sponsors and Change Management efforts—for a truly successful implementation. Taking an honest look at your organization’s Culture will help determine the best Strategy to use when purchasing technology.

The footprint of workforce data goes beyond business applications—it extends into social networks, mingles with environmental tools, and overlaps with personal profiles. The responsibility of an organization to safeguard the professional and personal information of its workforce cannot be ignored; how you capture, access, use, protect, and eventually purge data must be a major factor in the design of your HR technology ecosystem. Data Governance must also include an understanding of how to achieve the most value from your workforce data while adhering to ethical and legal standards.
Technology at Work: Application Environments

Surrounding the foundational elements are six primary categories of Enterprise HR System applications:

- Administrative
- Service Delivery
- Workforce Management
- Workforce Intelligence
- Emerging Technology
- Talent Management

Creating and maintaining your organization’s HR applications ecosystem is a complex process, involving integration efforts, User Experience expectations, and workforce behavioral changes. These discussions are crucial when building your HR technology ecosystem.

Getting the Basics Right: 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 use a Payroll system alone—leveraging its basic data-capturing capabilities in place of an HRMS until their needs expand. Over 92% of surveyed organizations currently have an HRMS in use today. For most organizations, the HRMS sits at the heart of their HR and workforce data management needs, sharing data with multiple HR applications.

As organizations grow and become more complex, an HRMS becomes necessary to manage the regulatory and data management needs of their enterprise workforce; increasingly, smaller organizations are finding it necessary to implement an HRMS. Organizations with a history of regional expansion or mergers and acquisitions often have multiple Payroll and HRMS applications in use to meet the needs of various workforces and regions.

Benefits applications are the most diverse HR application area, covering pension and retirement plans, stock options, healthcare, wellness benefits, and voluntary/flexible benefits. Benefits solutions are also highly adopted, but it is the Administrative application that is most likely to be outsourced by organizations.
User Experience: HR Service Delivery Applications

When organizations have Payroll, an HRMS, and Benefits in place, they naturally achieve some level of Administrative efficiency for their HR function; however, as organizations increase in size and complexity, they also need to consider the employee-facing elements of their HR ecosystem. Self-Service applications including Employee and Manager Self-Service, HR Help Desks, Portal technologies, and other employee communication platforms are critical data-collection and information-sharing applications. Organizations that focus on the adoption of Service Delivery applications often see higher levels of employee engagement and system adoptions, increasing the number of people each HR administrator can support. These applications are also significantly influenced by trends promoting increased Mobile enablement and consumerization of HR practices.

Business-Driven Applications: Workforce Management & Talent Management

Workforce Management (WFM) and Talent Management (TM) application adoption tightly connects with an organization’s business needs, although the initial adoption of these applications may be in response to a specific operational request. WFM tools provide operational oversight to areas such as Time & Attendance, Scheduling, Absence Management, and Leave Management. TM applications provide operational oversight for areas such as Recruiting, Onboarding, Learning, Compensating, and transferring critical talent within a workforce. Many of these WFM and TM requirements can be handled manually by smaller organizations, but they quickly become system priorities for those managing large workforces, multiple projects, or fast growth. Although these two areas may seem separate in their focus, they work hand in hand for organizations focused on balancing business needs with employee aspirations—and are also tightly connected to employee Culture and engagement.

Increasing Value: Workforce Intelligence

Adoption of the Administrative, Service Delivery, WFM, and TM applications provides an organization with clear benefits in the areas of HR efficiency and process management. However, the real value of these systems is realized in data analysis to provide Workforce Intelligence—also referred to as HR Business Intelligence (HR BI). Applications and tools that support Workforce Intelligence efforts help organizations to capture, store, govern, analyze, report, and share past, present, and future workforce information. The applications may also provide statistical analysis and proprietary algorithms that can deliver insights, recommendations, predictions, and forecasts to be used for decision-making purposes. These applications can be focused solely on workforce intelligence efforts or share space with other enterprise applications, providing the opportunity to cross-analyze data from all areas of the organization as well as external sources.

The category of Workforce Intelligence applications is still in its infancy; it currently exists as a combination of enterprise platform technologies, embedded analytics solutions inside HR applications, and standalone data cleansing and analytics tools such as Microsoft Excel, report builders, or statistical tools. We also see a growing number of dedicated HR-only solutions that mix services and analytics technology together to analyze and visualize large amounts of enterprise data. Some organizations analyze data directly in the various HR systems, while others extract data into other platforms or databases designed specifically for data analysis.
No System Is an Island: Connecting Data & Workflows

Surrounding the six Enterprise HR System Applications in the gray outer layer of the Blueprint are enterprise standards that play a major role in the success or failure of application investments. These standards interface with multiple Enterprise System Environments. HR solutions cannot exist separately from an organization's Content Strategy, Data Privacy, Workflows, Work Models, Integration Strategy, Platform Strategy, Mobile Strategy, Network Security, Cybersecurity, and Social Strategy. Connecting HR systems to enterprise standards allows organizations to seamlessly and safely embed HR solutions into everyday work environments and share data across multiple system environments.

Figure 4: Blueprint Connections

HR technologies coexist in a larger ecosystem represented by the black outer rim of Finance Management, Workforce Productivity (Microsoft, Google, Project Management, etc.), Customer Relationship Management, and Vendor Management. These environments, where work occurs and an abundance of additional workforce data is captured, require connections with HR applications to enable desired organizational outcomes.

The Blueprint can be viewed as a series of containers, each connected through interrelated elements. This environment works best when considering the inherent connection points of an entire HR technology ecosystem—those connection points are as important as individual applications. The Sierra-Cedar HCM Blueprint is a tool that your organization can utilize to spark conversations for your own HR Systems Strategy.
Within the Human Resources (HR) function, Chief Human Resources Officers (CHROs) often struggle to balance the multiple positions they are asked to hold in an organization—from employee advocate and business leader to keeper of the organizational culture. CHROs have the difficult task of prioritizing HR resource investments to achieve the greatest outcomes; and historically those outcomes were focused on processes and regulations. Without technology and data, HR’s limited resources were needed to reduce regulatory risk and, as much as possible, standardize employee expectations through policies.

As technology helps to create HR efficiencies and gathers data that allows us to recognize employees as individuals, CHROs are now able to shift their leadership and ultimately the perception of HR from a cost center to a value creator. Value comes in the form of definable outcomes necessary to achieve organizational goals. An Outcome Focused approach to HR simply shifts the focus from reaction, policy, and processes to a discernable vision of the future. Outcomes are definable, measurable expectations for what the customer, employee, and stakeholders achieve from the work of your organization.

**Figure 5: Outcome Focused HR, An HR Leadership Model**

Our approach to HR has always been a combined response to business needs and societal changes, but this preemptive approach to HR means that financial metrics can be tightly connected to other critical outcomes such as market share, brand, innovation, employee engagement, and workforce experiences. Business and organizational outcomes can be achieved in multiple ways. An HR function that understands this can put forth an approach to HR for employees and management that focuses on outcomes. To help the organization make the hard decisions about acknowledging or changing its culture, an HR function needs to hold up a mirror for leaders to see how real organizational priorities are set and decisions are made. To achieve value, an HR function needs to understand the outcomes expected from its stakeholders and break the standard approach to HR.
Getting the Biggest Outcomes from HR Investments

The Survey asks organizations to indicate whether a series of Talent, HR, 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 across the outcomes matrix and financial data as a way to compare different organization behaviors and types.

Each year, we look at over 250 different data points from our responding organizations and statistically determine which factors correlate to higher or lower Talent, HR, and Business outcomes. In any given year, these factors change slightly depending on the economy, industry trends, or respondent demographics. What we look for in these types of analysis efforts are the things that show up year after year, providing us with the highest level of confidence in the findings. In the last five years of analysis, we have found four consistent factors that correlate to higher Business Outcomes and, more importantly, that the lack of these factors correlates to lower-than-average Business Outcomes. In this year alone, we found improved Business Outcomes among the four factors ranging from 10 to 28%, respectively:

- Regularly updated HR Systems Strategy (10%)
- Regularly updated Integration Strategy (12%)
- Perception of HR, viewed as adding Strategic Value to Multiple Levels of Management (23%)
- Culture of Change Management (28%)

Significantly, if organizations had these four factors in place for the last five years, they are likely to have seen a 15% increase in their combined Talent, HR, and Business outcomes each year.

Figure 6: Year-over-Year Comparison of Factors Correlated to Outcomes

![Graph showing the comparison of factors correlated to outcomes over the years 2014 to 2019. The graph includes two categories: Improved and Declined. The green dots represent improvements, and the red dots represent declines. The text indicates that the lack of strategy, integration, culture of change, and high HR value correlates to improved outcomes, while no strategy, no integration, low change, and compliance HR correlate to declined outcomes. The chart also shows a 15% higher outcomes per year.]
As our research has expanded, we've widened our scope beyond financial metrics to include specific criteria pertaining to organizational behaviors that provide insight into cultural priorities and decision-making processes. As a result, we have defined four types of Outcome Focused organizations.

Each of these Outcome Focused organization types creates its own level of innovation—from processes, to people, to technology adoption strategies—supporting the view that there are multiple ways to reach Business Outcomes while staying true to an organization’s unique Culture and capabilities. The figure below illustrates demographic data for the four Outcome Focused organization types.

**Figure 7: Talent Driven, Emerging Tech, Data Driven, and Socially Responsible Organizations**
HR Focus, Outcomes & Impact

Once we identify our Outcome Focused organizations, we also identify all other participants who answered the determining questions for each category but did not meet the qualifications—to be Talent Driven, Data Driven, Emerging Tech, and/or a Socially Responsible organization—and we share their answers as a comparison group. Once organizations are categorized appropriately, we can compare multiple variables:

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

Each year, we assess various Financial metrics that include Revenue per Employee, Profit per Employee, Operating Income Growth, and Return on Equity for all publicly traded organizations, but profits and shareholder value should not be the only goal of an organization. In August 2019, the Business Roundtable issued a statement on the purpose of a corporation, arguing that, “companies should no longer advance only the interests of shareholders. Instead, they must also invest in their employees, protect the environment and deal fairly and ethically with their suppliers.” Financial stability is a critical metric for any organization, but along those same lines we wanted to assess other metrics such as perception factors, Talent Outcomes, HR Outcomes, and ultimately long-term Business Outcomes that be appropriate for both Private and Public organizations.

The first analysis we undertake involves reviewing business leaders’ perception of the strategic value of their HR function—from whether it’s viewed as a Compliance-based function or viewed as a Strategic Business Partner that adds value to Business Outcomes. The comparison analysis for this question across the four Outcome Focused organizations—Talent Driven, Emerging Tech, Data Driven, and Socially Responsible—shows a considerably higher percentage when HR is viewed as a strategic business partner. As we outlined earlier, the respect and perceived value of HR plays a major role in the ability to help an organization achieve various organizational goals.

Figure 8: The Strategic Perception of HR via Outcome Focused Organizations

![Bar chart showing the percentage of HR perceived as a strategic business partner across different categories: Talent Driven (69%, Δ68%), Emerging Tech (67%, Δ56%), Data Driven (67%, Δ63%), Socially Responsible (70%, Δ75%), and Everyone Else (41%, 41%, 43%, 40%).]
After analyzing perceptions, the second analysis we undertake is to review how organizations are using their HR technology environments to inform their Business Strategies. Once again, all four Outcome Focused organizations are much more likely to use their HR Systems Environments to help Inform Business Strategy versus just using it to replace paper processes or manage compliance issues. While HR systems vendors often promise the ability to leverage data and insights from their HR systems to inform business strategy, actually achieving this promise requires focus and prioritization of critical internal behaviors.

Figure 9: HR Systems Are Used to Inform Business Strategy

When looking at various outcome metrics, we find that Outcome Focused organizations have significantly higher outcomes in comparison to our aggregate data set. Socially Responsible organizations achieved the best outcomes overall at 12%; both Data Driven organizations and Talent Driven organizations were at 11%; and our newcomer to the group, Emerging Technology, achieved 10% higher outcomes than our aggregate data set. This analysis provides insights on the type of organizations you may look to benchmark against over time.

Figure 10: Achieving Outcomes Requires Focus
HR Systems Strategy & Culture

Creating an HR technology ecosystem that supports an Outcome Focused organization while also engaging and optimizing the workforce requires planning, interconnectivity, constant assessment, and ongoing Change Management. The complex and intelligent platforms that make up this ecosystem require an Enterprise HR Systems Strategy to guide and inform the flow of data and corresponding business decisions.

We continue to see over 70% of organizations with some form of an Enterprise-level HR Systems Strategy. However, not all strategies are the same and our research finds that the greatest improvements in Talent, HR, and Business outcomes—including financial benefits—align with the 41% of organizations who regularly review and update their HR System strategies. Our year-over-year analysis shows that organizations with a regularly updated HR Systems Strategy consistently achieve 10% higher Business Outcomes than their counterparts with no strategy or one that is rarely updated. We see a decrease this year in the percentage of organizations with a regularly updated HR Systems strategy, which may be the result of many organizations completing a major HR technology transformation effort, thus spending less time on Strategy initiatives. Nevertheless, this is a concerning trend across all organization sizes, as we saw slight declines from last year in Small, Medium, and Large organizations.

Figure 11: HR Systems Strategies by Size

The value of Enterprise HR Systems Strategies that are regularly reviewed can be seen in multiple areas including consistent messaging, clearly defined Business Outcomes, and an improved perception of the overall HR function.
Organizations with a Regularly Updated Strategy are more likely to be viewed by internal business leaders as having HR functions that contribute Strategic Value to their organization, while those with No Strategy are more likely to be viewed as having HR functions with simply a Compliance Focus.

**Figure 12: HR Perception by Strategy**

<table>
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<tr>
<th>Strategic Value</th>
<th>Compliance Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly Updated Strategy</td>
<td>54%</td>
</tr>
<tr>
<td>No Strategy</td>
<td>23%</td>
</tr>
</tbody>
</table>

This year, 30% of aggregate Survey respondents and 47% of our Outcome Focused organizations are investing both time and resources in a major HR initiative to create or improve an Enterprise HR Systems Strategy. Both Talent Driven and Data Driven organizations, along with 71% of Emerging Technology organizations, are more likely to have a Regularly Updated Enterprise HR Systems Strategy already in place (50% and 55%) than other Outcome Focused organization types. Strategies allow organizations to align software purchases with Business Outcomes during the buying process, while also providing a clear blueprint for system configuration, data integration, and Change Management efforts.
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 these strategies reviewed and adjusted?” Most organizations report that their Enterprise HR Systems Strategies are reviewed annually, with minor adjustments made each year.

We’ve gathered feedback from our audience on the elements included in an organizational Enterprise HR Systems Strategy and share these insights below. Although this list by no means covers every aspect of a Strategy, organizations can review these elements periodically to better handle internal requests and external pressures on their HR technology decision-making process.

Figure 13: HCM Systems Strategy Elements

<table>
<thead>
<tr>
<th>Business/Mission Drivers</th>
<th>Enterprise documentation of the prioritized business outcomes and required Talent and HR outcomes to achieve them. Alignment of Enterprise HCM system gaps that impact those outcomes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture, Scale &amp; Scope</td>
<td>Careful account of the organization’s cultural environment including its approach to enterprise decision making. A detailed understanding of the organization’s workforce makeup, locations, and technology access.</td>
</tr>
<tr>
<td>Current State Blueprint</td>
<td>A catalog of the organization’s current Enterprise HCM systems environment, including applications in use, vendor relationship details, and environmental factors such as privacy, integrations, infrastructure models, etc.</td>
</tr>
<tr>
<td>Benchmarking Analysis</td>
<td>Data or analyses of how the organization’s current state compares to peer organizations in culture, size, industry, or complexity.</td>
</tr>
<tr>
<td>Gap Analysis &amp; Necessary Changes</td>
<td>Gap analysis and recommend changes based on business, talent, and HR outcomes as well as peer benchmarking analysis.</td>
</tr>
<tr>
<td>Future State Blueprint</td>
<td>A clear vision of the Future State of the Enterprise HCM systems environment, including adoption expectations, user experience factors, and expected business outcomes.</td>
</tr>
<tr>
<td>Phased Roadmaps</td>
<td>Timelines, responsibilities, communication plans, and Key Performance Indicators (KPIs) associated with any approved application changes or updates.</td>
</tr>
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<td>Governance &amp; Change Management</td>
<td>Identified decision makers, ownership models, and guidelines for making ongoing decisions on Enterprise HCM system environments, data management, and privacy issues. Ongoing Change Management and Adoption efforts.</td>
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<td>Expenditures &amp; Budgets</td>
<td>Past expenditures and future budgets for Enterprise HCM system environments.</td>
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<tr>
<td>Resources &amp; Outsourcing</td>
<td>Careful account of both internal and external resources, as well as outsourcing agreements that support the Enterprise HCM systems environments.</td>
</tr>
</tbody>
</table>
Enterprise HR Systems Spending

Will spending for HR technologies at your organization increase, decrease, or stay the same for the next year? This question has been answered by HR System Survey respondents since 2012, and this year just 41% of organizations report plans to increase spending—a slight decrease from 2018.

Figure 14: 2019 HR Technology Spending Trends Outlook

Spending plans vary dramatically by organizational size and type, therefore important factors to consider when taking a look at year-over-year trends.

Figure 15: Three-Year HR Technology Spending Trends

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase</td>
<td>33%</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Stay the Same</td>
<td>62%</td>
<td>58%</td>
<td>61%</td>
</tr>
<tr>
<td>Decrease</td>
<td>5%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Increase</th>
<th>Stay the Same</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>39%</td>
<td>53%</td>
<td>8%</td>
</tr>
<tr>
<td>M</td>
<td>49%</td>
<td>48%</td>
<td>12%</td>
</tr>
<tr>
<td>L</td>
<td>49%</td>
<td>46%</td>
<td>6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Increase</th>
<th>Stay the Same</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>47%</td>
<td>49%</td>
<td>4%</td>
</tr>
<tr>
<td>M</td>
<td>47%</td>
<td>49%</td>
<td>4%</td>
</tr>
<tr>
<td>L</td>
<td>52%</td>
<td>46%</td>
<td>6%</td>
</tr>
</tbody>
</table>
Small organizations are the fastest-growing segment of new HR technology buyers, but they continue to be the most cautious. With 61% of Small organizations on target to simply maintain their existing HR technology spending, HR technology vendors will need to continue to provide economical options with high-value outcomes.

Medium organizations grew their spending plans by 20% last year, but this year, spending plans will hold steady. More Medium organizations, however, are planning to decrease spending this year when compared to last year.

Large organizations saw the greatest change in spending plans from last year, with 52% of organizations planning to increase spending, up from 48% last year.

This year we also looked at HR System Spending plans by organization type and found that subsidiaries and publicly traded organizations were much more likely to increase spending than private or franchise-based organizations.

**Figure 16: Plans to Increase HR Systems Spending in 2019–2020 by Organization Type**

<table>
<thead>
<tr>
<th>Organization Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidiary</td>
<td>57%</td>
</tr>
<tr>
<td>Public</td>
<td>50%</td>
</tr>
<tr>
<td>Government</td>
<td>40%</td>
</tr>
<tr>
<td>Non-Profit</td>
<td>40%</td>
</tr>
<tr>
<td>Private</td>
<td>37%</td>
</tr>
<tr>
<td>Franchise</td>
<td>35%</td>
</tr>
</tbody>
</table>

This year’s HR technology categories where respondents plan to increase or decrease their spending are similar to last year’s, with over 50% of organizations planning to increase spending in the area of Talent Management. Plans to increase spending for Core HRMS environments show the investment organizations are still planning to make in this HR technology application area. Benefits was a new addition to the list of spending categories this year, with 34% of organizations planning to increase spending in this area.

When looking at spending plans for HR applications by organizational size, Large, Medium, and Small ranked TM as their number one spending priority for next year. Plans to increase spending in Benefits were much higher, at 39% for Small organizations compared to just 23% in Large organizations. Large organizations were twice as likely as Small organizations to increase spending in Business Intelligence/HR Analytics and Emerging technologies.
**HR Technology Resourcing Strategies**

Spending isn’t the only indicator of an organization’s goals, therefore we also ask organizations for details on their current HR and IT roles and future plans for adding, increasing, or decreasing these roles over the next 12 months. HR roles range from Administrative to Management and include those supporting or working with Payroll, WFM, Learning and Development, Recruiting, and TM applications. Resourcing needs vary by organization size, as evidenced by the higher utilization of all HR roles beyond HR Management and Payroll positions by Large organizations.

**Figure 18: HR and HRIS/HRIT Current Resourcing by Size**

- **HR Management**: 94%
- **Payroll**: 90%
- **Benefits**: 85%
- **Recruiting**: 84%
- **HR Generalist**: 79%
- **Func Support**: 67%
- **Learning**: 67%
- **Comp**: 65%
- **EE Relations**: 65%
- **Talent/Career**: 65%
- **HR Tech Admin**: 63%
- **HR Business Partner**: 56%
- **Time/Labor**: 46%
- **HR Analytics**: 44%
- **HR IT Infrastructure**: 39%

- **Large (L)**: 98%
- **Medium (M)**: 96%
- **Small (S)**: 94%

Of 41% of Orgs Increasing Spending

- **Talent Management**: 59%
- **Core HRMS**: 47%
- **HR Business Intelligence**: 35%
- **Benefits**: 34%
- **Payroll**: 33%
- **Workforce Management**: 31%
- **Help Desk/Portals**: 18%
- **Emerging Technologies**: 17%

Of 4% of Orgs Decreasing Spending

- **Talent Management**: 27%
- **Core HRMS**: 50%
- **HR Business Intelligence**: 12%
- **Benefits**: 22%
- **Payroll**: 33%
- **Workforce Management**: 25%
- **Help Desk/Portals**: 10%
- **Emerging Technologies**: 12%
For 2019, we asked respondents from organizations with more than three HR employees whether they were familiar with the breakout of their HR roles and resourcing; for the 83% that were familiar, we asked follow-up questions regarding whether they had employees in specific HR/IT roles currently or if they planned to add them during the next 12 months. Large organizations had the highest number of overall roles in their HR/IT functions, while Small organizations were less likely to have roles that went beyond HR management, Payroll, Benefits, and Recruiting. Over 80% of organizations with more than three employees reported at least one full-time employee in these critical areas.

When looking at plans for adding new roles or increasing existing capacity, organizational size once again plays a major role. In aggregate, Recruiting resources are the top HR role organizations plan to add over the next 12 months; but for Large (34%) and Medium (28%) organizations, HR Data Analytics roles are the number one planned addition to their HR functions. Overall, we see higher percentages of organizations planning to add resources this year than in 2018, with the biggest jump in plans for increasing resources in Talent/Career Management and Learning & Development.

**Figure 19: Plans to Increase HR Roles by Size**

<table>
<thead>
<tr>
<th>Role</th>
<th>Small (S)</th>
<th>Medium (M)</th>
<th>Large (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR Data Analytics</td>
<td>10%</td>
<td>28%</td>
<td>34%</td>
</tr>
<tr>
<td>Recruiting</td>
<td>21%</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>Talent/Career Mgmt</td>
<td>15%</td>
<td>14%</td>
<td>21%</td>
</tr>
<tr>
<td>HR Admin/Help Desk</td>
<td>9%</td>
<td>13%</td>
<td>20%</td>
</tr>
<tr>
<td>HR Func Sys Support</td>
<td>13%</td>
<td>20%</td>
<td>21%</td>
</tr>
<tr>
<td>Learning &amp; Dvmt</td>
<td>15%</td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td>HR Business Partner</td>
<td>14%</td>
<td>12%</td>
<td>19%</td>
</tr>
<tr>
<td>HR IT Infrastructure</td>
<td>11%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>HR Generalist</td>
<td>11%</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>Compensation</td>
<td>7%</td>
<td>12%</td>
<td>7%</td>
</tr>
</tbody>
</table>
We also saw a slight increase in the percentage of organizations planning to decrease certain roles across all organization sizes this year. The top roles being decreased include HR Generalist, HR Administrator/Help Desk, HR Business Partner, and Payroll functions.

**Figure 20: Plans to Decrease HR Roles by Size**

<table>
<thead>
<tr>
<th>Role</th>
<th>Size</th>
<th>Small</th>
<th>Medium</th>
<th>Large</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR Generalist</td>
<td>3%</td>
<td>5%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>HR Admin/Help Desk</td>
<td>4%</td>
<td>6%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>HR Business Partner</td>
<td>2%</td>
<td>3%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Payroll</td>
<td>3%</td>
<td>5%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>HR Func Support</td>
<td>2%</td>
<td>5%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Time &amp; Labor (WFM)</td>
<td>3%</td>
<td>4%</td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>

**Changing the Conversation on Service Delivery**

In an effort to increase HR efficiencies and improve User Experience, many organizations (60%) are investing heavily in Shared Services centers. An organization’s approach to Service Delivery applications directly connects to its approach to delivering HR services to its workforce, as well as budgeting and resourcing plans. We’ve identified three types of HR Shared Services:

- **Centralized** – organization wide, with all decisions, resourcing, and processes standardized at a single central resource
- **Distributed** – managed at a regional/area level, with regional/area Shared Services centers and decision making
- **Hybrid** – managed at a central location, but variations in decision making, resourcing, and processes at the regional and operational level; limited standardization

Organizations vary their approach to Shared Services according to multiple factors, which may include size, global makeup, and business model. Global organizations, with employees working in multiple regions outside of the main headquarters, are almost twice as likely to have any shared services at all and more likely to have a Hybrid Shared Services model. Over 70% of Large organizations have a Shared services function for HR, and those organization are 50% more likely to have a Hybrid Shared Services model this year than last year. We believe this rapid growth in Hybrid Shared Services is in response to the increasing variations in HR regulations by country.
Organizations can limit their Shared Services to solely focus on HR or they can choose to make them part of an Enterprise Shared Services function that includes shared services for Finance, Marketing, or IT. Expansion should be done strategically, with organizations clearly defining the value of each function.

Changing regulations and the need for more employee personalization may explain why Data Driven and Talent Driven organizations are less likely to have Enterprise Shared Services than Socially Responsible organizations and those implementing greater amounts of Emerging Technology. Half of all compliance-based HR functions with Shared Services are also part of Enterprise Wide Shared Services.

Resourcing can be a quandary for organizations as they enter the Shared Services space. Many organizations look to the possibility of outsourcing these services, but our data shows that for an overwhelming number of organizations (81%), HR Shared Services Centers are currently staffed by their own internal HR employees rather than outsourced to a third party.

Just 5% of those employees are located in non-headquartered or offshore locations. Large organizations are the most likely to outsource and offshore their shared service resources.
Organizations headquartered in Europe, the Middle East, and Africa (EMEA) are slightly more likely to either outsource their entire Shared Services organization or have a Hybrid workforce when compared to those headquartered in both North America (NA) and Asia Pacific (APAC). Asia Pacific organizations are more likely to offshore their own employees in a shared service function. Shared Services are more than just centralizing processes and technology: they are also a major factor in improving an employee's HR experience.

An efficient and effective service delivery model includes multiple employee interactions, often across several communication channels. On average, organizations shared that they use 3.11 different methods to communicate with their employees. Organizations with a higher number of average employee communication tools tend to be larger organizations or those with workforces that have, on average, younger employees.
Organizations were asked about the various communication methods they use to interact with their employees, and over 90% are using email, while 57% are using HR portals and 27% are leveraging Call Center environments.

Figure 25: Approach to Employee Communications by Size

A few standout differences in approaches to employee communication tools include the following:

- **Call Centers.** At 47%, Large organizations are most likely to use this resource, compared to just 17% of Small organizations. European organizations are slightly more likely to use Call Centers than their counterparts in North America or Asia Pacific.

- **Text Messages.** Small organizations are twice as likely as Large organizations to use Text Messaging, with 25% of Small organizations texting.

- **Social Networks.** These include applications like Slack, Salesforce Chatter, Yammer, or SAP Jam and are most likely to be used by Large organizations compared to Small and Medium.

- **Social Media.** These include applications like Facebook, Twitter, and Instagram and are least likely to be used by Medium organizations as an employee communication tool.

- **Chatbots.** Although these applications seem popular, few organizations have implemented Chatbots as HR communication tools today. Large organizations are the most likely to use Chatbots at just 7%.

- **Other Category.** This consisted mostly of references to town halls, meetings, physical message boards, snail mail, posters, paper memos, and a few mentions of video formats/screens.
Our Emerging Technology organizations—those with a higher-than-average adoption of applications currently tracked in our Emerging Technology section of the Survey—also have a much higher use of all communication channels with their employees. On average, Emerging Technology companies use 4.79 different communication methods, 60% higher than Non-Emerging Technology organizations.

Figure 26: Communication with Employees: Emerging Tech vs. Non-Emerging Tech Organizations

The Value of Change Management

Change Management, although an increasingly important topic, is an area that’s easy to deprioritize as organizations make plans for HR system acquisitions and deployment. Since it can prove difficult to justify the value proposition for the additional resources required to deliver an effective Change Management effort when allocating budgets and time, our research—which shows that Change Management practices play a major role in the perception and outcome of HR technology initiatives—can be used to justify an organization’s investment in this area.

All Change Management efforts are not equal, and assessing impact requires a clear definition of the various levels of HR technology Change Management. The Survey refers to the Four Levels of HR technology Change Management:

- **Culture of Change Management** – every technology change in the organization on a consistent basis
- **Key Projects** – only those that meet certain criteria such as size, budget, or breadth of stakeholders
- **Sporadically** – done on an ad hoc basis, no criteria
- **Never** – not in the budget or resource plans
No organization escapes the constant pace of change ubiquitous to our everyday lives. This year's Survey data continues to show that organizations investing to create a continuous Culture of Change Management realize multiple benefits—yet still only 27% of respondents currently make these investments. Earlier we noted that organizations practicing the highest levels of Change Management with their HR system upgrades and implementations on average achieve 28% higher Business Outcomes. Organizations supporting a Culture of Change Management are also 17 times more likely to view their HR function as contributing Strategic Value to their organization versus those with no Change management efforts. The connection between investing in a Culture of Change Management and being viewed as a more Strategic HR function has increased every year for the last three years.

Figure 27: Change Management Practices by Size

Large and Medium organizations are the most likely to conduct any Change Management, and more than 40% of Large organizations are now likely to have a consistent Culture of Change Management. This picture changes dramatically for Small organizations, where only 24% have a consistent Culture of Change Management and 4% Never practice Change Management. Over the last five years, we've also seen a continued drop in the percentage of organizations that conduct no Change Management, from 17% in 2014 to just 3% today.

Transforming an HR environment necessitates a shift in thinking from organizations practicing Change Management for Key Projects to a consistent Culture of Change Management. This shift doesn't merely entail implementing new Cloud technologies requiring constant updates, but also the realization that the pace of change simply cannot be sustained with Key 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 determined at the beginning of the process can be achieved at the completion of the project. In reality, goals shift frequently and Key Performance Indicators (KPIs) often adjust expected outcomes. It can be easy to view changing end-user requirements as scope creep to be avoided; however, if your organization practices a consistent Culture of Change Management, then end-user requirements will be reviewed regularly so that adjustments can be made according to business needs.
Social Responsibility Shines a Light on Culture

When developing an Enterprise HR Systems Strategy, an organization needs to consider its goals, technology ecosystem, available financing, resource allocation, service expectations, capacity for change, and Culture. Organizational Culture consists of more than simply words on a poster or marketing language approved by executive leaders; real organizational Culture must be determined by behaviors and actions. Successful HR technology leaders are mindful of organizational Culture, understanding that their efforts will shine a light on cultural realities overlooked in the absence of data and behavior-tracking technology. HR Technologists play a significant role in governing how workforce technology is used, the behaviors technology enables or prevents, and the inherent business risks for individual employees as well as the organization.

Figure 28: Social Responsibility in a Technology World

<table>
<thead>
<tr>
<th>High Regulation</th>
<th>Some Regulation</th>
<th>Not Regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare Benefits</td>
<td>75%</td>
<td>52%</td>
</tr>
<tr>
<td>Diversity &amp; Inclusion</td>
<td>67%</td>
<td>61%</td>
</tr>
<tr>
<td>Comp/Pay Equality</td>
<td>61%</td>
<td>56%</td>
</tr>
<tr>
<td>Paid Family Leave</td>
<td>58%</td>
<td>53%</td>
</tr>
</tbody>
</table>

Our research into Social Responsibility focuses on understanding the connections among Culture, organizational behaviors, and HR technology. We determine an organization’s overall Social Responsibility average by asking respondents to rate their organization from Excellent to Terrible on how well it addresses a variety of Social Responsibility initiatives. The highest-level initiatives differ by size and region.

**Small** organizations responded that their strengths were in Healthcare Benefits, with 38% rating themselves as Excellent.

**Medium** organizations responded that they excel in Employee Assistance Programs (EAPs), with 34% of organizations rating themselves as Excellent.

**Large** organizations responded that they excel in multiple areas: Healthcare Benefits, EAPs, and Diversity and Inclusion, all with 36% of organizations rating themselves as Excellent.
Overall, we see that highly regulated initiatives are more likely to be handled well by the organizations surveyed, while Low Regulation and No Regulation initiatives such as Outplacement Services and Tuition Assistance/Loan Repayment are the most likely to be handled poorly by organizations. Outplacement Services is also most likely to be marked as not applicable to their HR practices by 34% of organizations.

One High Regulation initiative that continues to deviate from our categorization is the management of an organization’s Contingent Workforce; only 32% of organizations reported Excellent or Good management of these workers, a 13% decline from last year. On average, 36% of our Survey respondents’ workforces were identified as Contingent, and many organizations are unsure about HR’s role in dealing with this group. This disconnect can lead to the HR functiondiscounting the overall impact of contingent workers. Only 56% of organizations with contingent workers track these individuals in their HRMS today, and many HRMSs are not equipped to address the complex needs of managing a Contingent Workforce. In some cases, operations or procurement handles hiring, Onboarding, security, communications, and contract management for what essentially becomes a shadow workforce. Organizations that rated themselves as Excellent at managing their contingent workforce were more likely to use either a Core HRMS or Procurement System to primarily manage their contingent workforce. Organizations that felt they did the worst at managing contingent workforces also used these tools, but were more likely to Outsource these efforts or select the Other category. The Other category write-ins included a high percentage of inhouse tools, Excel spreadsheets, finance systems, and no primary platform.

Figure 29: Contingent Workforce Management

The Top 10% of overall Social Responsibility scores are designated as our Socially Responsible organizations; on average, these organizations have higher Return on Equity, have improved overall Business Outcomes, and are more likely to report having HR functions viewed by management as strategic business partners than Non-Socially Responsible organizations. However, we found no correlation among generational workforce makeup, standard HR technology environments, delivery models, per-employee HR technology Spending, or HR technology vendors for Socially Responsible organizations.
Social Responsibility initiatives are part of a larger business conversation. How do you want the consumers of your business to view your company? Can the Social Responsibility initiatives your organization undertakes impact how it is viewed by the marketplace, your industry, or current and prospective employees? How can Social Responsibility and Culture impact your ability to acquire talent and recruit critical skills required to achieve Business Outcomes?

**Enterprise Workforce Planning Realities**

Enterprise Workforce Planning (EWP) involves the most complex analysis efforts undertaken by HR functions and is the culmination of a well-executed HR Analytics Strategy. Currently, only 26% of Survey respondents are conducting EWP, a number that has risen very slowly from 22% in 2016 when we started tracking EWP.

**Figure 30: Existence of Enterprise Workforce Planning**

The benefits of EWP are most often seen as operational outcomes, and on average organizations that implement this function realize 12% higher gains in Talent, HR, and Business Outcomes. Successful EWP goes beyond simple headcount analysis and considers the data necessary to make sound business decisions. Those organizations that conduct EWP are over 50% more likely to leverage their HR technology environments to inform their Business Strategy and influence Workforce Business Decisions.

**Figure 31: HR Technology Usage in Organizations with Enterprise Workforce Planning**
Enterprise Workforce Planning can be time consuming and fraught with challenges, especially when trying to identify accurate and helpful data for forecasting and scenario-analysis efforts. Often the most challenging aspect involves using external and regional data—usually from government entities or shared regional data sets—to derive meaningful analyses. Key data leveraged by organizations that conduct EWP is listed in the figure below. On average, organizations that conducted EWP used 4.73 data sets in their planning process.

**Figure 32: Data Used in Enterprise Workforce Planning Efforts**

Survey respondents shared the following common themes about EWP best practices:

- A necessary partnership between HR and Finance
- Organizations need to do EWP beyond key roles
- Annual and three-year planning efforts are the most common timelines
- Multiple lines of business often require a customizable EWP process
- Business risk analyses are included in many organizational approaches
- Effective EWP cannot be managed manually

Very few organizations are conducting EWP; so which organization sizes and types are actually investing time and resources in this area? Data shows that organizations with an HR Systems Strategy and Large organizations are twice as likely to conduct EWP than Small organizations (44% Large versus 18% Small).
Our statistical analysis identified characteristics of organizations conducting EWP; strategy, process, and specific analytical tools are important elements in achieving EWP outcomes.

**Figure 33: Top 11 Enterprise Workforce Planning Characteristics**

<table>
<thead>
<tr>
<th>Top 11 Enterprise Workforce Planning Characteristics</th>
<th>Enterprise Workforce Planning</th>
<th>No Enterprise Workforce Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Workforce Planning Process (Effective/Transformational)</td>
<td>36%</td>
<td>18%</td>
</tr>
<tr>
<td>2 Enterprise Systems Integration Strategy</td>
<td>38%</td>
<td>11%</td>
</tr>
<tr>
<td>3 Sentiment Analysis Tools</td>
<td>14% Use 19% Evaluating</td>
<td>5% Use 11% Evaluating</td>
</tr>
<tr>
<td>4 Statistical Tools</td>
<td>33% Use 10% Evaluating</td>
<td>17% Use 4% Evaluating</td>
</tr>
<tr>
<td>5 Predictive Analytics Tools</td>
<td>24% Use 27% Evaluating</td>
<td>14% Use 20% Evaluating</td>
</tr>
<tr>
<td>6 Machine Learning Tools</td>
<td>21% Use 22% Evaluating</td>
<td>6% Use 17% Evaluating</td>
</tr>
<tr>
<td>7 Benchmarking Databases</td>
<td>41% Use 14% Evaluating</td>
<td>25% Use 16% Evaluating</td>
</tr>
<tr>
<td>8 Succession Planning Process (Effective/Transformational)</td>
<td>30%</td>
<td>14%</td>
</tr>
<tr>
<td>9 Enterprise HR Systems Strategy</td>
<td>59%</td>
<td>28%</td>
</tr>
<tr>
<td>10 Data Warehouse</td>
<td>50% Use</td>
<td>29% Use</td>
</tr>
<tr>
<td>11 Data Lake</td>
<td>22% Use</td>
<td>10% Use</td>
</tr>
</tbody>
</table>
HR Technology Deployment Strategies

Cloud-based HR applications are now a standard expectation for new buyers. In fact, moving to a Cloud environment is generally not a question of if but when. Over 70% of responding organizations identify at least one deployed HR Cloud application and, overall, Cloud adoptions continue to increase.

During the last five years, we’ve seen fewer responses per year from organizations with On Premise deployment models; however, 40% of organizations still have one or more HR applications deployed On Premise and we continue to see a slower-than-expected decrease in On Premise deployments.

We are also seeing a slight resurgence in enterprise application On Premise investments, particularly in the U.S., as organizations reassess tax implications, ongoing costs of Cloud applications, and security concerns—although these concerns haven’t resulted in a slowdown of HR application Cloud adoption. Organizations with existing On Premise HR applications must consider multiple factors when weighing these concerns against Cloud advantages as they determine plans for technology changes.

<table>
<thead>
<tr>
<th>Cloud</th>
<th>On Premise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved User Experience</td>
<td>Business-specific customizations</td>
</tr>
<tr>
<td>Consistent update schedule</td>
<td>Upgrade requirements</td>
</tr>
<tr>
<td>Growth &amp; scale requirements</td>
<td>Existing hardware &amp; tax implications</td>
</tr>
<tr>
<td>Security expenses &amp; management</td>
<td>Security regulations or visibility</td>
</tr>
<tr>
<td>Regional data location regulations</td>
<td>Reduced or limited vendor maintenance</td>
</tr>
<tr>
<td>Potentially higher costs</td>
<td>Potentially lower costs</td>
</tr>
<tr>
<td>Better analytics and reporting</td>
<td>Impact of change</td>
</tr>
<tr>
<td>Private or Public Cloud options</td>
<td>Data fluidity vs. Data lock in</td>
</tr>
</tbody>
</table>

Vendor or solution changes aren’t solely the purview of organizations moving applications from On Premise to the Cloud. We are beginning to see changes to both type and number of applications deployed by individual organizations within the Cloud, including second- and third-generation Cloud deployments, Cloud vendor replacements, and the consolidation of multiple vendors into suites. These HR Cloud environments include Payroll, Core HRMS, WFM, TM, Workforce Intelligence (HR BI), and Emerging Technology solutions. When looking at entire HR Systems’ ecosystems and strategies, organizations should consider several factors including enterprise, regional, and group-specific applications.

The Sierra-Cedar HR Systems Survey White Paper first reported on Cloud/SaaS (software-as-a-service) deployment methods in 2007; by 2011, over 50% of deployed TM applications were in the Cloud; in 2015, we first hit the 50% mark for purchased Core HRMS Cloud/SaaS solutions. In the next figure, we illustrate the rapid rise in the adoption of Cloud-based HR technology over the last 14 Years.
In 2019, we continue to see movement to Cloud, in particular for Core HRMS and Talent Management applications. Data shows that consumer-like and data-driven applications have become standard in the HR community. Presently, 34% of organizations maintain an On Premise Core HRMS solution, only dropping slightly from last year. In aggregate, HR Cloud adoption has increased by just 3% from last year.

Many organizations have more than one HR application environment; therefore, overall deployment percentages never equal 100% between current On Premise and Cloud deployments. We call these situations Hybrid or Parallel Environments.

Figure 35: 2019–2020 HCM Technology Deployment

Note: these include Hybrid and Parallel environments and will not equal 100%.
This year also marks the first time that there is little difference in the User Experience scores for Cloud versus On Premise deployments in aggregate. We still see slightly lower scores for Licensed applications, but the lowest User Experience scores are realized by organizations leveraging a Hybrid approach of both Cloud and On Premise deployment. The small percentage of organizations continuing to leverage Licensed On Premise deployments are often utilizing portal technologies, mobile enablement, and custom programming to achieve improved User Experience while still addressing unique industry or organizational needs in customized On Premise environments.

**Figure 36: Average User Experience for HR Technology Categories by Deployment Models**

<table>
<thead>
<tr>
<th></th>
<th>SaaS/Cloud</th>
<th>Hybrid</th>
<th>Licensed</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFM</td>
<td>3.24</td>
<td>3.02</td>
<td>3.23</td>
</tr>
<tr>
<td>HRMS</td>
<td>3.50</td>
<td>3.04</td>
<td>3.10</td>
</tr>
<tr>
<td>TM</td>
<td>3.30</td>
<td>3.08</td>
<td>3.11</td>
</tr>
</tbody>
</table>

Even with slightly improved User Experience scores and the advantage of lower costs for On Premise deployments, we expect a continuing decline in Licensed/On Premise solution deployments. Although Cloud deployments continue to increase, the pace of change is slowing dramatically. Those organizations remaining in Licensed/On Premise environments are often complex, risk averse, and cost conscious. In 2017, 24% of our aggregate respondents planned to move to a Cloud/SaaS Core HRMS solution in the next 12 months; 2018 respondents reported that only 16% actually did so. Last year, respondents planned a 7% increase in Cloud HRMS deployments, and the actual movement was only 3%. In 2019 we see similar expectations of just a 7% planned increase in HRMS Cloud solutions—and based on past data, we believe these plans will also prove to be optimistic.

**Figure 37: Core HRMS Transition to Cloud/SaaS Solutions**

| Aggregate Respondents – Core HRMS Transition to Cloud/SaaS Solutions |
|-----------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 48% ↑                                               | 32% ↑               | 2% ↑                | 24% ↑               | 15% ↑               | 3% ↑                | 7% ↑                |

Overall movement to the Cloud varies greatly by application area, geographic region, and organization size. In past years, Cloud deployments (for all application categories except for TM) were predominantly undertaken by organizations with fewer than 10,000 employees. However, it is now common to see Cloud deployments in the largest of organizations: Walmart now manages almost all of its 2.1 million employees with Workday HR and Toshiba manages HR for its 140,256 global employees with Oracle HCM Cloud. In the last 12 months, Large organizations have also seen a major reduction in Licensed/On Premise application deployments for Payroll, WFM, and TM applications.
Third-party hosting of licensed software has also increased in the last few years; this service, once only the domain of Very Large organizations (over 50,000), is now expanding to Small and Medium organizations as they continue to remove the expense of infrastructure in their own facilities. Organizations with only a Licensed/On Premise HRMS are twice as likely to be evaluating the benefits of Public Cloud hosting or IaaS (infrastructure as a service) over those organizations already hosting their software in the Cloud.

The Private versus Public Cloud hosting conversation has been in the news in the wake of several data breaches, including the Amazon Web Services-Capital One data breach that exposed the personal information of nearly 106 million of the bank’s customers and applicants. However, research shows that Public databases are still the most secure environments for personal information in comparison to on-premise data centers or third-party managed data centers, which have more opportunities for both human and system error. This year about 7% of organizations with Licensed HR applications are hosting them with a third-party, while about 4% are leveraging Public Cloud hosting options, with just about a 5% planned increase in either option in the next 12 months.

Many buyers adopt SaaS applications without investigating the deployment options offered by their vendors. Depending on the vendor, SaaS deployments can be hosted by the vendor itself on a Public Cloud environment or in a Hybrid environment. Public Cloud deployment options for SaaS are more beneficial if clients have specific regional data location requirements, dramatic scalability needs, and a desire to improve data security and fluidity. Most SaaS HR vendors are exploring Public Cloud deployment options, but recouping the large investments they’ve already made in their own hardware and hosting facilities will take many years. An important question for any vendor when adopting SaaS applications is, “Where is my data today, where will it be tomorrow, how do I get it out, and what are my options for data storage?”
Figure 39: 2019–2020 Deployment Hosting Models

- **In House**: 4% (Today) / 3% (12 Months)
- **Licensed On Premise**: 22% (Today) / 18% (12 Months)
- **Licensed Third Party**: 9% (Today) / 8% (12 Months)
- **Licensed Public Cloud**: 4% (Today) / 5% (12 Months)
- **SaaS Vendor Hosted**: 68% (Today) / 71% (12 Months)

**Note:** these include Hybrid and Parallel environments and will not equal 100%.
Transforming HR Environments

Since 2010, the HR Market has changed from just 19% of organizations having at least one Cloud-based HR application to over 70% today. This dramatic transformation in HR technology environments is often part of a more comprehensive transformation of an organization's entire HR function. These comprehensive transformation efforts often focus on shifting HR's role from an administrative Personnel Department to a critical Business Unit that contributes strategic value to clearly defined organizational outcomes. Outcome Focused HR Leaders are knowledgeable in all aspects of the organization, including the vision, culture, approach to leadership, available workforce, and the organization's mission or business model. An HR leader who comprehends where the organization is headed—and can provide insight and guidance concerning the available resources and roadblocks to achieving that vision—is a valuable member of any executive team. Outcomes are definable, measurable expectations for what the customer, employee, and stakeholders achieve from your organization. Accomplishing this level of transformation requires a clear vision, executive support, and practical execution.

Figure 40: HR Shifting from Personnel Department to Outcome Focused HR

Since 2014, we've asked Survey participants about the perception of their HR function within the organization—ranging from compliance-focused to those contributing strategic value. The growing number of HR Transformation efforts in the last five years has produced a 20% increase in respondents who view HR functions as contributing strategic value (38% to 46%). This number increases dramatically when you look at Executive opinions, with over 50% viewing HR as contributing Strategic value this year.

Figure 41: Perception of HR Differs by Organizational Role
As we see organizations move beyond major transformation efforts, a new reality is dawning for HR functions: one of continuous improvement. In an agile work environment, the desired business and organizational outcomes can change rapidly and be achieved in multiple ways. Continuously improving HR data flows, policy, processes, and supporting technology is the only way to meet the demands of an Outcome Focused approach to HR.

Organizations take different pathways in pursuit of HR environment transformations, and each of those pathways requires a certain level of risk and focus in the deployment choices for HR technology applications. Today, 48% of organizations have chosen to move to All Cloud environments in their HR technology stack—a 26% increase from last year’s All-Cloud deployments. The next largest strategy for transformation is a more phased approach: 23% of organizations currently have a Hybrid HR technology environment that includes key On Premise solutions in high-risk areas such as Payroll or Core HRMS, while adding new Cloud solutions in less risky areas of HR. Another 13% of organizations chose a more reactive model, either keeping multiple solutions running in Parallel environments—both Cloud and On Premise—or randomly replacing technology without a clear strategy, which we call a Patchwork environment. A total of 16% of organizations still have All On Premise or Licensed environments: 9% are keeping their applications housed All On Premise, while 7% leverage some form of hosting in their approach.

Figure 42: Current State, HR Technology Environments

Over the next year, 34% of surveyed organizations plan to make no major changes to their current HR technology environments; instead, they plan to upgrade existing systems, work on integrations, or increase current application adoptions. The remainder of organizations are split almost evenly between Cloud-to-Cloud movements, plans for Hybrid environments, and a lack of a strategy altogether while planning to continue Patchwork or Parallel models.
Breaking this data out by size, we see the dramatic differences in future plans for Large organizations versus Medium and Small. Large organizations are the most likely to be moving forward with a Hybrid environment, while Small organizations are the least likely to be planning major changes to their existing environments. Medium organizations are the most likely to be making plans for Cloud-to-Cloud replacements.

**Figure 43: Future Plans for Changing HR Technology Environments by Size**

- **No Plans to Change**: 41% (L), 26% (M), 17% (S)
- **Hybrid**: 11% (L), 11% (M), 25% (S)
- **Patchwork**: 14% (L), 21% (M), 19% (S)
- **Parallel**: 7% (L), 12% (M), 13% (S)
- **Rip & Replace All**: 5% (L), 8% (M), 8% (S)
- **Cloud to Cloud Movement**: 3% (L), 17% (M), 11% (S)
- **Hosting/Outsource Most**: 5% (L), 4% (M), 3% (S)

**HR Technology Adoption & Outcomes**

Strategic and environmental transformations are important for organizations building sustainable HR technology systems to meet both workforce and business needs. No process or technology adds value to an organization unless it is utilized. For the second year, we’ve asked organizations about current HR technology environments and, once again, only 52% use their environments to Influence Workforce Business Decisions, while just 38% use them to Inform Business Strategy. Not surprisingly, 69% of HR organizations are effectively using their HR Systems to monitor and report on compliance needs, and almost 80% are using them to facilitate information gathering or process efficiencies.

**Figure 44: HR Technology Environment Usage**

- **Informs Business Strategy**: 38%
- **Influences Workforce Business Decisions**: 52%
- **Monitor and Report Compliance**: 69%
- **Employees & Managers Input/Access Information**: 79%
- **Replaces HR Paper-Based Processes**: 80%

**No HR Systems Strategy**

**2 1/2X**

less likely to use HR Systems to Influence Business Decisions
The question of strategic HR technology environment use can be a maturity issue, as larger or more mature organizations are more likely to use their environments strategically: Large organizations are 20% more likely to use them to Inform Business Strategy than their Medium and Small counterparts. Other factors such as having an HR Systems Strategy, measuring HR technology adoption, or being a Data Driven organization also have an impact on HR technology environmental use—and these variables are not size dependent. Organizations with No HR Systems Strategy are two-and-a-half times less likely to use HR Systems to Influence Workforce Business Decisions than those with an HR Systems Strategy.

When evaluating the effectiveness of existing HR applications to meet an organization’s most basic business needs, we see that sentiment continues to be positive for HR technology solution providers: 75% of organizations report that their current HR Systems applications either Always or Most of the Time meet their business needs.

No major differences were seen in how well applications meet an organization’s business needs by size or region, but effectiveness does differ slightly this year by Industry with Agriculture/Mining/Construction having the most challenges with all of their HR system environments.
Another area where we see differences in a system’s ability to Always meet business needs is between organizations that embrace Emerging Technologies and those that do not. When comparing Emerging Technology organizations—those with higher-than-average use of mobile HR, social applications, and emerging technology applications—with Non Emerging Technology organizations, we see that the former are more likely to report that their HRMS, WFM, and TM applications Always meet their business needs and less likely to report that Payroll applications Always meet their business needs. Payroll applications are the least likely to have undergone major product transformations (even in Cloud environments), exemplifying the need to rethink today’s Payroll application capabilities for organizations on the cutting edge of HR technology.

**Figure 47: HR Technology Always Meets Business Needs by Emerging Technology Organizations**

With 20% of organizations reporting that their HR system Always meets their business needs, we wanted to understand the gaps faced by the other 80% of organizations. This year, we see the number one and number two issues from last year change positions, with Functionality Gaps taking the number one spot, far outpacing Configuration/Customization Limitations. The 25% of organizations selecting Internal Knowledge and Skills as a major gap in their system’s usability represent opportunities for vendors and system integrators to address issues impacting their clients’ ability to fully leverage their systems.

**Figure 48: Views on Application Gaps**
Administrative Applications

Administrative applications were the first HR technology environments to be automated and are generally still the first HR applications deployed by organizations today. To understand your Administrative applications, it is important to understand two things: their development history and the concept of effective dating.

Originally, Administrative applications were designed to reduce paperwork, time, and manual effort required to pay employees and record sensitive personal identification information. These applications were designed solely for the HR Administrative staff; employees and managers were never expected to use these systems. Although these applications improved timelines, there was no such thing as real-time process management, so the term effective dating became critical in HR. These new HR applications were needed to manage this multi-dimensional view of time for every bit of data and enable systems to create an audit trail for timeline changes.

Over time, organizations have realized that they could become even more efficient by granting employees and management direct access to these applications so that they could enter their own information and access data as needed. Since the HR Administrative areas and the Employee/Manager areas of these applications evolved along separate timelines—depending on the age or maturity of the Administrative applications—these two areas (HR Administration and Employee/Manager Self Service) may be separate applications with different design elements and maintenance schedules. These elements may also have different effective-dating or record-auditing standards.

Today, Administrative applications come in multiple formats: as part of ERP suites, HR suites, or as stand-alone applications. They also play diverse roles within HR technology ecosystems, depending on the available level of Employee/Manager Self-Service, regional breadth, and reporting capabilities. These applications see the highest overall adoption levels, regardless of organizational size.

Figure 49: Administrative Application Adoption Today and in 12 Months

Effective dating is the date upon which something is considered to take effect. It may be a past, present, or future date, and can be different from the date when the event occurs or is recorded. For example, you might get a raise on October 1st, but the paperwork doesn’t make it to HR until October 15th. The paychecks for that month have already run. HR enters the raise, effectively dates it for the 1st, and checks that the system adds an increase for October and November to your paycheck run for November.
Payroll Applications
Payroll, the first and most universally implemented Administrative application, achieved 98% adoption this year. The small percentage of organizations not using a complete Payroll solution note that they are using financial tools or accounting firms to handle Payroll for employees.

Beyond the actual Payroll software application, a key issue is where Payroll services are performed. Payroll services include activities such as payroll data entry and validation, payroll processing, and tax filing and reporting. Organizations have choices on how these various Payroll activities are managed: the services can be performed completely inhouse, partially outsourced to a third party (i.e., co-sourced), or fully outsourced to a third party. Approximately 38% of organizations are engaged in some form of outsourcing, while nearly 62% of companies perform all Payroll services internally. In terms of vendors providing Payroll outsourcing services, the majority of Survey respondents use ADP or Ceridian.

Figure 50: Payroll Outsourcing Models by Size

Payroll becomes particularly complicated for organizations that have a workforce in more than one country, due to various compliance regulations around employee time tracking and payments. As a result, global organizations tend to engage in some outsourcing arrangement more often than nonglobal entities. This year’s Survey respondents show that ~46% of global organizations are outsourcing Payroll services versus ~35% of nonglobal organizations.

Although Payroll processes can be complex and fraught with regulation requirements, Payroll is the HR application most likely to meet an organization’s current business needs. Currently, 53% of organizations are comfortable that their Payroll application meets their businesses needs Most of the Time, and 29% responded that it meets their needs Always. Replacing a Payroll application is difficult and time consuming, thus explaining why organizations retain existing vendors.

Many of the Cloud solutions offered by the larger Payroll providers are still maintained as single-tenant, vendor-hosted solutions rather than as a multitenant SaaS model. Compliance requirements and solution performance expectations may determine whether this distinction is important to an organization, but they often limit the modern consumerization of these applications, which can include Mobile access and real-time data.
When Payroll applications meet organizational needs only Sometimes or Never, organizations are 11.5 times more likely to replace a Payroll solution in the next 12 months than when Payroll applications meet organizational needs Always or Most of the Time. In the aggregate, 27% of organizations are either evaluating their options or planning to replace their current Payroll application within the next two years. At 43%, Large organizations are still more likely to be planning or evaluating a change in Payroll this year.

**Figure 51: Replacement Plans for Payroll Applications**

The average deployment time for a Payroll system is shorter for Small organizations and longer for Medium and Large organizations. The same is true with nonglobal and global organizations that, on average, leverage their payroll system for 5.9 and 6.4 years, respectively. Length of deployment time plays a major role in Payroll application replacement plans. Organizations planning to replace their current Payroll application in the next 12 months report an average deployment of 7.11 years; those planning to make a change within 24 months have had their solutions for an average of 10.00 years.

**Figure 52: Payroll Applications – Average Deployment in Years**
Payroll applications will continue to evolve, and emerging trends to watch include the following:

- Cloud Adoption
- Pay Equity and Transparency Tools
- Pay-to-Quit Policies
- Crowd-sourced Pay
- Machine Learning
- Blockchain Payroll Solutions
- Open Marketplace Payroll Models
- On-demand Paycheck Options

**Payroll Vendor & Solution Outlooks**

For each application area we cover, we provide an outlook on the current state of vendor solution adoption and adoption plans for the next 12 months. 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. Note that columns do not add up to 100% as organizations may have multiple solutions in use.

The Payroll vendor landscape, although stable for the largest organizations, has seen a huge influx of new Cloud-based Payroll solutions that serve smaller organizations. This market is ripe for change, and we expect to see rapid shifts in the next few years as vendors take newer SMB solutions up market and organizations expand funding options.

**Figure 53: Payroll Vendor Adoption by Size**

When combined, the ADP Payroll solutions continue to hold the largest overall adoption levels. When looking at data by size, however, Oracle PeopleSoft continues to hold the largest adoption for a single solution for Large organizations. While Workday moves to the second-highest adopted solution for Large organizations, it holds the highest for Medium companies. This year, Paycor leads the Small market, followed by Ultimate.
The Other category (vendors that didn’t reach 3% or more in our data set) is relatively stable for Payroll. Approximately 15% of organizations in the aggregate use a Payroll solution in this category. Most often mentioned solutions include the following:

- Ascentis
- Alt Payroll/PeopleStrong
- CloudPay
- Ellucian Banner
- Infor Infinium
- Intuit Quickbooks
- iSolved
- Microsoft Great Plains
- Oracle EBS
- Oracle JD Edwards
- Paycom
- Paylocity
- PDS Vista
- PeopleStrategy
- Sage
- Tyler Technologies

**Core HRMS Applications**

Central to most organizations’ HR technology ecosystems is a Core HRMS that handles administrative record-keeping, serving as the single source of information about the workforce. More recent additions to standard HRMS functionality include employee profiles, organizational structures, analytics tools, and contingent worker information. Approximately 93% of organizations currently have an HRMS. For most organizations, the HRMS sits at the heart of their HR and workforce data management needs and shares data with multiple HR applications.

Core HRMS solutions help HR to both understand their workforce and effectively communicate with employees. Overall satisfaction with Core HRMS systems is high, with 62% of organizations stating that their Core HRMS meets their business needs Most of the Time and 15% of organizations reporting that their current HRMS solution Always meets their business needs.

Major HR transformation efforts often include an HRMS replacement, signifying the central role this technology plays in User Experience and the flow of critical data. Consistent with last year’s reporting, 28% of organizations are either Evaluating their options or are planning to replace their current Core HRMS application within the next two years. Large organizations are more likely than other sizes to change their Core HRMS system, perhaps because they often have multiple Core HRMSs due to mergers, acquisitions, and unique regional requirements.

**Figure 54: Replacement Plans for Core HRMS Applications**
The vendor and deployment models of a Core HRMS play a major role in the decisions made concerning additional HR technologies. Replacing or upgrading a Core HRMS 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. Those organizations with multiple Core HRMSs have an even greater challenge when planning to replace or update a Core HRMS environment. Changes often require consolidation efforts of current applications prior to making an enterprise-wide change.

Similar to Payroll applications, the length of time a Core HRMS system has been deployed plays a major role in application replacement plans. Organizations planning to replace their Core HRMS application in the next 12 months report that, on average, their current system has been deployed for 8 years; those planning to make a change within 24 months have had a solution for an average of 9.56 years. Organizations who responded that their Core HRMS application meets their organizational needs only Sometimes or Never are almost 11 times more likely to be replacing their solution in the next 12 months than when their Core HRMS application meets organizational needs Always or Most of the Time.

Figure 55: Core HRMS Applications – Average Deployment in Years

In the last five years, due to major competition in the vendor space, new Core HRMS applications have been developed with more valuable employee experiences, better data management models, and increased platform extensibility. Additional emerging trends to watch in Core HRMS applications are as follows:

- Continued Cloud Adoption
- Mobile Access
- HR Consumerization
- Voice Initiation/Chatbots
- Contingent/Remote Worker Management
- Robotic Process Automation
- HR Standards Benchmarking
- Intelligent Services
Core HRMS Vendor & Solution Outlooks

The Core HRMS vendor landscape has seen rapid changes over the last five years as new SMB vendors have entered the market and existing vendors have shifted flagship products to focus on Cloud-based solutions. We will continue to see changes in this vendor landscape as the focus shifts from a “single platform” to Core HRMS ecosystems with the creation of savvy marketplaces and partner relationships.

Another critical element of navigating the changing HCM vendor landscape involves understanding the different dynamics among vendors offering one-size-fits-all solutions versus those offering solutions across multiple smaller applications. In both cases, buyers expect a tightly connected relationship that includes transparency to a vendor’s culture, business issues, and the achievability of published product roadmaps.

Figure 56: Core HRMS Vendor Adoption by Size

For the second year in a row, Workday holds the top aggregate adoption level for Core HRMSs and is a heavily leveraged solution by Medium and Large organizations. Large organizations also maintain high adoption rates for Oracle PeopleSoft. In the Small market, demand for Paycor and Ceridian has increased in the last year.

The Other category (vendors that didn’t reach 3% or more in our data set) was highly splintered: many of our respondents were very clear about their plans to move to a vendor currently on our adoption list. On average, 14% of organizations use a vendor in the Other category; the most often mentioned solutions include the following:

- ADP Vantage
- Ascentis
- BambooHR
- Cornerstone
- Darwinbox
- Ellucian Banner
- Employee Navigator
- Kronos Workforce Ready
- Microsoft Dynamics
- Paylocity
- PeopleAdmin
- PeopleStrategy
- SD Worx
- SilkRoad
- Tyler Technologies
Benefits Applications

Benefits, which falls under the Administrative application category, is the most complex HR process, since employee benefit structures vary greatly around the world. For example, employees can be offered pension or retirement options, health insurance and/or other Health & Welfare benefits (such as reimbursement accounts or EAPs), or voluntary/flexible benefits (which can range from supplemental health coverage to childcare vouchers to car schemes depending on the country). There are underlying applications for all these benefits, but the majority of these solutions focus on one benefits area for one country or region.

A growing trend over the last five years has been the adoption of global benefits platforms, driven largely by multinational organizations that previously had multiple disparate benefit systems in each country. This movement is facilitated by the adoption of Cloud-based HR systems. An example of a global benefits system is the Darwin platform by Thomsons Online Benefits, a wholly owned subsidiary of Mercer; Darwin has been adopted by ~7% of Large organizations surveyed this year and is also the technology engine for other global benefits offerings in the market.

On average, 90% of organizations are using some type of Benefits application. Overall adoption does vary greatly by region, with the U.S. having the highest adoption level at 93%. Asia Pacific has the lowest adoption percentage at 67%, but in this region, it is not uncommon for benefits to be part of the payroll application rather than a standalone solution.

![Figure 57: Benefits Application Adoption by Region](image)

In addition to assessing the use of Benefits applications this year, Survey respondents were also asked where Benefits Administration services are performed: completely inhouse, through a co-sourcing model where a third-party vendor is providing the software and back-office Benefits Administration processes, or through a fully outsourced model where a third party is providing the software, back-office support, and call center services. Approximately 45% of organizations are engaged in some form of outsourcing, compared to ~55% of organizations that perform all Benefits services internally. By size, Large organizations have a greater propensity to rely on outsourcing since the number of benefits offered to employees will likely be greater than organizations of other sizes.
The following data around the types of Benefits Administration services that are outsourced only represents U.S.-based organizations. It's also best to separate the financial-related Benefits services from the health-related Benefits services. Defined contribution (DC) administration is the predominate financial-related Benefits service outsourced. On the health services side, 81% of U.S. organizations outsource COBRA administration, followed by Reimbursement/Spending Account Administration, Health & Welfare administration (which includes services such as eligibility, enrollment, life-event processing, and direct billing for health insurance plans), and EAPs. Other outsourced Benefits services that are applicable to both financial and health-related services include compliance services and communication services, which have adoption rates of 53% and 32% respectively.
Approximately 66% of Survey respondents are offering voluntary/flexible benefits for their employees. Adoption by benefit type varies greatly, with Life Insurance offered the most often at 73%.

**Figure 60: Voluntary/Flexible Benefits Adoption**

- Life Insurance: 73%
- Dental: 44%
- Disability: 39%
- Vision: 38%
- Accident: 38%
- Critical Illness: 23%
- Legal: 20%
- Pet Insurance: 12%
- Cancer: 10%
- Hospital Indemnity: 9%
- Long Term Care: 9%
- Identity Theft: 6%
- Other: 9%

On average, Benefits applications are deployed for 5.04 years. Approximately 24% of Survey respondents cited that they are either evaluating their options or planning to replace their current Benefits application within the next two years.

**Figure 61: Replacement Plans for Benefits Applications**

- 76%
- 16%
- 5%
- 3%

Emerging trends to watch in Benefits applications are as follows:
- Optimization of Benefit Selections and Hyperpersonalization
- Integration of Health and Wealth for a Holistic Benefits Experience
- Chatbots
- Robotics Process Automation
- Global Benefit Platforms
Benefits Vendors & Solution Outlooks

Benefits vendors fall into three very specific category types:

- **Enterprise Systems** – extend beyond a Benefits application to include the entire HR suite of applications.
  
  *Examples include Oracle, SAP, Workday, ADP, Infor Lawson, Ultimate, Ceridian, and Paycor*

- **Pure Plays** – focus on either financial-related Benefits or health-related Benefits, and can be utilized with or without Benefits Administration service support.
  
  *Examples on the Retirement/Pension side include Fidelity, Empower Retirement, Voya, Vanguard, Equiniti, Capita, and JLT.*
  
  *Examples on the Health side include Benefitfocus, bswift, Businessolver, Empyrean, WageWorks, ComPsych, Secova, and Reed Group.*

- **Total Benefits** – offer comprehensive Benefits solutions, focusing on both financial-related Benefits and health-related Benefits, but solutions can be utilized individually and with or without Benefits Administration service support.
  
  *Examples include Alight, Conduent, Morneau Shepell, and Willis Towers Watson.*

In addition, Benefits vendors tend to target their solutions at a particular market segment, and some vendors even have multiple Benefits applications to serve different segments. It should be noted that organizations typically leverage multiple vendors because of the variety of Benefits offered and the need for a point solution.

**Figure 62: Benefits Applications Vendor Adoption by Size**

Across all sizes of organizations, our Survey respondents are currently using more Enterprise Systems—such as Oracle PeopleSoft, Workday, Ultimate, and Paycor—as their primary Benefits applications. Total Benefits vendors have the highest adoption rates by Large organizations. Since Pure Play solutions are narrowly focused on one Benefits area, they work well for all organizational sizes, which is why adoption rates are comparable across the three segments.
On average, ~18% of organizations use a vendor in the Other category. The most often mentioned solutions in the Other category include the following:

- ADP Enterprise/GlobalView
- ADP Health & Welfare
- ADP Vantage
- Ascentis
- Conduent
- Custom Benefit Consultant (CBC)
- Ellucian Banner
- iSolved
- Kronos
- Paychex
- Paycom
- PlanSource
Service Delivery Applications

Service Delivery applications are an ever-evolving category of technologies that focus on the employee and manager experience within the HR function. These applications become critical when organizations are transforming from a compliance and administrative function to a more strategic HR function, relying on data provided in real time by employees and managers. Service Delivery applications typically include Employee Self-Service (ESS), Manager Self-Service (MSS), HR Help Desk, Portals (for employees, managers, and/or HR), and communication tools. In some cases, Service Delivery applications are automatically rolled out with new Cloud HRMS solutions or they are purchased separately.

We have closely tracked the evolution of this application area for the last 20 years because it provides a clear indication of the maturity and strategic capabilities of the HR function within an organization. We can reasonably expect that an organization’s investment in Service Delivery applications is highly dependent on the Core HRMS environment it has now or plans to have in the future.

Figure 63: Service Delivery Applications by Top Cloud Adoption

Figure 64: Service Delivery Application Adoption Today and in 12 Months
ESS and MSS adoptions fail to provide the full picture of access to self-service applications; we often find that even when ESS and MSS are purchased, they are not always fully rolled out to Employees and Managers. On average, organizations roll out ESS to 85% of their workforce and 74% of their management staff; those numbers drop considerably for Not Top Cloud-based HR technology environments as seen below.

**Figure 65: Service Delivery ESS and MSS Actual Roll-Out Average by Top Cloud**

The top barriers for rolling out self-service vary among Managers and Employees. Interest and time constraints were the biggest hurdle for MSS, while lack of workstations and poor user design were problematic for ESS.

**Figure 66: Barriers to Rolling Out MSS and ESS**

<table>
<thead>
<tr>
<th>Manager Self Service Barriers</th>
<th>Employee Self Service Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Interest</td>
<td>Lack of Workstations</td>
</tr>
<tr>
<td>Time Constraints</td>
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<td>Poor UX</td>
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<td>HR Data Accuracy</td>
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<td>No Single System</td>
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HR Help Desk Vendor & Solution Outlooks

Help Desk solutions are part of the complex mix of technology and process knowledge required for an HR Shared Services function. Shared Services centers deal in data, and the tools that capture, tag, and manage it are becoming increasingly important. Improving the service experience for the end user is not about technology but 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 level of service, organizations may leverage an existing IT or sales Help Desk solution or find a solution tailored to the HR industry. In both scenarios, we see an increased focus on Mobile Help Desk solutions that can provide employees with 24/7 access to their critical HR information.

Figure 67: Help Desk Application Adoption by Size

As the HR Help Desk space continues to grow, we see increased adoption of applications focusing on modern IT service models, specifically on HR processes and practices. Over the last several years, we’ve seen a dramatic increase in adoption in ServiceNow Help Desk solutions and are beginning to see similar-yet-smaller increases in the adoption of applications from organizations such as Zendesk, Cherwell, and Freshdesk. The Core HRMS market is also focusing on this area: in 2018, Oracle HCM Cloud deployed its own Cloud-based Help Desk solution with embedded Machine Learning elements and Ultimate acquired PeopleDoc, a modern Help Desk/Portal application developed in Europe. Niche HR-focused Help Desks—such as Dovetail, Neocase HR, LBI Software, and Willis Towers Watson AskHR solutions—continue to add value to this category as well. The Help Desk industry is in the midst of an evolution as all of these companies are making major investments in enterprise innovations such as RPA, Virtual Bot assistants, Machine Learning, and AI. These investments are meant to leverage the abundance of internal data captured in these environments to achieve higher business efficiency and automation, along with new levels of HR insight.
The Other category (vendors that didn't reach 3% or more in our data set) continues to be extremely large in this area, particularly with Small and Medium organizations. The most often mentioned solutions are as follows:

- Assyst
- Benefit Solution Help Desk
- Ceridian
- Microsoft Dynamics, CA Service Desk
- Neeyamo
- Team Dynamix
- Zoho
- Inhouse Built Tools

The Service Delivery application area will continue to evolve over the next few years, as organizations and software vendors expand their use of enterprise-wide data layers, microservices, and new data organization models. It is in this application area that we are seeing the first extensive use-cases for Machine Learning, Natural Language Processing, and Sentiment Analysis, which will lead to brand new enterprise application categories in the areas of communication, engagement, and personalization. This is also the area where we will see extensive focus on technology adoption and employee feedback efforts as well. Additional emerging trends to watch in Service Delivery applications include the following:

- Chatbot interfaces and data-gathering applications
- Employee communication platforms
- Digital Adoption platforms
- Blockchain personal information managers/vaults
- Engagement and personal well-being platforms, beyond healthcare and finance
- Feedback and survey applications
- Organizational Network Analysis
- Activity and project tracking
- Work/productivity burnout monitors
- Return to work resources and tools
- Robotic Process Automation
- Integrated healthcare and disability management
Workforce Management Applications

Workforce Management (WFM) applications help organizations manage the scheduling, assignments, and actual time in the work environment for their employees. These processes are tightly connected to operational functions and can be managed from within operations or in partnership with HR. WFM applications are available in multiple buying options: they can be purchased as part of ERP suites, operations applications, HR suites, WFM suites, or as stand-alone applications. Purchasing decisions are often made based on the complexity of an organization's time tracking and scheduling needs or regional regulations that require specific reporting. As the WFM applications market begins to move beyond a compliance focus, we anticipate that WFM will become a major topic for many organizations.

Time & Attendance
Time and Attendance applications continue to be the most widely adopted solutions in the WFM category, with 88% adoption today and continued plans for growth. In previous years, Time and Attendance applications were 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.

Absence & Leave Management
Absence and Leave Management can be a single application or separate applications, but the focus of both is managing employee time off. Whether planned or unplanned, short or long term, legally mandated or simply an organizational benefit, Absence and Leave Management requires copious amounts of communication and compliance tracking to be managed effectively. These are the second most widely adopted WFM applications, as 77% of organizations have Absence Management and 62% have Leave Management In Use.

Figure 68: Workforce Management Application Adoption Today and in 12 Months
Labor Scheduling
Labor Scheduling applications are complex solutions built to manage the operational workflow of an organization, varying from simple applications managing a single location schedule to sophisticated applications tracking thousands of working locations with multiple shift formats and variations in required workforce qualifications. The Hospitality, Manufacturing, and Retail industries are well known for their heavy labor scheduling requirements, but we also see organizations with complex project management requirements or highly specialized skills require sophisticated WFM scheduling. Currently, 42% of organizations use Labor Scheduling applications.

Workforce/Labor Budgeting
Workforce/Labor Budgeting applications are often overlooked despite their important role in workforce planning processes. Currently, 29% of organizations utilize these applications that provide scenario-based forecasts for future schedules and labor requirements using historical data, standard work rules, and external factors. Recent advancements in Predictive Analytics and Machine Learning are having a major impact on these applications.

On average, organizations are leveraging 2.8 WFM applications from the categories we’ve listed. If adopted, Workforce Budgeting and Labor Scheduling are much more likely to be purchased as separate applications. Examples of vendors providing these applications on a stand-alone basis for Survey respondents include ABI MasterMind, HotSchedules, ProStaff, and Deltek.

This year, satisfaction with current WFM applications is on par with other areas including HRMS and Payroll, with 27% of organizations either Evaluating their options or Planning to Replace their application within the next two years. By size, Large organizations are more likely to change WFM applications, Medium organizations are more likely to evaluate their options, and Small organizations show the greatest percentage of those planning to maintain their existing WFM solution.

Figure 69: Replacement Plans for WFM Applications
In the aggregate, WFM applications have been deployed for a shorter period of time than Administrative applications. Small organizations, however, tend to deploy WFM applications longer than Administrative applications, which is partly because Small companies leverage fewer WFM applications and tend to have less complex needs. Those planning to replace their WFM application in the next 12 months report that, on average, their current systems have been deployed for 7.26 years; those planning to make a change within 24 months have had solutions for an average of 6.98 years.

*Figure 70: Workforce Management Applications – Average Deployment in Years*

This year, User Experience surpassed Cost as the most important factor when selecting a WFM application. However, Cost remains at the top of the list for Large organizations as well as for some industries, including Business/Professional Services, Non-Profits, and Agricultural/Mining/Construction. Specific functionality of WFM applications increased in importance this year, driven primarily by the Education and Government sectors.

*Figure 71: Primary Factors in Selecting Workforce Management Applications*
WFM applications are rapidly evolving due to their operational connections and large amounts of historical data. Machine Learning and AI are finding WFM applications ripe opportunities to test their management capabilities. Additional emerging trends to watch in WFM applications include the following:

- Cloud Adoption
- Mobile Use and Document Processing
- Contingent Workforce Management
- 24/7 Employee Communications
- Self-Scheduling Employees
- Activity and Project Tracking
- Work/Productivity Burn-out Monitors
- Return to Work Resources and Tools
- Robotic Process Automation
- Integrated Healthcare and Disability Management

Workforce Management Vendor & Solution Outlooks

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.

WFM 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 solutions from multiple vendors to meet their needs.

Figure 72: Workforce Management Applications by Size
The WFM vendors with the largest overall market share have often been slow to rewrite their product codes for true multitenant Cloud environments. Kronos, one of the largest vendors in the space, marked a critical shift for this industry when it released its newest Cloud-based application for enterprise customers in 2017. Yet, the vendors gaining the most momentum are new entrants in this application area, including Workday, Ceridian, and Ultimate, creating a more competitive landscape and forcing other vendors to be more innovative.

The Other category for WFM holds the highest overall percentage compared to all HR application areas because organizations are often adopting operational or industry-focused solutions that meet current business needs. The most often mentioned solutions in the Other category include the following:

- ADP Vantage
- Anaplan
- API Healthcare
- Ascentis
- Attendance on Demand
- BambooHR
- Deltek
- Ellucian Banner
- IBM Maximo
- Matrix Labour Management
- Oracle EBS
- Paylocity
- PeopleStrategy
- Reflexis
- TimeClock Plus
- Inhouse
Talent Management Applications

The primary functions of Talent Management (TM) applications are to assist organizations in managing the acquisition, performance, development, rewards, and succession of their workforce. These processes are often defined in terms of the employee lifecycle. When organizations understand the value of their talent, they leverage the TM processes and supporting applications as strategic management tools that are essential to achieving operational outcomes. Although WFM and TM application categories are separate in their focus, they both benefit organizations that want to balance business needs with employee aspirations. Both WFM and TM have a major impact on employee culture, engagement, and operational performance.

Organizations are currently re-evaluating their approach to key process areas traditionally managed with TM applications: Recruiting, Performance Management, and Learning. These application areas are experiencing transformations as Recruiting processes focus heavily on passive candidate tracking, including talent pool management, Social outreach, and marketing campaigns. Performance processes that once focused on annual events, key roles, and confidential assessments are now being transformed into continuous feedback models. Organizations are working to tailor these models to meet enterprise-wide individual needs and build-out expectations of transparency and trust. We also see that Learning technologies, originally designed to adhere to strict reporting structures and event management models, are having difficulty with the task of altering architectures to accommodate constant input and personalization. Similar to WFM applications, TM applications can be purchased as part of ERP suites, HR suites, TM suites, or as stand-alone applications. Purchasing decisions are often based on User Experience requirements or complex talent-management processes—another reason for recent increases in stand-alone TM applications.

Figure 73: Talent Management Application Adoption Today and in 12 Months
Talent Driven organizations, on average, are using ~5.22 TM applications, compared to the aggregate use of nearly 4.0 TM applications. As can be expected, TM application usage varies by organizational size, with Large organizations using the most applications:

- **Small**: 3.6 applications
- **Medium**: 4.4 applications
- **Large**: 5.2 applications

White-collar industries also tend to leverage more TM applications than other sectors, with Financial Services/Insurance using 4.9 TM applications on average, followed by High-Tech with ~4.5 TM applications.

Organizations are just as satisfied with their TM solutions as they are with their HRMS, Payroll, and WFM solutions. Approximately 58% report that their existing TM applications meet their businesses needs Most of the Time, and 20% responded that they Always meet their needs. Despite comparable satisfaction levels, 31% of organizations are evaluating or are planning to replace TM applications in the next two years. Of all HR applications, TM has the highest percentage of organizations considering change.

**Figure 74: Replacement Plans for Primary Talent Management Applications**

Organizations planning to replace their TM applications in the next 12 months report that, on average, their current systems have been deployed for 6.16 years; those planning to make a change within 24 months have had solutions for an average of 4.98 years. TM applications, on average, have been deployed for a shorter amount of time than Administrative and WFM applications.
This year, Cost and User Experience were tied at 69% as the top factor influencing TM application selection. By industry, Cost was the most important selection criteria by the Business/Professional Services sector as well as by Non-Profits; whereas the User Experience was valued greater by the Education, High-Tech, Manufacturing, and Retail sectors. There were also deviations by organizational size, with Small companies the most sensitive about Cost, and Medium and Large organizations focused more on HRMS Integration capabilities. Talent Driven organizations, on the other hand, place a premium on the User Experience, followed by HRMS Integration, with Cost and Specific Functionality tied for third place.
Talent Management applications were the original Cloud-based HR solutions built with full consumerization in mind. In these applications, consumer-like User Experience and data analytics were leveraged to engage both employees and managers. Lack of focus on the actual work and operational Culture can be a challenge for many TM applications, although the next generation is working to address these issues. Additional emerging trends in the TM application space include the following:

- Contingent Learning and Performance Management
- Engagement Platforms
- Learning Experience Platforms
- Activity and Automatic Performance Tracking
- Integration with Work/Productivity Tools
- Voice Automation
- Team Management
- Workforce Mobility
- Transparency and Feedback
- AI/Machine Learning

**Primary Talent Management Vendor & Solution Outlooks**

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.

We also ask organizations to identify their primary TM suite as well as the solutions they are using for individual application requirements, which provides us with a broad look across the entire TM landscape. The primary TM vendors that respondents selected are part of an ERP suite, HR suite, Talent suite, or a stand-alone provider that offers multiples applications. We also see a trend toward greater focus on a vendor’s early strengths and tailoring solutions in those directions. Many vendors focus on Recruiting, Performance, or Learning as central modules—then add supporting modules to their solution over time. TM vendors offer a wide range of features and functions, leading many organizations to purchase multiple solutions to meet their needs.

**Figure 77: Talent Management Applications Adoption by Size**

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<tr>
<th>Vendor</th>
<th>Small</th>
<th>Medium</th>
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<td>Workday</td>
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<td>SAP SuccessFactors EC</td>
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<td>Other</td>
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Organizations with the largest overall adoption numbers for TM applications are ERP vendors offering these applications as part of a wider solution. Notable increases in adoption rates this year include Workday, Ultimate, and Ceridian Dayforce.

The Other category (vendors that didn’t reach 3% or more in our data set) stayed relatively stable for Small and Large organizations but increased by 40% for Medium organizations. The most-often mentioned solutions in the Other category include the following:

- BambooHR
- Healthcare Source
- HealthStream
- Kronos Workforce Ready
- NeoGov
- Paycom
- Paylocity
- PeopleAdmin
- Saba Lumesse
- TalentSoft
- Inhouse

Individual Talent Management Solutions & Vendor Outlooks

Recruiting/Talent Acquisition Applications

Recruiting, or Talent Acquisition, has seen dramatic changes over the last five years with an increased focus on Social Media recruiting, branding, relationship management, and AI. Recruiting has the highest adoption percentage for TM applications at 85%. Approximately 79% of organizations with a TM application In Use have purchased it from their primary TM provider. Vendors in this space are often at the forefront of technology innovation, constantly addressing rapidly shifting requirements based on workforce supply and demand.

The need for constant innovation has led to an abundance of vendors entering this application category—particularly for niche applications focused on managing the candidate relationship and experience. Traditional Recruiting applications, those with the largest share of adoption, are usually full-blown applicant tracking systems that offer some innovative features, but rarely all of them.

Figure 78: Recruiting Application Adoption by Size
The Recruiting vendors with the largest overall market share are once again part of an ERP suite; the one standout in the top five is iCIMS, a Recruiting application also providing Onboarding. Notable increases in adoption rates this year include Workday, Ultimate (specifically with Medium organizations), and Jobvite.

In the aggregate, the Other category for Recruiting vendors accounts for nearly 17% of adoption, with Medium and Large organizations seeking out alternative specialized solutions for a particular need. This group includes many recruiting-focused start-ups and several organizations that have dropped overall adoption and are quickly falling out of favor in an industry where buyers replace applications quickly. The most often mentioned solutions within the Other category are as follows:

- ApplicantPro
- Avature
- BambooHR
- Bullhorn
- Indeed
- Inhouse
- JazzHR
- Lever
- NeoGov
- Paycom
- PeopleAdmin
- PeopleStrong
- Saba Halogen/TalentSpace
- Talentreef
- Workable
- Workbright

Overall, Survey respondents are satisfied with their existing Recruiting solutions. Approximately 30% of organizations are either evaluating their options or are already planning to replace their current Recruiting applications. Industries with a higher-than-average percentage of plans for Recruiting replacement include Education, followed by Government, and Transportation/Communication/Utilities.

**Figure 79: Replacement Plans for Recruiting Applications**

Features most frequently desired in new Talent Acquisition applications continue to include the following:

- CRM
- Mobile
- Improved User Experience, Candidate and Recruiter
- Compliance Tools
- Onboarding
- Integration with HRIS/HRMS
- Productivity Tracking
- Reporting
- Talent Pool/Pipeline Mgmt
- Better Recruiter Experience
- Global Capabilities, Language, Localization Options
- Bulk, All-in-One Features
- Fewer Clicks to Apply
The Evolving Talent Acquisition Ecosystem

Much of the growth and innovation in the Talent Acquisition space often takes place outside of the Recruiting application. These innovative solutions support existing tools by providing better decision-making data or increasing candidate engagement and may also include video interviewing, big data analysis, and assessment technologies. Over the last few years, we’ve seen a deluge of new Talent Acquisition tools often backed by large amounts of venture capital funding.

The average tenure of a worker in the 25–34 age group is only three years\(^1\), 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 current corporate walls is central to a Talent Acquisition strategy.

To get a better understanding of the wider Talent Acquisition ecosystem, Survey respondents were asked to identify their adoption plans for various emerging Talent Acquisition tools. On average, organizations are using 2.58 tools, with Talent Driven organizations leveraging 3.60 tools. Across the board, Employee Referral Management, Employer Branding, and Candidate/Talent Pool Management were the most likely to be procured with existing Recruiting applications.

Figure 80: Exploring New Talent Acquisition Tools

Across all of these newer Talent Acquisition tools, many organizations are leveraging an inhouse solution. For example, ~20% of surveyed organizations use an inhouse solution for Employee Referral Management, Employer Branding, and Marketing Campaign Management.

For Candidate Management, organizations almost always rely on their primary Recruiting application, which is also heavily used for Employee Referral Management and Employer Branding activities. LinkedIn is the preferred application for Social Searching/Matching and is also used for Marketing Campaign Management.

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\(^1\) http://www.bls.gov/news.release/tenure.nr0.htm
Behavior Assessments, Game-Based Recruiting, and Video Interviews are areas where organizations will use specialists; top vendors by each area as follows:

- **Behavior Assessments** – The Predictive Index, OutMatch, DiSC, Hogan Assessments, Wonderlic, and Caliper Profile
- **Game-Based Recruiting** – Greenhouse, Traitify, and Talenticks
- **Video Interviews** – Microsoft Skype, followed by Zoom, HireVue, and Montage

**Performance Management Applications**

Performance Management (PM) continues to add new practices and new technologies. Large global companies including Adobe, Dell, Accenture, and Deloitte have abandoned traditional PM models and replaced annual ratings and merit increases with continuous feedback and immediate rewards. Traditional applications have aggressively focused on rolling out updated or brand-new modules, aligning with new PM applications. Emerging platforms in this space are focusing on engagement, rewards, and survey technology to challenge long-term players. Early adopters of a continuous PM model are seeing the greatest overall gains. PM has the third-highest adoption level of TM applications at 68%, with 58% of organizations purchasing PM from the primary TM vendor. PM can be central to an organization’s decision-making process around primary TM solutions and often serves as a key battleground for organizations hoping to attract clients who will eventually purchase future TM modules.

**Figure 81: Performance Management Application Adoption by Size**

The PM vendors with the largest overall market share are part of an ERP suite, the one standout in the top five is Cornerstone. In addition, use of an inhouse or custom-built PM application is also popular, a trend unique to this area, indicating that PM vendors can improve their offerings. Notable increases in adoption rates this year include Workday (especially with Small and Medium organizations), Cornerstone (with Large organizations), and Ultimate (with Medium organizations). Over the next year, Workday, Ultimate, and Ceridian should experience an increase in adoption as well as SAP SuccessFactors EC and Oracle HCM Cloud.
The Other category (vendors that didn't reach 3% of our data set) for PM vendors accounted for ~10% of Survey responses. The most often mentioned solutions in the Other category include:

- BambooHR
- Betterworks
- Culture Amp/Zugata
- Healthcare Source
- Kronos Workforce Ready
- LTG PeopleFluent
- PageUp
- Paycom
- Paylocity
- Performance Pro
- Reflektive
- SilkRoad
- Skillssoft SumTotal
- ViaGlobal (viDesktop)

### Onboarding Applications

Onboarding applications are the TM application area with the second-highest adoption level. Approximately 76% of organizations report having an Onboarding application In Use today, 66% of which are provided by their primary TM vendor. Onboarding applications are a complex mixture of features, ranging from document management tools to coaching and behavior assessment solutions. Organizations focus on both compliance and creating an engaging employee experience as a part of the Onboarding process. In many cases, organizations use multiple vendors to handle Onboarding employees, particularly for compliance needs. We see vendors enter this space from less traditional areas such as case management tools, analytics, and communication tools.

#### Figure 82: Onboarding Applications Adoption by Size

The Onboarding vendors with the largest overall market share are often part of an ERP suite, the one non-ERP suite in the top five is iCIMS’ Talent Acquisition application. Notable increases in adoption rates from last year include Workday (with Large organizations), SAP SuccessFactors EC (with Large organizations), Paycor (with Small organizations), and Ultimate (with Medium organizations). ServiceNow and SAP SuccessFactors EC should see higher overall adoption in the next year.
The Other category for Onboarding (vendors that didn’t reach 3% or more in our data set) remained relatively steady at ~13%. The most often mentioned solutions in the Other category are as follows:

- BambooHR
- Greenhouse
- Inhouse
- Jobvite
- Kronos Workforce Ready
- NeoGov
- Paylocity
- PeopleMatter
- Saba Halogen
- SAP HCM
- WorkBright

**Learning Applications**

Learning and Development applications have evolved into two very different personas: compliance-focused applications or experience applications. Some Learning applications address both needs, while others choose to focus on specific areas. Traditional Learning Management Systems (LMS) are specifically designed to address administration for complex required Learning, while newer Learning applications focus on tackling the age-old issue of performance- and need-based Learning. To address these multiple Learning needs, we are seeing organizations shift from a single LMS to a Learning environment made up of multiple Learning applications—including modules within existing HR applications and stand-alone niche players.

**Figure 83: Learning Applications Adoption by Size**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornerstone</td>
<td>10%</td>
<td>11%</td>
<td>18%</td>
<td>18%</td>
<td>26%</td>
<td>27%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAP SuccessFactors EC</td>
<td>4%</td>
<td></td>
<td>8%</td>
<td></td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skillsoft SumTotal</td>
<td>4%</td>
<td></td>
<td>3%</td>
<td></td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saba TS, Halogen</td>
<td>6%</td>
<td>6%</td>
<td>8%</td>
<td>11%</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workday</td>
<td>8%</td>
<td>13%</td>
<td>6%</td>
<td></td>
<td>4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle PeopleSoft</td>
<td>2%</td>
<td></td>
<td>6%</td>
<td>11%</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HealthStream</td>
<td>1%</td>
<td></td>
<td>6%</td>
<td>11%</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle HCM Cloud, Taleo</td>
<td>2%</td>
<td></td>
<td>6%</td>
<td>11%</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAP Litmos</td>
<td>3%</td>
<td></td>
<td>3%</td>
<td></td>
<td>4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultimate UltiPro</td>
<td>8%</td>
<td>12%</td>
<td>6%</td>
<td>11%</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADP Vantage</td>
<td>3%</td>
<td></td>
<td>3%</td>
<td></td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceridian Dayforce</td>
<td>6%</td>
<td>9%</td>
<td>3%</td>
<td></td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relias</td>
<td>4%</td>
<td></td>
<td>6%</td>
<td></td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paylocity</td>
<td>3%</td>
<td></td>
<td>6%</td>
<td></td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhouse</td>
<td>18%</td>
<td>18%</td>
<td>8%</td>
<td></td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>23%</td>
<td>29%</td>
<td>15%</td>
<td>21%</td>
<td>6%</td>
<td>6%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Learning solutions, at 66%, are the TM application area with the fourth-highest adoption, 34% of which were purchased from their primary TM vendor. The Learning vendors with the largest overall market share tend to be part of traditional TM suites, and there is a considerable increase in adoption for these vendors such as Saba TalentSuite. We also see increased adoption rates in ERP-based Learning solutions, including SAP SuccessFactors EC, Workday, Oracle HCM Cloud (particularly for Medium organizations), and Ceridian Dayforce.
The Other category for Learning (vendors that didn’t reach 3% or more in our data set) saw an increase for Small organizations and a decrease for Medium and Large organizations. Enterprise software vendors continue to invest here, and in addition to these market shifts, niche providers (such as Degreed) are emerging from the consumer Learning space and are working to centralize ownership of an employee’s Learning record. The most often mentioned solutions in the Other category are as follows:

- AbsorbLMS
- BAI
- Blackboard
- Brainier
- ComplianceWire
- Docebo
- Instructure Bridge/Canvas
- LTG NetDimensions
- NeoGov
- PageUp
- Paycom
- SAP HCM
- Wisetail

For Learning applications, 33% of organizations are either evaluating their options or are already planning to replace their primary Learning application. Large organizations are the most likely to plan for a change at 41%. The Financial Services/Insurance and Retail/Hospitality/Wholesale industries also have a higher-than-average percentage of plans for replacement over the next several years. Unique to the Learning space are organizations making plans to simply remove their LMS without replacing it in the near future—which has led to some fluctuation in the overall adoption numbers of Learning applications.

Figure 84: Replacement Plans for Learning Applications
Learning solutions, on average, have been deployed for a much longer time than other TM category applications. Even Small organizations are likely to have an existing Learning application that has been deployed for over four years. Similar to Payroll, HRMS, and WFM, the deployment time for Learning applications has a direct impact on replacement plans. Organizations planning to replace their Learning application in the next 12 months report that, on average, their current systems have been deployed for 5.73 years; those planning to make a change within 24 months have had solutions for an average of 5.86 years.

**Figure 85: Learning Application – Average Deployment in Years**

The Evolving Learning Ecosystem

Like Talent Acquisition, the Learning space has expanded beyond the traditional LMS to include new and innovative learning tools that support training initiatives. Unlike LMS platforms, which are largely used for compliance purposes, these modern platforms focus on the individual learner and their needs and essentially supplement the learning experience.

Content Creation and Content Libraries have high usage rates because these tools have been around for quite some time—there will always be a need to create content for specific purposes. However, between Content Libraries and other sources of enterprise-based content that already exist, demand will likely increase for curated content that can go directly into the LMS or one of these newer modern platforms.

On average, Survey respondents are using nearly 1.4 learning tools, compared to Talent Driven organizations, which use an average of 2.2 tools. Talent Driven organizations are more likely to use Adaptive Learning Platforms—which leverage AI to adjust training in real-time based on how well the learner is absorbing the training material—over other tools like MOOCs (Massive Open Online Courses).
Popular Content Creation vendors among Survey respondents include Adobe Captivate, Camtasia, and Articulate. Skillsoft is the preferred vendor when it comes to Content Libraries, but demand is also high for LinkedIn/Lynda.com. Other Content Library vendors used by organizations include Relias, Cornerstone, Brainier, and OpenSesame. When it comes to the newer Learning tools, the vendor landscape is less defined. Examples of some vendors used by responding organizations include the following:

- **MOOCs** – Coursera, edX, and Udemy
- **Adaptive Learning Platforms** – Percipio, Degreed, and EdCast
- **Learning Adoption/Engagement Platforms** – WalkMe and AppLearn
- **Microlearning Platforms** – Grovo, Axonify, and Articulate
- **Learning Record Stores (LRS)** – Cornerstone, Watershed, and Learning Locker

### Compensation Applications

Compensation applications are generally adopted by larger, more complex organizations and are often tightly connected to services associated with Compensation benchmarking. Organizations that don’t use a compensation tool must still analyze and manage compensation strategies but tend to work in Microsoft Excel or a business-specific analytics package and miss out on the accuracy and benchmarking data available from these systems. These complex solutions play a major role in an organization’s ability to forecast business needs and develop strategic plans. Compensation has mediocre adoption levels of TM applications, with 56% of organizations stating they have a Compensation application In Use, 39% of which are purchased from the primary TM vendor. This application area offers opportunities for both niche and enterprise vendors.
The Compensation applications with the largest overall market share are generally part of an ERP suite, but we are seeing more TM suites enter this space from vendors such as LTG PeopleFluent and Cornerstone that include strong Compensation applications. Notable increases in adoption rates include Workday, SAP SuccessFactors EC, Ultimate, and PayScale. New to this year’s list is Payfactors.

The Other category for Compensation (vendors that didn’t reach 3% or more in our data set) increased slightly from last year, pointing toward a lack of competition in this area. The most frequently mentioned solutions in the Other category are as follows:

- BalancedComp
- Beqom
- CompXL
- Healthcare Source
- HRsoft
- LTG PeopleFluent
- Oracle EBS
- Paychex
- Skillsoft SumTotal
- Willis Towers Watson
- Inhouse/Excel/Custom Tool

**Succession Management Applications**

Succession Planning should be a key component of any TM strategy to help organizations identify leaders and implement development plans. Yet, Succession Management solutions are the TM application area with the lowest adoption level, with 38% of organizations reporting that they have Succession Management tools in use, 23% of which are purchased from their primary TM vendor. The highest adoption levels for Succession Management applications are for Large organizations—with 70% more implementing Succession Management applications than Small organizations.
Succession Management vendors with the largest overall market share are a mix of ERP and TM suites. TM vendors such as Cornerstone, LTG PeopleFluent, and Saba Halogen have made this area a major focus of their applications. Notable increases in adoption from last year’s numbers include SAP SuccessFactors EC (for Large organizations), Workday (for Medium and Large organizations), Saba Halogen (for Medium organizations), and Cornerstone (for Small organizations).

The Other category for Succession Management (vendors that didn’t reach 3% or more in our data set) dropped significantly from last year, pointing toward a lack of competition in this area. Succession Planning, like Performance Management, has a large percentage of organizations that identified their applications as Inhouse or home grown. The most often mentioned solutions in the Other category include the following:

- Darwinbox
- LTG PeopleFluent
- Paychex
- Paycor
- Reflektive
- SAP HCM
- TalentGuard
- Vice HCM
HR Business Intelligence

HR Business Intelligence (HR BI) provides insights for organizational decisions by managing the processes created to store, govern, analyze, report, and share past, present, and future workforce information. These efforts are not a single project, but require constant care, rework, and management of data and tools to produce an ever-evolving story. Because no single tool set, suite, or platform covers the entire function, multiple technologies are used to accomplish HR BI efforts including the following:

- **Embedded Analytics**: separate modules within an organization's HRMS, WFM, and/or TM platform that can be turned on/installed but are not sold outside of the application. Capabilities can vary widely by solution but may include dashboards, data modeling, interactive reports, and predictive capabilities.

- **Extraction and Analysis**: tools used to extract specific data from various systems, conduct cleansing, organize, and run separate unique analysis; e.g., Microsoft Excel and statistical applications.

- **Visualization and Sharing**: tools designed to use clean data, defined data, and very large data sets to produce images, charts, communications, and presentations; e.g., Tableau or Qlik.

- **HR BI Solutions**: tools designed for multiple data sets, specifically outputs for HR BI queries that can provide data mapping, data analytics, forecasting, and visualizations to produce insights for HR and business decisions concerning workforce data in environments that have been optimized for workforce analytics.

- **Data Management and Manipulation**: tools designed to extract large amounts of data for storage, organization, and mapping that is then made available to individuals to run processes or algorithms; e.g., Data Warehouses and Data Lakes.

Figure 89: HR Business Intelligence Application Adoption by Size

**Data Lake**: A storage repository that holds large amounts of raw data in its native format (structured and unstructured) until it is called for use.
Recent advances in HR applications, Self-Service, and analytic tools have made BI accessible to all organizations. While Microsoft Excel is the dominant BI application used by organizations, it is rarely the only application used for HR analytics. On average, organizations have 3.6 BI applications In Use. Beyond Microsoft Excel, Small organizations often rely on the analytic capabilities that are embedded in their Core HR application, while Medium organizations tend to leverage Platform BI Solutions, and Large organizations prefer to use BI Visualization Tools for their HR intelligence. Data Driven organizations, on the other hand, generally have significantly higher adoption rates across the board and utilize 5.89 BI tools for their HR analytic needs.

Figure 90: HR Business Intelligence Application Adoption by Data Driven Organizations

Taking a step back for a moment, organizations should be clear about the objectives they are seeking to accomplish by using BI tools within the HR function. Managing HR Costs and Compliance Risks are at the top of the list for most organizations; and while Cost Management is a priority for Data Driven organizations, improving Employee Engagement and managing Employee Retention Risks are of equal importance.

Figure 91: HR BI Objectives for the Aggregate and Data Driven Organizations
An important factor in whether an organization will be successful in achieving its HR BI objectives is identifying the data that needs to be added and properly integrating the data source. On average, organizations are integrating 2.81 data sources into a single HR BI tool for the purpose of workforce analysis; Data Driven organizations have ~4.65 data sources integrated.

**Figure 92: Integrated Data Sources for the Aggregate and Data Driven Organizations**

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Aggregate</th>
<th>Data Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core HR</td>
<td>73%</td>
<td>93%</td>
</tr>
<tr>
<td>WFM</td>
<td>54%</td>
<td>85%</td>
</tr>
<tr>
<td>TM</td>
<td>51%</td>
<td>76%</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>34%</td>
<td>67%</td>
</tr>
<tr>
<td>Financials</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>Safety/Audit</td>
<td>15%</td>
<td>36%</td>
</tr>
<tr>
<td>Operations</td>
<td>10%</td>
<td>27%</td>
</tr>
<tr>
<td>Sales/CRM</td>
<td>10%</td>
<td>24%</td>
</tr>
<tr>
<td>Marketing</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>None</td>
<td>13%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Determining HR metrics for reporting is another step in creating an impactful BI function. For Data Driven organizations, metric strategies include measuring more of everything; however, in the aggregate, Turnover and Demographics were the metrics most often included in HR reporting. On average, organizations included between 3 and 4 metrics in HR reporting, with Data Driven organizations including between 5 and 6 metrics.

**Figure 93: Metrics Included in HR Reporting by Aggregate and Data Driven Organizations**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Aggregate</th>
<th>Data Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>80%</td>
<td>98%</td>
</tr>
<tr>
<td>Demographics</td>
<td>71%</td>
<td>89%</td>
</tr>
<tr>
<td>Recruiting</td>
<td>58%</td>
<td>84%</td>
</tr>
<tr>
<td>Compensation</td>
<td>45%</td>
<td>67%</td>
</tr>
<tr>
<td>Absence</td>
<td>39%</td>
<td>71%</td>
</tr>
<tr>
<td>Performance</td>
<td>22%</td>
<td>49%</td>
</tr>
<tr>
<td>Learning</td>
<td>20%</td>
<td>33%</td>
</tr>
<tr>
<td>Productivity</td>
<td>14%</td>
<td>33%</td>
</tr>
</tbody>
</table>
By size, Large organizations included an average of 4.0 metrics compared to 3.8 for Medium organizations and 3.4 for Small organizations.

**Figure 94: Metrics Included in HR Reporting by Size**

- **Turnover**: Large (87%), Medium (85%), Small (67%)
- **Demographics**: Large (89%), Medium (83%), Small (68%)
- **Recruiting**: Large (51%), Medium (31%), Small (22%)
- **Compensation**: Large (51%), Medium (31%), Small (22%)
- **Absence**: Large (41%), Medium (31%), Small (22%)
- **Performance**: Large (23%), Medium (21%), Small (22%)
- **Learning**: Large (17%), Medium (21%), Small (25%)
- **Productivity**: Large (14%), Medium (15%), Small (15%)

Metric usage in HR reporting doesn't vary significantly by size, region, or industry, but variations are seen for organizations integrating their HRMS, TM, and WFM applications as compared to organizations not integrating all three sources. In addition, organizations that are fully integrated on average included 4.7 HR metrics compared to 3.1 HR metrics when all three of these applications are not integrated. This further emphasizes the importance of integration in BI.

**Figure 95: Metrics Included in HR Reporting by Integration**

- **All Integrated**
  - Turnover: 93%
  - Demographics: 85%
  - Recruiting: 83%
  - Compensation: 67%
  - Performance: 59%
  - Absence: 33%
  - Learning: 31%
  - Productivity: 18%

- **Not Integrated**
  - Turnover: 78%
  - Demographics: 71%
  - Recruiting: 47%
  - Compensation: 37%
  - Performance: 33%
  - Absence: 12%
  - Learning: 19%
  - Productivity: 12%
HR BI applications provide great insights, but how far does access typically extend within an organization? Globally, access to BI is most frequently given to HR staff in 88% of organizations. In fact, over 50% of Survey respondents have at least one HR Data Analytics role today, and 6% plan to add this role over the next 12 months. However, beyond the HR department, access is limited, with Large and Medium organizations more inclined to give access to IT/HRIT personnel. Data Driven organizations, on the other hand, are generally much more liberal with access, particularly for Managers.

Figure 96: Access to HR BI Applications for the Aggregate and Data Driven Organizations

<table>
<thead>
<tr>
<th>Role</th>
<th>Aggregate</th>
<th>Data Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR Staff</td>
<td>88%</td>
<td>89%</td>
</tr>
<tr>
<td>IT/HRIT</td>
<td>47%</td>
<td>67%</td>
</tr>
<tr>
<td>Executives</td>
<td>46%</td>
<td>67%</td>
</tr>
<tr>
<td>Managers</td>
<td>41%</td>
<td>75%</td>
</tr>
<tr>
<td>Finance Staff</td>
<td>38%</td>
<td>49%</td>
</tr>
<tr>
<td>Shared Services</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>All Employees</td>
<td>7%</td>
<td>11%</td>
</tr>
</tbody>
</table>

HR Business Intelligence Application Outlooks

For each application area we cover, we provide an outlook on the current state of vendor solution adoption by our Survey respondents’ adoption plans for the next 12 months. This should not be considered Market Size data. We break each application out into Small, Medium, and Large organizations, as adoption varies greatly by size.

We tend to see two types of vendors in the HR BI application category. The first group includes applications designed specifically for HR and workforce analytics, which are often integrated with existing HR applications. The second group includes multipurpose BI, data analytics, or data management applications, which may lack HR-specific language, algorithms, or reporting formats. This evolving technology category is slowly shifting from a disparate group of BI tools into a set of applications specifically designed for the analytics, planning, and reporting required for the HR function.
Figure 97: HR Business Intelligence Adoption by Size

Tableau Software, a visualization application, continues to hold the top spot for overall application adoption by Survey respondents, followed by IBM Cognos (which is primarily used by Small and Medium organizations), and Microsoft Power BI. New entrants to the list include Google Analytics and SAP Analytics Cloud.

The Other category for HR BI (vendors that didn’t reach 3% or more in our data set) accounts for ~8% of our aggregate results. The most often mentioned solutions include the following:

- Amazon QuickSight
- DOMO
- Incorta
- Information Builders
- Looker
- Mercer (iMercer)
- OneModel HR
- Oracle Analytics Cloud
- SAP Qualtrics
- Sisense
- SplashBI HR
- Tibco Spotfire
The Total HR Systems Environment

Integration, Security & Adoption

How to think about HR processes and supporting tools is a challenge faced by many organizations. Does your organization look at technology solutions in silos rather than as a total HR environment? Although breaking down silos has been a discussion point for years, Survey respondents often find they can only report on one or two application areas and identify unique, sometimes non-HR roles responsible for other process areas.

This section discusses the factors intersecting multiple HR technology categories, represented by the outer rings of our HCM Blueprint. Our research has found that these factors impact both User Experience and the outcomes achieved from application adoption at much higher levels than the actual solution itself. Regardless of the types of HR systems environments in use, poor integration management, Security, Data Privacy, and standard workflow processes can quickly overwhelm even the best HR technology.

Integrating the HR Experience

Creating a holistic HR environment has its place; however, these all-in-one solutions may be overhyped and not suitable for all organizations. Many vendors invest heavily in integration standards, partner marketplaces, and microservice development approaches. Although using fewer applications and supporting increased integration can facilitate better data cohesion and User Experience, some solutions will always sit outside of the traditional HR toolset, including content providers, package services, assessments, and industry tools.

We have tracked integration issues for several years and seen little change in the percentage of organizations investing in an Enterprise Integration Strategy (EIS): just 17% of organizations report a Regularly Updated Strategy. When looking at the responses by size, we see that Large organizations are much more likely to adopt an EIS; but our data shows that no matter the size, organizations that have an EIS that is Updated Regularly had a 12% increase in Business Outcomes this year and have had a continuous increase in overall Talent, HR, and Business Outcomes for the last five years.

Figure 98: Integration Strategies by Size
Another way to look at integration practices is to look at how integration decisions are made within an organization. This year, we saw an increase in the percentage of organizations leveraging their Core HRMS as their primary integration point, and a decrease in the Case by Case integration decision. Medium and Large organizations were the most likely to be leveraging an Enterprise Integration Platform as their primary approach to HR application integration.

**Figure 99: Integration Approach by Size**

- **Into Core HR**: 51%, 58%, 68% for Small, Medium, Large organizations respectively.
- **Case by Case/None**: 42%, 26%, 19% for Small, Medium, Large organizations respectively.
- **Enterprise Platform***: 4%, 13%, 11% for Small, Medium, Large organizations respectively.
- **Into Talent Management**: 3%, 3%, 2% for Small, Medium, Large organizations respectively.

* (Dell Boomi, MuleSoft, etc.)

The average organization has 19 integration touchpoints—connections between two systems (often HR and non-HR environments) where data is pulled from one and pushed to another. The average integration touchpoint numbers change based on the size and complexity of the organization, with an average of 66 for Large and 8 for Small organizations.

**Figure 100: Enterprise Integration Strategy Touchpoints by Size**

- **Into Core HR**: 19, 8, 23, 66 for Small, Medium, Large organizations respectively.
- **Case by Case/None**: 1, 3, 5, 11 for Small, Medium, Large organizations respectively.
- **Enterprise Platform***: 1, 2, 3, 6 for Small, Medium, Large organizations respectively.
- **Into Talent Management**: 3, 3, 2, 1 for Small, Medium, Large organizations respectively.
In looking at the non-HR systems included in these touchpoints, we found that the top two areas most likely to be integrated were Finance and Active Directory applications. We also found that Large and Medium organizations were more likely to invest time in non-HR system integrations than Small organizations. Overall, 38% of respondents reported that they were unaware of any non-HR system integrations with their HR environment.

**Figure 101: Non-HR Systems Integrated into HR by Size**

- Active Directory: 20%
- Finance: 69%
- Operation/Production: 79%
- Sales/CRM: 56%
- Vendor/Supply Chain: 22%
- Marketing: 21%
- None: 12%

**Figure 102: Non-HR Systems Integrated into HR by Outcome Focused Organizations**

On average, organizations have 1.33 business systems integrated with their HR environments; that number jumps to 2.0 for Data Driven organizations, 2.48 for Top Performing organizations, and 2.82 for Emerging Technology organizations.
Does investing time and resources toward creating an EIS provide value for an organization? Organizations with an EIS positively correlate with improved Talent, HR, and Business Outcomes; this correlation is even stronger for organizations with Cloud technology, data analytics initiatives, and Effective/Efficient TM processes. In fact, organizations with an EIS had 12% higher Business Outcomes, and those with such strategies are a key differentiator for our Outcome Focused organizations.

An EIS 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 inhouse
- Vendors prevetted for integration support
- Audit and risk concerns reviewed with all integration efforts

Data Privacy, Security & Risk Assessments

Data Privacy, Security, and IT Risk Assessments are topics of conversation for both HR and IT professionals. Organizations that capture or transfer data of any kind must educate themselves on the latest regulations concerning Data Privacy and verify that their Cloud vendors are also diligent regarding these issues. While 49% of organizations report they are Effective at handling Data Privacy Processes, only another 6% report Transformational processes in this area—a number that has remained the same for the last two years. Large organizations are only slightly more likely to say they are Effective or Transformational in Data Privacy than their Small counterparts, pointing out that this is not just in issue for SMBs. Meanwhile, there was a 10% increase in the number of countries enacting Data Privacy regulations—from 120 in 2018 to 132 in 2019—and another 28 countries have legislation in process.

Figure 103: Data Privacy Process Maturity Levels

[Diagram showing data maturity levels]

European Organizations 2X more likely to be Transformational in Data Privacy Processes
The General Data Protection Regulations (GDPR), which unified the Data Privacy requirements across the European Union, have now been in place for more than one year. To date, 375,000+ organizations have registered a Data Protection Officer (DPO), 280,000+ cases have been received, and 144,000 individual complaints have been made, ranging from access requests to unfair process disclosures. Europe’s early focus on Data Privacy standards is the reason European-headquartered organizations are almost twice as likely to have Transformational Data Privacy processes (11%) than their counterparts in North America and Asia Pacific.

Global Data Privacy laws enacted in the last year will impact future Data Privacy conversations:

- California Consumer Privacy Act (CCPA)/USA: takes effect in January 2020
- The General Data Protection Law (LGPD)/Brazil: takes effect in the beginning of 2020

In today’s era of brand management and hypervalue of personal data, being Effective at Data Privacy processes simply isn’t enough—organizations should strive to be Transformational.

Navigating data challenges becomes an area of concern as organizations build personalized HR environments that provide access to personal employee information and deliver recommendations and insights based on that information. The first step in Data Privacy efforts is to make sure that all data is secure through a regularly reviewed Cybersecurity Strategy that includes the System environment. In the last year, there was a 17% increase in Cybersecurity Strategies, with 70% of organizations reporting they have a strategy in place and that it is Updated Regularly. Emerging Technology organizations are particularly focused on Cybersecurity issues, with over 90% reporting that they have a strategy in place.

**Figure 104: HRIS/HRIT Security Strategy**

- Yes, Updated Regularly: 9%
- Yes, Rarely Updated: 14%
- In Development: 7%
- No Strategy: 70%

HR and Finance systems are most often included in Cybersecurity Strategies, at 88% and 87% respectively. Systems mentioned in the Other category include Client Systems, Protected Health and Medical Environments, Student Systems, Email, and Off-site Backup Locations.
Although personal Mobile devices create Cybersecurity risks for organizations, few have implemented a Bring Your Own Device (BYOD) policy. Only 22% of organizations have a policy in place for Everyone, while 27% of Large organizations have No Policy but still allow network access through Personal Devices. Emerging Technology organizations don’t shy away from IT challenges or limit access to various technology environments; they are twice as likely to have a BYOD policy in place and twice as likely to include Everyone in that policy.

**Figure 106: Bring Your Own Device Policies by Size**

- **No Policy, But Personal Devices Access Network**: 25%, 23%, 27%
- **Yes, for Everyone**: 22%, 23%, 25%
- **No & Network Restricted**: 38%, 29%, 25%
- **Yes, for Select Groups**: 16%, 26%, 22%
Organizations with BYOD policies are more likely to employ security processes and technology—including Multi-Factor Authentication (MFA) and Remote Wipe Technology—to protect both the employee and their organization from hackers. Approximately 55% of Small organizations are using MFA for HR applications, and 62% are using Remote Wipe Technology. In the last year, Large organizations increased their use of MFA by 20%. Alarmingly, 30% of respondents were not aware if their organization had Remote Wipe technology in place for their HR environments. Security procedures shouldn’t make the employee’s job harder by limiting access to needed information, but should instead make data more secure by creating processes to nullify software and device vulnerabilities, lost passwords, or risky employee behavior.

Figure 107: Cybersecurity Tools in Use by Size

Another issue in Cybersecurity strategies involves the ownership of Content, Data Privacy, and Configuration—all decisions that could impact security access. Major differences in the roles primarily responsible for these critical areas exist between organizations with All Cloud environments versus On Premise environments. This data provides great insight into the growing demand for more strategic HRIS/HRIT roles to manage both privacy issues and multiple levels of data, particularly for Large and Emerging Technology organizations.

Figure 108: Primary Roles Responsible for Content Security & Data Privacy
Adoption & Service Delivery

The effective management of integration, Cybersecurity, and data is a critical issue for every HR technology function, and these are popular topic areas for most HR technology leaders. However, for HR technology administrators, issues concerning adoption and Service Delivery may receive less focus but are just as critical. Organizations need data, and technology facilitates its effective/efficient capture and use. Only 12% of organizations measure their HR technology adoption, up slightly from 10% in 2018. Large, Emerging Technology, and Socially Responsible organizations are almost twice as likely to measure HR technology adoption than aggregate organizations.
The 12% of organizations measuring HR technology adoption, on average, use 3.4 metrics to assess adoption levels, ensuring that they are tracking both activity and quality of use. Over 60% of organizations use Sign In Counts and Mobile Device Usage, while over 50% leverage Vendor Reporting, Process Activity, and Surveys.

**Figure 111: HR Technology Adoption Measurements Used**

<table>
<thead>
<tr>
<th>Approach</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign In Counts</td>
<td>72%</td>
</tr>
<tr>
<td>Mobile Device Usage</td>
<td>64%</td>
</tr>
<tr>
<td>Vendor Dashboard/Reporting</td>
<td>55%</td>
</tr>
<tr>
<td>Process Activity/Transaction Counts</td>
<td>52%</td>
</tr>
<tr>
<td>Manager/Employee Surveys</td>
<td>51%</td>
</tr>
<tr>
<td>HR Call Center Metrics</td>
<td>43%</td>
</tr>
<tr>
<td>Browser Analytics</td>
<td>32%</td>
</tr>
<tr>
<td>Social Collaboration</td>
<td>14%</td>
</tr>
</tbody>
</table>

There is truth to the adage, “What gets measured gets done.” Organizations that make the effort to measure their HR technology adoption realized 8% higher Talent, HR, and Business Outcomes.

**HR Process Maturity**

Although data and outcomes are focal points for HR technology environments, the workflows for each HR process are still integral components of the employee experience. No technology will fix a bad process, and a bad process can cost you more than just adoption numbers—it can also cost time, money, and resources.

When asked about HR Process Maturity levels of various environments, organizations report that some process areas are more valued than others. The most Effective and Transformational process areas continue to be Data Privacy, Payroll, and Benefits, while HR BI, Labor Scheduling, and Succession Planning were the most likely to have No Process/Random processes.

**Small** organizations are most likely to have Transformational processes in Onboarding, Benefits, and Recruiting, and most likely to have No Process/Random processes in Succession Planning and HR BI.

**Medium** organizations are most likely to be Transformational in Compensation Management and Data Privacy; most likely to have Random processes in HR BI and Workforce Reporting; and most likely to have No Process in Succession Planning and Employee Profile Management.

**Large** organizations are most likely to have Transformational processes in Data Privacy, Learning, and HR BI; most likely to have Random processes in Employee Profile Management; and most likely to have No Process in Succession Planning.
Talent Driven and Socially Responsible organizations also had 20% higher-than-average process maturity scores than their noncohort groups.

**Figure 112: Maturity Ratings for HR Processes**
Implementations & Maintenance

Congratulations! The business case worked: leadership sees the need for change, the current application no longer meets business needs, and the organization is clamoring for new Workforce Intelligence. When an organization makes the fateful decision to make a change, a multitude of issues face HR technologists and their teams:

- How much do I try to do at once?
- How long will this take?
- How much is this going to cost?
- What resources will I need now?
- What resources will I need for maintenance?
- How do I ensure adoption?

How an organization handles implementation can mean the difference between success or failure, regardless of the solution or vendor. Implementations require sponsorship, planning, resources, clear communications, and flexibility. After several years at high rates, HR technology replacement cycles are now stabilizing. On average, only 15% of organizations are Evaluating or Replacing at least one major HR application. However, Large organizations report slightly higher-than-average replacement and evaluation plans at 20%.

Figure 113: Plans for Replacing HR Technologies by Size

An organization’s current HR technology deployment plays a major role in whether it will make changes to its systems environment. Organizations with Licensed and Hybrid deployments are the most likely to make changes, particularly for HRMS, Payroll, and TM applications. Cloud deployment models aren’t immune to replacement efforts: 13% of organizations with HRMS, Payroll, WFM, and TM in the Cloud are evaluating a change, and 10% are replacing primary TM applications in the next 12–24 months.
Within the last year, 22% of Survey respondents have implemented an HR application, with 80% of those organizations completing an implementation in one of the four major HR technology categories. In addition, 16% of organizations implemented a Benefits application. Other application implementations included point solutions in these categories:

- HR Help Desk/Case Management
- HR Portals
- BI/Analytics Tools
- Performance Management
- ATS and Recruiting
- Rewards and Recognition
- Document Approval
- Learning Tools
- Global Mobility Tools
Implementation Scope & Timelines

Organizations need to decide which applications to implement first and which applications to implement together. Sometimes these decisions are based on budgetary concerns or the scale of the system being replaced, but often organizational complexity and size make the biggest difference. Overall, organizations are likely to implement a Payroll application with their HRMS implementation no matter the region or size. U.S. organizations are more likely to implement a Benefits application with their HRMS. While Small organizations are likely to add WFM, Large organizations are more likely to add TM to their implementation efforts. On average, organizations implement 2.88 applications with their HRMS.

Figure 116: HR Applications Implemented with the HRMS

Once an organization decides to either replace or upgrade an existing solution, the next step is to determine the timeline and cost. Implementation timelines are a challenge for organizations dealing with On Premise solutions, particularly for Large Global entities. Two- to three-year implementation timelines for enterprise-wide HRMS environments were not uncommon, especially when implemented with other enterprise-wide solutions such as Finance or Sales. With the advent of Cloud and more basic implementations of On Premise applications, timelines have consolidated considerably over the last few years.
The following figure provides insight into the average implementation timelines for the four primary HR technology categories by organizational size. HRMS and Payroll applications generally have the longest implementation timelines and, as previously reported, are frequently included in the same implementation. As larger and more complex organizations transform their HR system environments, implementation timelines are increasing.

**Figure 117: Average Implementation Timelines in Months by Size**

### Human Resource Management System

- **By Size, In Months**
  - Small: 6.95
  - Medium: 5.38
  - Large: 9.56

### Payroll

- **By Size, In Months**
  - Small: 7.49
  - Medium: 6.00
  - Large: 9.05

### Workforce Management

- **By Size, In Months**
  - Small: 7.21
  - Medium: 5.35
  - Large: 7.73

### Talent Management

- **By Size, In Months**
  - Small: 5.38
  - Medium: 5.35
  - Large: 11.52

In general, applications were rolled out to the entire organization at the same time, rather than through a phased approach, however some variations occur by size and region. Large organizations are more likely to leverage a phased rollout model, particularly those headquartered outside of the U.S. While Large European organizations are more likely to use a phased approach by geography, Asia Pacific organizations are more likely to use a phased approach by business units.
Implementation Resources

How do organizations resource the additional workload for the implementation of a new application? Options include Internal staff picking up the extra work, the selected System Vendor providing resources, or hiring a Third Party consulting organization for some of the work. Large organizations are more likely to leverage a Third Party, while Small organizations are more likely to leverage the System Vendor. This year, Third Party resourcing is up by 20% for Medium and Large organizations. Publicly traded and nonprofit organizations are more than twice as likely to use Third Party resources than privately owned organizations.

Respondents identified which resources were involved in various implementation tasks. Almost 50% of organizations had Internal resources involved in every aspect of the implementation process. System Vendor resources were most often involved in Systems Training and Configurations, and over 50% of Small organizations enlisted System Vendors to provide Strategy/Guidance, Process Training, Data Input, and Project Management. Third Party resources were most often involved in Integrations, Data Input/Setup, and Configurations, as well as more strategic tasks such as Project Management, Strategy, and providing guidance for the implementation efforts.
HR Systems Expenditures

Total HR technology expenditures are difficult to identify without clear benchmarking parameters, although we attempt to provide a general view of this data by organization size and complexity. These costs do not include salaries or external implementation costs. Total annual HR technology Costs per Employee average $148 for Large organizations to $319 for Small organizations; however, these numbers change dramatically based on Average Number of Applications implemented, Internal versus Third Party resources leveraged, global scale, and the complexity of support needs. These aggregate numbers are a helpful estimate that can provide a lens through which to review your organization’s year-over-year annual Costs per Employee.
This year, there was a decrease in Costs for Large organizations that may be the result of recent major system implementations. Cost for Small and Medium organizations remained relatively stable. Regardless of organization size, increases in Costs are common during major implementation years.

**Figure 121: Total HR Technology Costs per Employee by Size**

<table>
<thead>
<tr>
<th>Size</th>
<th>Costs per Employee</th>
<th>Average # of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>$274</td>
<td>8.04</td>
</tr>
<tr>
<td>M</td>
<td>$319</td>
<td>7.06</td>
</tr>
<tr>
<td>L</td>
<td>$196</td>
<td>9.70</td>
</tr>
<tr>
<td>S</td>
<td>$148</td>
<td>10.62</td>
</tr>
</tbody>
</table>

This data is an analysis of our aggregate data set, which includes everyone with low and high application-level adoptions.

We also compared total HR technology Costs by Deployment Model. Organizations with All On Premise deployments continue to see a decrease in Costs as they stretch the lifespan of these systems. Increasing costs by moving to a Cloud environment requires proof that the migration will be beneficial. Although organizations with All Cloud deployments paid, on average, 42% more per employee, they receive 45% more applications for that cost and achieve more value per dollar spent through bundled applications. Note: Small organizations’ average Cost per Employee will be slightly higher and Large organizations’ average Cost per Employee will be slightly lower.

**Figure 122: Total HR Technology Costs per Employee by Deployment Model**

<table>
<thead>
<tr>
<th>Deployment Model</th>
<th>Avg. # of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>All On Premise</td>
<td>6.12</td>
</tr>
<tr>
<td>Other</td>
<td>6.91</td>
</tr>
<tr>
<td>Hybrid</td>
<td>8.58</td>
</tr>
<tr>
<td>All Cloud</td>
<td>8.85</td>
</tr>
</tbody>
</table>

All Cloud Deployments include 45% More applications
The applications included in organizations' overall HR technology costs vary greatly. Most Large and Medium organizations include Core HRMS and Payroll, and some will include other applications, such as HR Portals and Help Desk. Small organizations are most likely to include Payroll and Benefits applications. Applications in use but not included in the total HR technology budget indicates that the budget is either held in a non-HR function or is part of a vendor contract outside of the HR technology scope; however, application administration and resourcing remains the responsibility of the HR department.

Figure 123: Applications Included in HR Technology Expenditures by Size

Ongoing Maintenance, Upgrades & Updates

Upgrading Licensed applications is still a major part of an organization's HR technology strategy. An average of 74% of organizations are on the most current version, ~18% are planning to Upgrade at some point, and ~8% have No Plans to Upgrade their current On Premise environment.

Figure 124: On Premise Applications Upgrade Plans
Timelines for Licensed HRMS Upgrades are relatively similar by organization size, averaging 8.51 months. For Cloud suites, vendors generally release two to three major Updates per year, with regular patch and minor system Updates in between. Although Cloud solution vendors release regular Updates, organizations may take different approaches to implementation. Some vendors provide various ways to test and model the impact of Updates before organizations go live. Often major Updates are released with all features initially turned off, allowing clients to turn on preferred features at their own pace. Organizations, however, sometimes ignore and/or forget about these updated features that could provide better User Experience. In the last year, there was a slight decline in the average time spent on Update efforts for Cloud HRMS, from 4.8 to 3.73 weeks. Automation efforts made by the vendor community and improved processes and role definition inside organizations may explain this decline. In general, major Cloud Updates still require 3 to 6 weeks for testing and Change Management efforts. Small and Medium organizations may require more time for Updates, as they often have fewer resources.

**Figure 125: HRMS Updates & Upgrade Average Timelines by Size**

**HRMS Cloud Updates Average in # of Weeks**

<table>
<thead>
<tr>
<th>Week</th>
<th>Large = 3.69 Weeks</th>
<th>Medium = 4.38 Weeks</th>
<th>Small = 3.12 Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HRMS On Premise Upgrade Average in # of Months**

<table>
<thead>
<tr>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large = 8.82 Months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium = 8.18 Months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small = 8.53 Months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Measuring Implementation Outcomes

To better understand how organizations determined implementation success beyond getting an application up and running, we analyzed four outcome factors: Resourcing, Timeline, Adoption, and Budget. Although most organizations reported that their implementations Met Expectations, the outcome that consistently fell short was Resourcing. Finding resources to focus both on the implementation and the day-to-day work will result in better outcomes. Those without an HR Systems Strategy were twice as likely to fall short in Resourcing and Adoption, and were three times as likely to fall short in Budget expectations.

Figure 126: Implementation Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Fell Short of Expectations</th>
<th>Met Expectations</th>
<th>Exceeded Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resourcing</td>
<td>37%</td>
<td>52%</td>
<td>11%</td>
</tr>
<tr>
<td>Timeline</td>
<td>36%</td>
<td>57%</td>
<td>7%</td>
</tr>
<tr>
<td>Adoption</td>
<td>23%</td>
<td>63%</td>
<td>14%</td>
</tr>
<tr>
<td>Budget</td>
<td>18%</td>
<td>72%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Organizations leveraging greater percentages of resources from their Systems Vendor reported improved outcomes in all areas (especially in Adoption levels), while organizations that leveraged Third Party resources saw improved outcomes in their Timeline and Budget expectations. Once again, Resourcing was most likely to fall short of expectations for Large organizations, while Small and Medium organizations struggled with Timelines.

A factor that positively influenced whether outcomes Exceeded Expectations was Certification. Organizations that had resources with some level of HRIS/HRIT certification achieved the highest percentage of outcomes that Exceeded Expectation across the board.

Figure 127: Exceeded Implementation Outcome Expectations by Certifications

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Certified HRIS/HRIT</th>
<th>Not Certified HRIS/HRIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>Timeline</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Adoption</td>
<td>18%</td>
<td>13%</td>
</tr>
<tr>
<td>Resourcing</td>
<td>12%</td>
<td>11%</td>
</tr>
</tbody>
</table>
Voice of the Customer

Understanding the relationship that organizations are developing with their current vendor solution has become another lens through which to view the total HR environment. We look at five major areas of customer feedback and analysis:

- **Application User Experience and Vendor Satisfaction Scores.** Over 1,006 respondents ranked the quality of User Experience for commonly deployed applications (i.e., HRMS, primary WFM, and primary TM) and their satisfaction with each vendor (many respondents provided feedback on multiple vendors).

- **Application Gap Data.** We've consistently tracked how effective various HR applications are at meeting their organization's basic business needs by vendor.¹

- **Application Customer Complexity Chart.** A recurring theme throughout this section is that less-complex organizations have fewer needs and are generally more satisfied with their solutions than their more-complex counterparts. As a result, vendors serving the SMB community often have higher ratings than vendors serving the enterprise market. The Complexity Charts for Payroll, HRMS, WFM, and TM compare the profile of vendors and include the following categories:
  - Average/Median Employee Size
  - Average/Median Number of Employees Served per HR Resource
  - Percentage of Global Organizations
  - Average/Median Number of Countries in which Companies Operate
  - Average/Median Number of Integrated Non-HR Systems
  - Average/Median Voluntary Turnover Percentage
  - Average/Median System Deployment Time
  - Average/Median Time Owned Percentage with a Shared Services Center

- **Vendor Solution Customer Feedback.** For HRMS applications, respondents provided insight into the primary Benefits and Challenges driving their Vendor Satisfaction rating. We provide an aggregate view of the top three reasons for their Vendor Satisfaction and Dissatisfaction ratings.

Payroll Voice of the Customer

**Payroll Application Gap Data**

Although Payroll processes can be complex and include regulation requirements, 52% of organizations are comfortable that their current Payroll application meets their businesses needs Most of the Time, and 28% responded that it Always meets their needs. This year, we also shared the percentage of organizations that felt it was too early to tell if the application was meetings their needs. Ultimate UltiPro and Paycor once again have the highest percentage of Always meeting customer needs, while Oracle HCM Cloud had the largest percentage of organizations who felt it was still too early to provide insight.

¹ Vendors must have at least 20 responses to be included in the charts in this section.
Figure 128: Does your Primary Payroll Vendor Meet Your Current Organizational Needs?

Payroll Customer Complexity Chart
The complexity chart compares the profile of individual organizations for Payroll solution areas.

Figure 129: Payroll Customer Complexity Chart

Payroll Vendor Meets Our Business Needs…

- Always
- Most of the Time
- Half of the Time
- Sometime
- IDK/Too Early

*Mean/Median
Core HRMS Voice of the Customer

Core HRMS Application User Experience & Vendor Satisfaction Scores

For the HRMS vendor marketplace, once again no single vendor solution achieved an average rating that exceeded expectations in either Vendor Satisfaction or User Experience scores—although Cloud solutions continue to achieve higher satisfaction ratings, every solution has opportunities to improve. This was the first time in several years that we’ve seen the HRMS Average Vendor Satisfaction and User Experience scores go down, by ~9% from last year. This is also the first year that we’ve seen User Experience scores for Cloud and On Premise applications begin to close ranks. The lowest average User Experience score is only 1.55 points below the highest score. In general, organizations report high levels of satisfaction with their current HRMS applications, and competition in this space has continued to increase.

Figure 130: HRMS Vendor Satisfaction & User Experience

The HRMS technology space exemplifies the value of competition in the market; the narrowing of the satisfaction gap is due to a mixture of increased scores and declining averages. The highest ranked organizations are only 0.11 points apart in User Experience scores. This is the first year that Ultimate UltiPro achieved the highest User Experience score, while Workday continues to hold the highest Vendor Satisfaction rating. In the SMB market, innovative new products are rapidly entering the HCM space, as many Payroll providers have expanded into this area further driving market competition.
HRMS Application Gap Data
Approximately 60% of organizations report that their current HRMS application meets their needs Most of the Time, and 14% report that it Always meets their needs. When we look at this gap data by specific applications, we see that Ultimate UltiPro, Paycor, Paychex, and Workday have the highest percentage of Always meeting needs, while Paychex has the largest percentage of organizations who felt it was Too Early to provide a rating.

Figure 131: Does your Primary HRMS Vendor Meet Your Current Organizational Needs?

HRMS Customer Complexity Chart
The complexity chart compares the profile of individual organizations for HRMS solution areas.

<table>
<thead>
<tr>
<th>HRMS Vendor</th>
<th>EE + Cont.*</th>
<th>EE/HR*</th>
<th>% Global</th>
<th># Countries*</th>
<th>Int. Non-HR Systems</th>
<th>Vol. Turnover*</th>
<th>Time owned*</th>
<th>% Shared Service Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate</td>
<td>12,049/1,200</td>
<td>101/87</td>
<td>33%</td>
<td>9/1</td>
<td>1.33</td>
<td>22%/15%</td>
<td>5.9%/4.0</td>
<td>59%</td>
</tr>
<tr>
<td>ADP GlobalView</td>
<td>44,231/20,000</td>
<td>73/74</td>
<td>88%</td>
<td>35/8</td>
<td>3.75</td>
<td>31%/13%</td>
<td>4.63/4.0</td>
<td>N/A</td>
</tr>
<tr>
<td>SAP HCM</td>
<td>43,886/16,500</td>
<td>140/102</td>
<td>71%</td>
<td>33/10</td>
<td>2.37</td>
<td>16%/13%</td>
<td>11.03/12.0</td>
<td>90%</td>
</tr>
<tr>
<td>Oracle JD Edwards</td>
<td>41,156/12,000</td>
<td>140/102</td>
<td>38%</td>
<td>12/1</td>
<td>2.48</td>
<td>16%/12%</td>
<td>13.47/15.0</td>
<td>78%</td>
</tr>
<tr>
<td>Kronos WFC</td>
<td>37,855/6,490</td>
<td>133/111</td>
<td>27%</td>
<td>15/1</td>
<td>1.58</td>
<td>19%/14%</td>
<td>8.36/7.5</td>
<td>63%</td>
</tr>
<tr>
<td>SkillSoft SumTotal</td>
<td>35,415/8,300</td>
<td>115/82</td>
<td>53%</td>
<td>21/2</td>
<td>2.00</td>
<td>22%/9%</td>
<td>6.58/4.0</td>
<td>77%</td>
</tr>
<tr>
<td>Oracle EBS</td>
<td>34,913/11,007</td>
<td>208/99</td>
<td>57%</td>
<td>33/6</td>
<td>2.41</td>
<td>18%/12%</td>
<td>10.04/10.0</td>
<td>76%</td>
</tr>
<tr>
<td>SAP SF EC</td>
<td>29,321/7,500</td>
<td>116/113</td>
<td>68%</td>
<td>33/9</td>
<td>2.04</td>
<td>19%/12%</td>
<td>3.84/3.0</td>
<td>75%</td>
</tr>
<tr>
<td>Oracle HCM Cloud</td>
<td>23,839/7,150</td>
<td>113/79</td>
<td>52%</td>
<td>16/2</td>
<td>2.50</td>
<td>15%/12%</td>
<td>3.47/2.0</td>
<td>67%</td>
</tr>
<tr>
<td>ADP Enterprise</td>
<td>18,492/7,500</td>
<td>125/100</td>
<td>63%</td>
<td>20/5</td>
<td>1.64</td>
<td>31%/20%</td>
<td>8.69/10.0</td>
<td>65%</td>
</tr>
<tr>
<td>Workday</td>
<td>18,053/3,900</td>
<td>105/83</td>
<td>56%</td>
<td>16/2</td>
<td>2.13</td>
<td>21%/13%</td>
<td>3.24/3.0</td>
<td>76%</td>
</tr>
<tr>
<td>Infor Lawson</td>
<td>17,223/6,110</td>
<td>223/163</td>
<td>14%</td>
<td>3/1</td>
<td>1.75</td>
<td>13%/12%</td>
<td>9.18/10.0</td>
<td>69%</td>
</tr>
<tr>
<td>Infor CloudSuite</td>
<td>8,252/9,500</td>
<td>92/75</td>
<td>N/A</td>
<td>4/1</td>
<td>0.58</td>
<td>25%/13%</td>
<td>3.17/3.0</td>
<td>58%</td>
</tr>
<tr>
<td>Ceridian Dayforce</td>
<td>4,933/780</td>
<td>105/84</td>
<td>32%</td>
<td>4/1</td>
<td>1.24</td>
<td>23%/16%</td>
<td>5.7/5.0</td>
<td>60%</td>
</tr>
<tr>
<td>Ultimate Ultipro</td>
<td>2,709/950</td>
<td>100/82</td>
<td>27%</td>
<td>4/1</td>
<td>0.69</td>
<td>21%/15%</td>
<td>6.44/5.0</td>
<td>61%</td>
</tr>
<tr>
<td>ADP WFN</td>
<td>1,694/533</td>
<td>84/65</td>
<td>32%</td>
<td>5/1</td>
<td>0.50</td>
<td>32%/32%</td>
<td>3.90/3.90</td>
<td>N/A</td>
</tr>
<tr>
<td>Paycom</td>
<td>642/339</td>
<td>86/86</td>
<td>15%</td>
<td>2/1</td>
<td>0.50</td>
<td>32%/32%</td>
<td>2.99/3.0</td>
<td>31%</td>
</tr>
<tr>
<td>Paycor</td>
<td>352/102</td>
<td>73/63</td>
<td>9%</td>
<td>2/1</td>
<td>0.35</td>
<td>25%/24%</td>
<td>3.99/3.0</td>
<td>31%</td>
</tr>
</tbody>
</table>

*Mean/Median
Workforce Management Voice of the Customer

Primary WFM Application User Experience & Vendor Satisfaction Scores

Organizations identified a primary WFM application; this usually includes the solution used for Time and Attendance or Scheduling by the largest percentage of their workforce population. The WFM vendor landscape includes many small niche solution providers, as well as a few established larger vendors. The market is poised for change, especially for vendors working to include the use of Predictive Analytics and AI in their solutions. WFM is highly regulated, but this complexity provides viable opportunities for an organization to improve its bottom line by leveraging the depth of data captured in a Time and Attendance application or showing real operational savings and improved engagement from predictive scheduling.

Figure 133: Workforce Management Vendor Satisfaction & User Experience

Buyer perception toward WFM applications is beginning to shift positively. For the first time in several years, the average Vendor Satisfaction and User Experience scores for WFM increased slightly. Increases continue in Vendor Satisfaction and User Experience scores for newer Cloud based WFM applications, including Ceridian Dayforce (who is currently outpacing everyone in both categories) and Kronos Workforce Ready. Kronos’ newest Cloud product, Workforce Dimensions, did not have enough responses to be included in this year’s matrix. Vendors with traditional HRMS applications are also enhancing their WFM modules, leading to improved scores for Workday and Oracle HCM Cloud. This space should continue to evolve as new vendors emerge and organizations look to improve their existing solutions that offer limited WFM capabilities.
WFM Application Gap Data
Overall, 56% of organizations are comfortable that their current WFM application meets their needs Most of the Time, and 19% responded that it Always meets their needs. By vendor, Paycor, ADP Workforce Now, Kronos Workforce Ready, and Ceridian Dayforce have the highest percentage of Always meeting needs, while ADP eTime has the highest percentage of organizations that feel it is Too Early to provide a response.

Figure 134: Does your Primary WFM Vendor Meet Your Current Organizational Needs?

WFM Customer Complexity Chart
The complexity chart compares the profile of individual organizations for WFM solution areas.

Figure 135: Workforce Management Customer Complexity Chart
Talent Management Voice of the Customer

Primary TM Application User Experience & Vendor Satisfaction Scores

Organizations identified a primary Talent Management (TM) application—this usually includes the application they are using to manage multiple key TM functions, such as Recruiting, Onboarding, Performance, or Learning. We put no restrictions on the solution they can select, as long as the vendor offers at least two TM modules as part of their solution. Buyers of TM applications reported turbulence over the last few years, as many major vendors were acquired, focused on going public, or simply vanished from the marketplace. Over the last year, TM vendors saw a ~12% drop in percentage points, the largest in average Vendor Satisfaction and User Experience score of all the categories reviewed.

Figure 136: Talent Management Vendor Satisfaction & User Experience

The TM vendor environment changes dramatically from year to year, but once again average enterprise vendor scores are comparable to niche TM vendor scores. Saba Halogen and Ultimate UltiPro had the highest Vendor Satisfaction and User Experience scores, followed closely by Silkroad, Ceridian Dayforce, and Workday. The TM space is ripe for disruption, and many vendors have shifted focus from rapid growth in this area to either ongoing maintenance and measurement or refocusing on the niche areas such as Learning, Recruiting, or Performance.
TM Application Gap Data

TM still has the most gaps of all of the application areas. In aggregate, 54% of organizations are comfortable that their current TM application meets their businesses needs Most of the Time, and 18% responded that it Always meets their needs, with Paycor, Infor Lawson, and Ultimate UltiPro having the highest percentages.

Figure 137: Does your Primary TM Vendor Meet Your Current Organizational Needs?

TM Customer Complexity Chart

The complexity chart compares the profile of individual organizations for TM solution areas.

Figure 138: Talent Management Customer Complexity Chart
Vendor and Buyers Opportunities

For further insights into Vendor Satisfaction, organizations are asked to provide details into which factors have the greatest impact on their ratings for each solution. No two vendors are alike, and each has something unique that it can offer to individual clients. The goal in capturing and providing Vendor Satisfaction and User Experience data is to provide a voice for the HR community in areas for which they would like to see improvements from their solution providers. We find that most buyers and users are generally satisfied with their current solutions and relationships but would prefer to see one or two items adjusted.

Figure 139: High and Low Vendor Satisfaction Drivers

The analysis of the key drivers associated with High and Low Vendor Satisfaction scores has changed little from last year; High Costs continue as the number one Challenge for organizations with low Vendor Satisfaction scores, while Good Service & Support remains the number one Benefit for high Vendor Satisfaction scores. Data continues to show that organizations with the highest per-employee HR technology costs generally have higher Vendor Satisfaction scores, but they also expect a great deal more for that investment. Organizations are looking for more value from their systems and more services from their vendors; this may explain why vendors that have invested heavily in additional services are seeing increased Vendor Satisfaction scores. Many vendors are also investing in automating some service areas, reducing time and cost for both the vendor and client, but automation does not necessarily translate into improved Vendor Satisfaction and User Experience scores.

Poor User Experience continues to be a Challenge and often connects to integration issues, lack of Mobile capabilities, and older interfaces. Service & Support and Customization again appear as key factors leading to both low and high Vendor Satisfaction ratings; although this could seem contradictory, traditional On Premise HRMS users are still very satisfied with their current vendor. Organizations investing heavily in customized On Premise solutions still value those Customizations as unique differentiators. Vendors focused on creating standardized Cloud HR technologies and hoping to convince On Premise organizations to move to the Cloud will need to include some way to recreate or find similar customized capabilities. New microservice applications and expanded partner marketplaces are just a few ways that vendors are trying to address these needs.
Vendor Solution Customer Feedback Details

Below are the Top 3 Benefits and Challenges selected for each HRMS 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 140: Percentage of Vendor Benefits and Challenges Selected by End-Users

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Top 3 Benefits</th>
<th>% Chosen</th>
<th>Top 3 Challenges</th>
<th>% Chosen</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADP Enterprise</td>
<td>Good service and support</td>
<td>52%</td>
<td>High costs</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>Good vendor relationship</td>
<td>48%</td>
<td>Inability to customize</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>Ease of integration</td>
<td>31%</td>
<td>Poor user experience</td>
<td>28%</td>
</tr>
<tr>
<td>ADP Global View</td>
<td>Good service and support</td>
<td>50%</td>
<td>Inability to customize</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Global functionality</td>
<td>33%</td>
<td>Poor user experience</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Good vendor relationship</td>
<td>33%</td>
<td>Lack of innovation</td>
<td>50%</td>
</tr>
<tr>
<td>ADP Workforce Now</td>
<td>Good service and support</td>
<td>34%</td>
<td>Inability to customize</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>Good vendor relationship</td>
<td>34%</td>
<td>Poor service and support</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>28%</td>
<td>Lack of configuration</td>
<td>25%</td>
</tr>
<tr>
<td>Ceridian Dayforce</td>
<td>Good service and support</td>
<td>46%</td>
<td>Poor service and support</td>
<td>42%</td>
</tr>
<tr>
<td></td>
<td>Good vendor relationship</td>
<td>45%</td>
<td>High costs</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Integrated solution</td>
<td>42%</td>
<td>Inability to customize</td>
<td>22%</td>
</tr>
<tr>
<td>Infor CloudSuite HCM</td>
<td>Industry specific functionality</td>
<td>60%</td>
<td>Poor service and support</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>40%</td>
<td>Lack of configuration</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>40%</td>
<td>Inability to customize</td>
<td>25%</td>
</tr>
<tr>
<td>Infor Lawson</td>
<td>Integrated solution</td>
<td>38%</td>
<td>Poor handling of updates/upgrades</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Ability to customize</td>
<td>31%</td>
<td>Poor user experience</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>31%</td>
<td>Lack of innovation</td>
<td>33%</td>
</tr>
<tr>
<td>Kronos Workforce Central</td>
<td>Good service and support</td>
<td>46%</td>
<td>Poor user experience</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>35%</td>
<td>High costs</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Positive user experience</td>
<td>32%</td>
<td>Inability to customize</td>
<td>24%</td>
</tr>
<tr>
<td>Oracle EBS</td>
<td>Ability to customize</td>
<td>57%</td>
<td>Poor user experience</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Global functionality</td>
<td>33%</td>
<td>Lack of innovation</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>33%</td>
<td>Poor handling of updates/upgrades</td>
<td>40%</td>
</tr>
<tr>
<td>Oracle HCM Cloud</td>
<td>Integrated solution</td>
<td>48%</td>
<td>Poor user experience</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>33%</td>
<td>Poor service and support</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Global functionality</td>
<td>29%</td>
<td>High costs</td>
<td>40%</td>
</tr>
<tr>
<td>Oracle JD Edwards</td>
<td>Ability to customize</td>
<td>60%</td>
<td>Poor user experience</td>
<td>67%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>60%</td>
<td>Poor service and support</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Good service and support</td>
<td>40%</td>
<td>Lack of integration complexities</td>
<td>33%</td>
</tr>
<tr>
<td>Oracle PeopleSoft</td>
<td>Ability to customize</td>
<td>66%</td>
<td>Poor user experience</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Integrated solution</td>
<td>32%</td>
<td>High costs</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>27%</td>
<td>Lack of innovation</td>
<td>31%</td>
</tr>
<tr>
<td>Paychex</td>
<td>Good service and support</td>
<td>50%</td>
<td>Poor user experience</td>
<td>44%</td>
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<tr>
<td></td>
<td>Good vendor relationship</td>
<td>42%</td>
<td>Inability to customize</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>33%</td>
<td>Poor service and support</td>
<td>33%</td>
</tr>
<tr>
<td>Paycom</td>
<td>Good service and support</td>
<td>56%</td>
<td>Inability to customize</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Positive user experience</td>
<td>44%</td>
<td>Functionality not specific for industry</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>44%</td>
<td>Poor service and support</td>
<td>22%</td>
</tr>
<tr>
<td>Paycor</td>
<td>Good service and support</td>
<td>68%</td>
<td>Poor service and support</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>Low costs</td>
<td>37%</td>
<td>Inability to customize</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Positive user experience</td>
<td>32%</td>
<td>Lack of configuration</td>
<td>21%</td>
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<tr>
<td>SAP HCM</td>
<td>Ability to customize</td>
<td>41%</td>
<td>Poor user experience</td>
<td>77%</td>
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<tr>
<td></td>
<td>Integrated solution</td>
<td>32%</td>
<td>Lack of innovation</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>32%</td>
<td>High costs</td>
<td>45%</td>
</tr>
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<td>SAP SuccessFactors EC</td>
<td>Global functionality</td>
<td>44%</td>
<td>Poor user experience</td>
<td>59%</td>
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<tr>
<td></td>
<td>Ability to customize</td>
<td>37%</td>
<td>Not an integrated solution</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>33%</td>
<td>Poor handling of updates/upgrades</td>
<td>18%</td>
</tr>
<tr>
<td>Skillsoft SumTotal</td>
<td>Positive user experience</td>
<td>43%</td>
<td>Poor user experience</td>
<td>33%</td>
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<tr>
<td></td>
<td>Ability to customize</td>
<td>43%</td>
<td>Poor service and support</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Good service and support</td>
<td>36%</td>
<td>Not an integrated solution</td>
<td>33%</td>
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<tr>
<td>Ultimate UtiPro</td>
<td>Good service and support</td>
<td>50%</td>
<td>High costs</td>
<td>39%</td>
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<td>Integrated solution</td>
<td>44%</td>
<td>Poor service and support</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Positive user experience</td>
<td>41%</td>
<td>Inability to customize</td>
<td>34%</td>
</tr>
<tr>
<td>Workday</td>
<td>Ease of configuration</td>
<td>43%</td>
<td>High costs</td>
<td>53%</td>
</tr>
<tr>
<td></td>
<td>Integrated solution</td>
<td>43%</td>
<td>Functionality not specific for industry</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Best practice functionality</td>
<td>43%</td>
<td>Inability to customize</td>
<td>31%</td>
</tr>
</tbody>
</table>
Emerging Technologies & Innovations

Each year, we track new HR technologies and topics that may impact your organization’s enterprise HR technology decisions. This year, we looked at the following categories:

- Mobile HR Technology
- Social Applications in HR
- Storage & Application Development:
  - IaaS
  - PaaS
- Intelligent Platforms & Tools:
  - Benchmarking Databases
  - Predictive Analytics
  - Sentiment Analysis
  - Machine Learning
  - Robotic Process Automation (RPA)
  - Blockchain Technology
- Total Enterprise Cloud Movement

While most of these Emerging Technologies are in the early stages of adoption, it is nevertheless important to monitor their usage rates because many will have an impact on the future of HR applications and the move to intelligent HR systems.

**Figure 141: Emerging Technology Adoption by the Aggregate**
We recently identified a new type of organization to include in our Outcome Focused category: Emerging Technology organizations. These entities consistently leverage higher-than-average percentages of new technology applications when compared to aggregate respondents. In its first year of assessment, this new category achieved 10% higher overall Talent, HR, and Business Outcomes than non-Emerging Technology organizations. We will continue to assess whether they consistently achieve better outcomes than their peers.

All Emerging Technology organizations have deployed Mobile HR and the majority are using Benchmarking Databases and Social HR applications. Incorporating Predictive Analytics is a high priority for Emerging Technology organizations over the next year.

Figure 142: Application Adoption by Emerging Technology Organizations

Mobile HR Becoming Table Stakes

The use of Mobile technology is so pervasive that expectations for its use in the workplace are at an all-time high. Last year, Mobile-enabled HR reached the tipping point and now it’s becoming table stakes, with close to 60% of organizations deploying some level of Mobile HR application.

As Mobile HR use continues to increase, the conversation will naturally evolve to focus on how companies are optimizing its use, extending the conversation beyond phones to include a wide range of mobile devices that facilitate workforce connections, such as tablets, headsets, wearables, and the Internet of Things (IoT). It will become paramount to define a strategy around which Mobile devices to employ for specific HR purposes to yield the greatest impact, especially for Emerging Technology organizations.

As workforce demographics continue to shift and incorporate younger generations who have become dependent on Mobile technology, strategic use of Mobile HR is especially important if organizations want to remain competitive and attract top talent. Beyond new hires, employees obtain a great deal of information on their Mobile devices and a lack of investment in this area will limit HR’s ability to reach them. Efficiencies gained by early Mobile HR adopters are decreasing, but the costs of not having Mobile access—higher inefficiency, poor perception of HR, and lower adoption of HR applications—are increasing.
Adoption rates for Mobile vary significantly by HR processes: organizations have a high propensity to deploy HR Management/Recordkeeping and Time and Attendance applications, followed by Payroll and Benefits applications, while adoption for Workforce/Labor Budgeting, Succession Planning, and HR Business Intelligence applications remain low. Over the next year, all areas will experience an uptick in use, but the largest increases are expected for talent-oriented applications, including Onboarding, Performance Management, and Learning.

On average, organizations have six Mobile-enabled HR technology applications today, with plans to increase to seven Mobile-enabled applications within the next 12 months.

<table>
<thead>
<tr>
<th>HR Application</th>
<th>% Using Mobile Today</th>
<th>% Planned Mobile 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Core HRMS</td>
<td>71%</td>
<td>75%</td>
</tr>
<tr>
<td>2 Time and Attendance</td>
<td>70%</td>
<td>74%</td>
</tr>
<tr>
<td>3 Payroll</td>
<td>64%</td>
<td>67%</td>
</tr>
<tr>
<td>4 Benefits</td>
<td>58%</td>
<td>65%</td>
</tr>
<tr>
<td>5 Absence Management</td>
<td>47%</td>
<td>53%</td>
</tr>
<tr>
<td>6 Recruiting/Talent Acquisition</td>
<td>46%</td>
<td>53%</td>
</tr>
<tr>
<td>7 Onboarding/Transition</td>
<td>38%</td>
<td>48%</td>
</tr>
<tr>
<td>8 Leave Management</td>
<td>35%</td>
<td>42%</td>
</tr>
<tr>
<td>9 Talent Management</td>
<td>28%</td>
<td>37%</td>
</tr>
<tr>
<td>10 Performance Management</td>
<td>28%</td>
<td>38%</td>
</tr>
<tr>
<td>11 Employee Profiles/Competencies</td>
<td>26%</td>
<td>33%</td>
</tr>
<tr>
<td>12 Learning/Training</td>
<td>25%</td>
<td>35%</td>
</tr>
<tr>
<td>13 Portal Applications</td>
<td>21%</td>
<td>27%</td>
</tr>
<tr>
<td>14 Labor Scheduling</td>
<td>19%</td>
<td>26%</td>
</tr>
<tr>
<td>15 Compensation Management</td>
<td>15%</td>
<td>23%</td>
</tr>
<tr>
<td>16 HR Help Desk</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>17 HR Business Intelligence</td>
<td>11%</td>
<td>19%</td>
</tr>
<tr>
<td>18 Succession/Career Planning</td>
<td>9%</td>
<td>16%</td>
</tr>
<tr>
<td>19 Workforce/Labor Budgeting</td>
<td>6%</td>
<td>11%</td>
</tr>
</tbody>
</table>
Social Applications in HR

The majority of Survey respondents agree that Social Media technology is a necessary tool in modern HR. With an abundant landscape of Social applications, organizations of all sizes are becoming more selective with the average number of Social applications in use, essentially transitioning from an experimental phase where more applications were leveraged to a selective phase where only the most effective applications are continually managed. On average, organizations are using 2.4 Social applications on a regular basis in their HR operations.

**Figure 145: Average Number of Social Applications in Use by Size**

LinkedIn and Collaboration Tools have clearly proven to be indispensable applications for HR among the aggregate, as well as for Emerging Technology organizations. Approximately 72% of aggregate Survey respondents and 100% of Emerging Technology organizations strategically use LinkedIn in their HR department today, while Collaboration Tools are leveraged by 56% of the aggregate and 96% of Emerging Technology organizations.

Size also plays a major factor in the selection of Social Media technology. Large organizations are more likely to use formal Collaboration and Corporate Networking applications, while Small organizations tend to conserve resources and focus on LinkedIn and Facebook.

**Figure 146: Strategic Use of Traditional Social Applications by Size**
A very small percentage of organizations in our aggregate data set, with the exception of Emerging Technology organizations, are strategically using applications such as Instagram, WhatsApp, Snapchat, Pinterest, and WeChat. On average, Emerging Technology organizations are three times more likely to use the following Social Media applications strategically than the aggregate:

- **Instagram**: 59% (versus 20%)
- **WhatsApp**: 28% (versus 9%)
- **Snapchat**: 24% (versus 5%)
- **Pinterest**: 9% (versus 3%)

**Figure 147: Strategic Use of Emerging Social Applications by Size**

Determining the precise mix of Social applications that are the most effective can take time, but companies ignoring Social Media as a communication method altogether risk maintaining relevancy with the current and future workforce. Furthermore, the use of Social tools needs to extend beyond Recruiting to general HR communication practices to continuously drive employee engagement.

In terms of effectively managing the constant stream of Social content necessary to strategically use a Social Media application, nearly 50% of organizations reported that this messaging was managed centrally through marketing, while 19% stated they had No Standard Approach.

**Figure 148: Social Content Messaging Approach**
Storage and Application Development

Infrastructure as a Service (IaaS)

Traditionally, an organization's IT platform strategy has been the sole purview of the CIO or Technology department; however, almost every technology application in the market today offers a Cloud-based option, which means that organizations should be having wider conversations around a platform strategy, especially when it comes to technology selection, integration, or data privacy issues.

As the overall cost of data storage decreases and expectations for secure access to Cloud solutions increase, IT leaders and vendors are realizing that maintaining the infrastructure and hardware for Cloud environments is an unnecessary expense. More importantly, scaling the structure fast enough to meet system adoptions and 24/7 demands is a constant challenge.

As a result, the use of large global public hosting organizations such as Amazon Web Services (AWS), Google Compute Engine, Microsoft Azure, and Oracle Cloud Platforms have become viable alternatives. These public hosting organizations initially offered Cloud space for small vendors and businesses unable to pay for their own storage, but now organizations are increasingly relying on these providers for their scalability, extensibility, support, security, and unimaginable levels of space that are provided at a fraction of the cost of an organization maintaining its own data center. Moving an On Premise application to one of these public Cloud environments is known as infrastructure as a service (IaaS).

A usage-rate snapshot of IaaS for HR applications revealed that approximately 20% of organizations are operating in an IaaS environment (slightly lower than last year), with another 15% Evaluating this option for future use. AWS is the preferred vendor of choice Today, followed by Microsoft Azure.

Figure 149: IaaS Adoption and Primary IaaS Vendors

<table>
<thead>
<tr>
<th>IaaS (Infrastructure as a Service)</th>
<th>Today</th>
<th>12 Months</th>
<th>Evaluating</th>
<th>No Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>IaaS (Infrastructure as a Service)</td>
<td>20%</td>
<td>3%</td>
<td>15%</td>
<td>62%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary IaaS Vendor</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Web Services</td>
<td>39%</td>
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<tr>
<td>Microsoft Azure</td>
<td>32%</td>
</tr>
<tr>
<td>Other</td>
<td>18%</td>
</tr>
<tr>
<td>Google Compute Engine</td>
<td>7%</td>
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<tr>
<td>Rackspace Open Cloud</td>
<td>5%</td>
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</tbody>
</table>
Platform as a Service (PaaS)

Platform as a service (PaaS) was pioneered by organizations like Google with their App Engines and development toolkits. In a nutshell, PaaS increases the development of third-party applications available through existing browser-specific and technology infrastructure. There are multiple forms of Public, Private, and Hybrid PaaS environments. A more common model, however, for HR technology is rapid development PaaS, made famous by Salesforce.com and its Force.com PaaS environment, which was designed to provide licensed developers with access to the platform and tools needed to quickly create complex multitenant applications. PaaS also allows a vendor the ability to offer customizations (industry- or business-need specific) to a Cloud environment.

Examples of HR PaaS environments exist today with Oracle, SAP, Cornerstone, and Workday. Other organizations, such as Ultimate, ADP, and Ceridian choose to control platform development and integration and instead work with select partners to create large marketplaces where third-party solutions offer predeveloped applications that can be purchased directly from the marketplace; these solutions offer extensibility to the existing Cloud solution while assuring low-hassle integration with their applications.

Figure 150: PaaS Adoption

<table>
<thead>
<tr>
<th>Use Within HR System Environment</th>
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</thead>
<tbody>
<tr>
<td>Today</td>
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<tr>
<td>PaaS (Platform as a Service)</td>
</tr>
<tr>
<td>20%</td>
</tr>
</tbody>
</table>

Of 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, 20% of organizations are leveraging PaaS infrastructure technology in conjunction with their HR systems, and nearly 17% are Evaluating future use. Survey respondents cited Workday and Oracle as the most common platforms PaaS applications are developed on.

The Emergence of Intelligent Platforms

Innovation comes in many formats, the least of which is simply newer and bigger systems. The next generation of workplace technology is being designed to inform our decisions and simplify our activities; it is meant to be invisible and ubiquitous in our lives and is expected to continuously gather data necessary for maintaining multiple intelligent platforms, which over time will likely create an even more intelligent platform where data is housed and accessed by multiple applications.

The line between what organizations want and what they can do comes down to one simple issue: building blocks. The first building block is Data. Understanding your organizational data is a critical step in developing an environment for tomorrow’s Intelligent Platforms. Every intelligent platform requires immense amounts of historical and current data to train and test. Although it can be tempting to buy into the vendor hype that you can leapfrog over these data requirements, just imagine your smartphone’s voice-activated digital assistant trying to explain the multiple variations of your Onboarding process to your CEO. If that image was disturbing, think about how the intelligent platform feeding your HR applications will need both data and time before it becomes a valuable member of your HR technology ecosystem.
In addition to HR system applications, data is captured from employees through a variety of other ways. On average, organizations are using 3.2 methods to capture Employee Data outside of HR applications. Exit Interviews are by far the most popular method for organizations of all sizes, followed by Employee Surveys and company-issued Wearables/Badges/RFID. Beyond these top three methods, Large and Medium organizations prefer to leverage Pulse Surveys (63% and 61% respectively), while smaller companies are quicker to rely on Video and Internet Monitoring.

**Figure 151: Methods of Capturing Employee Data**

<table>
<thead>
<tr>
<th>Method</th>
<th>All Organizations</th>
<th>Emerging Technology Companies</th>
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</thead>
<tbody>
<tr>
<td>Exit Interviews</td>
<td>86%</td>
<td>100%</td>
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<tr>
<td>Employee Surveys</td>
<td>72%</td>
<td>93%</td>
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<tr>
<td>Wearables/Badges/RFID</td>
<td>61%</td>
<td>68%</td>
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<tr>
<td>Video Monitoring</td>
<td>53%</td>
<td>67%</td>
</tr>
<tr>
<td>Pulse Surveys</td>
<td>44%</td>
<td>39%</td>
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<tr>
<td>Internet/Screen Monitor</td>
<td>37%</td>
<td>57%</td>
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<tr>
<td>Social Media</td>
<td>25%</td>
<td>57%</td>
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<tr>
<td>Personal Mobile Devices</td>
<td>25%</td>
<td>39%</td>
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<tr>
<td>Biometric Sensors</td>
<td>23%</td>
<td>55%</td>
</tr>
<tr>
<td>Audio Monitoring</td>
<td>16%</td>
<td>53%</td>
</tr>
<tr>
<td>Environmental Sensors</td>
<td>12%</td>
<td>50%</td>
</tr>
</tbody>
</table>

We also found that Emerging Technology companies use, on average, 4.0 methods and are more likely to capture employee data in almost all areas over the aggregate data set, with 100% conducting Exit Interviews and 93% performing Employee Surveys.

**Figure 152: Methods of Capturing Employee Data by Emerging Technology Organizations**
Now that we have established how vital employee data is in the intelligent HR platform ecosystem, it’s a good time to point out that increasing the number of employee data sources should not come at the expense of having a strategy in place to aggregate the Employee Data Footprint. Today, only 12% of organizations have such a Strategy in place and another ~12% are currently In Development. More concerning is the fact that 42% of organizations that we surveyed did not even know if they had an Employee Data aggregation and management plan or Strategy in place at this time.

Figure 153: Employee Data Footprint Strategy

What should an organization do with its data after it has been identified, gathered, and made accessible via a Workforce Intelligence application? Data must be refined, analyzed, put into context, evaluated for ethical issues, and shared in a way that provides value to the organization, creating either awareness or assistance in decision-making efforts. Using data without proper cleansing or analysis could result in catastrophic situations for an organization. Initially, accessing and leveraging data may be a risk and yield very little value, but those organizations able to harness the data will reap the long-term benefits. As organizations simplify the data collection process and build incentives for data sharing, data can become an infinite resource. Data can also be reused and recycled and provide insights, both internally and externally, when compared to broader data sets. Our Survey identifies the tools using data today and those that are most relevant to the evolution of emerging Intelligent Platforms. These early technology efforts are the next building blocks for tomorrow’s intelligent systems.

Benchmarking Databases

Benchmarking—a comparison exercise that organizations undertake against competitors or peers—uses a data set obtained from systems, interviews, surveys, or simple observation by an entity that chooses to keep that information. One of the key benefits of using multitenant Cloud technologies is that, with permission, vendors have the ability to aggregate their client data for more accurate and broader benchmarking efforts in many areas. This may include metrics, activities, usage data, or key practices.

While benchmarking is a mature activity, Cloud platforms facilitate the aggregation of broader benchmarking efforts. Currently, ~29% of organizations are leveraging Benchmarking Databases as part of their HR technology, with another 16% 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 Platforms of the future.
Predictive Analytics

Predictive Analytics is a branch of advanced analysis that relies on existing data sets and statistical models to determine future possibilities. Currently, ~17% of organizations are leveraging Predictive Analytics as part of their HR technology, with another ~22% Evaluating these tools.

Organizations wishing to use Predictive Analytics face many challenges, including data quality, data volume, and data bias—any one of which could derail a Predictive Analytics model. Predictive Analytics is an iterative science with models that must be adjusted frequently to achieve accurate and actionable insights.

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 from large data sets. These tools often analyze unstructured data required for Predictive Analytics over time and provide richer context to benchmarking analyses' data and other employee engagement efforts. Today, only ~9% of organizations have adopted any form of Sentiment Analysis, and another ~13% are Evaluating their options.

Machine Learning

Machine Learning is a type of AI that allows a computer the ability to perform a specific task without precise instructions. The purpose of Machine Learning is for the technology to constantly teach itself as data inputs are received. In HR, we see organizations investing in Machine Learning for Recruiting, Performance Management, Health and Wellness Programs, and operations-specific requirements. Only ~9% of organizations have explicitly adopted Machine Learning today, but ~21% are Evaluating the technology for future use. In addition, Machine Learning may be embedded in existing technology over time.

Much of what is currently being called AI or Intelligent Systems in HR technology environments today are early forms of Machine Learning.

Robotic Process Automation

Robotic Process Automation (RPA) software is programmed to perform routine and repetitive transactions based on a rule-based engine, essentially operating as a virtual workforce that improves the speed and accuracy of the work. The software, or bot, replicates human execution of tasks via existing user interfaces: it captures and interprets existing applications, manipulates data, triggers responses, and communicates with other systems. It can also be applied to existing applications without changing the current IT landscape.

Organizations using RPA often apply these applications to administrative tasks in Onboarding, Payroll, and Benefits to allow HR administrators to manage more complex work in these areas. Only ~9% of organizations were aware of the use of RPA applications in the context of HR, but ~15% were Evaluating the application for future use.
Blockchain technology is a data structure that makes it possible to create a digital ledger of transactions and share it among a distributed network of computers. Specifically, it is a growing list of records, called blocks, that are separately encrypted. Each block contains cryptography, hash/signature (of previous block), timestamp, and transaction data.

By design, a Blockchain is resistant to modification of the data. It is an open, distributed ledger that can record transactions between two parties in a verifiable and permanent way. Once recorded, the data in any given block cannot be altered retroactively without changing all subsequent blocks, which requires consensus of the network majority.

Although this technology is in its very earliest of stages, many forward-looking organizations believe Blockchain technology will fundamentally change many of the following HR practice areas:

- Instant Payroll/Noncash Payments
- Reference Checks
- Certification Verification
- Performance Ratings
- Job/Career History Management
- Background Checks

Although most of these examples are still hypothetical, ~4% of organizations reported that they are currently using Blockchain applications in their HR technology environments. Early adopting organizations are definitely building business cases for future applications, but they are unlikely to be mainstreamed in the next several years.

**Figure 154: Intelligent Systems Building Blocks, Summary**

<table>
<thead>
<tr>
<th>Use Within HR System Environment</th>
<th>Today</th>
<th>12 Months</th>
<th>Evaluating</th>
<th>No Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmarking Databases</td>
<td>29%</td>
<td>6%</td>
<td>16%</td>
<td>48%</td>
</tr>
<tr>
<td>Predictive Analytics</td>
<td>17%</td>
<td>14%</td>
<td>22%</td>
<td>46%</td>
</tr>
<tr>
<td>Sentiment Analysis</td>
<td>9%</td>
<td>3%</td>
<td>13%</td>
<td>75%</td>
</tr>
<tr>
<td>Machine Learning</td>
<td>9%</td>
<td>7%</td>
<td>18%</td>
<td>65%</td>
</tr>
<tr>
<td>Robotic Process Automation</td>
<td>9%</td>
<td>7%</td>
<td>15%</td>
<td>70%</td>
</tr>
<tr>
<td>Blockchain</td>
<td>4%</td>
<td>2%</td>
<td>11%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Overall adoption of these tools is slowly increasing. In the last year, RPA tools experienced the largest increase at ~50%. Ignoring the growing hype and focus in these areas is not advisable—this technology movement is not a trend but rather a whole new way of working. The best advice is to walk into this era with eyes open, clearly evaluating the risks, rewards, limitations, and possibilities inherent in this new future.
Total Enterprise Cloud Movement

As we wrap up this year’s report, we want to remind HR leaders that they can provide guidance and leadership as Finance and Supply Chain functions continue to make their own journey into the Cloud. In asking organizations which non-HR business systems (Sales/CRM, Vendor/Supply Chain Management, Marketing, Financial, Operations/Production, and Active Directory Systems) will join HR in the Cloud, our data shows the strongest candidate is Sales/CRM solutions at 41%. This transformation effort, in part, has been spearheaded by organizations such as Salesforce.com.

Across all Survey respondents, ~26% have at least one non-HR business application in the Cloud, and ~11% of Survey participants have all non-HR business applications in the Cloud.

Figure 155: 2019 Business Systems – On the Move to the Cloud

While HR technology transformation efforts may seem slow and sometimes painful, in tech terms, they have been quite rapid. Within twenty years, the focus of HR technology applications has shifted from administrative tools to end-user engagement platforms; over the last ten years, Cloud has gone from a concept to a reality, with over 50% of organizations deploying Cloud-based HR applications. Non-HR Business applications are moving just as fast, with the number of organizations deploying applications in the Cloud doubling in the last four years.

HR not only has the technical and Change Management experience valuable for navigating this upcoming enterprise Cloud transformation, but it also has the benefit of pushing its own technology market to develop applications with a focus on added value over administrative cost savings. 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.
In the figure above, the influence of various system strategies can be seen on Business Outcomes as organizations with HR System Strategies, Finance Systems Strategies, and Supply Chain System Strategies are highly correlated with improved Business Outcomes. The focus on increased business value provides an opportunity to help colleagues in Finance, Marketing, and Vendor Management understand the value of their systems.

**Long-Term Perspective**

Twenty-two years of Survey history gives Sierra-Cedar long-term insights into the trends with staying power in today’s HR marketplace.

HR Technologists are facing a rapidly changing world that requires management of an overwhelming amount of information and constant skill development. In the beginning of this research effort, our quest was to prove the value of HR technology. Today, the need for HR systems is no longer a debate, therefore our research focuses on helping HR Technologists and business leaders choose, use, maintain, connect, and harness the power of various systems to achieve desired outcomes. The future of HR technology is here and now, but we will always be asking, “What’s next?”

**Technology is a useful servant but a dangerous master.**  
– Christian Louis Lange,  
from his Nobel Peace Prize Acceptance Speech

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 & 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 & Breadth of the Research

Each year, nearly 2,000 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 distributors, with only 4% from the Sierra-Cedar client base. This outreach approach provides a broad and varied audience for gathering data on technology adoption and usage metrics, while safeguarding against data bias towards any particular vendor or user community so that data represents the overall HR technology environment.

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

- Technology adoption for Core HRMS, Payroll, Benefits, Workforce Management, Talent Management, and HR Business Intelligence 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, maintenance, or Change Management efforts. Many organization executives and business leaders who focus on workforce technology issues also find the Survey results of interest.

Figure 157: Survey Methodology

We follow 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 within the HR community. All participants are kept strictly anonymous, and only aggregate data is used.
Outcome Focused HR Methodology

In our quest to conduct research that provides insight to the HR technology community’s most challenging questions—such as adoption, cost, and value—we ask a wide range of questions concerning an organization’s demographics, HR technology environment, and business/mission.

We also independently gather key financial metrics on Publicly Traded organizations. We use this data to deliver insight into the correlation of specific HR practices and technology to business and financial outcomes.

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

- Revenue per Employee
- Profit per Employee
- Operating Income Growth
- Return on Equity

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

Figure 158: HR, Talent & Business Outcomes

<table>
<thead>
<tr>
<th>Talent Outcomes</th>
<th>Strongly Declined</th>
<th>Declined 0</th>
<th>0.5</th>
<th>1</th>
<th>1.5</th>
<th>2</th>
<th>2.5</th>
<th>3</th>
<th>3.5</th>
<th>4</th>
<th>4.5</th>
<th>5</th>
<th>Not Applicable</th>
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<tbody>
<tr>
<td>Ability to Attract Top Talent</td>
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<td>Ability to Develop a Highly Qualified Workforce</td>
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<td>Availability of Workforce Data for Decision Making</td>
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<td>Talent Mobility</td>
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<td>Retention of Top Talent</td>
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<td>HR Outcomes</td>
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<td>Employee Engagement</td>
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<td>Employee and Manager Productivity</td>
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<td>HR Alignment with Business Strategy</td>
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<td>HR Cost Efficiency</td>
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<td>Business Outcomes</td>
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<td>Competitive Advantage</td>
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<td>Customer (Constituent) Satisfaction</td>
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<td>Innovation</td>
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<td>Market Share</td>
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<td>Organizational Profitability</td>
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</table>
Data analysis uncovers variations in how organizations approach both their business and technology decisions and patterns in how they achieve positive outcomes in multiple ways. When assessing organizations, there is no right or wrong approach to HR technology investment: the five different types of organizations used in our comparison analysis are as follows:

- Top Performing
- Talent Driven
- Emerging Technology
- Data Driven
- Socially Responsible

**Top Performing Organizations**

We focus on finding high value from HR technologies and associated best practices by looking at Top Performing organizations—those with high financial performance—as determined by metrics in the following areas:

- Revenue per Employee
- Profit per Employee
- Operating Income Growth
- Return on Equity

The focus for Top Performing organizations is often one of financial outcomes, which may be realized at the expense of long-term planning. Top Performing organizations are selected because they fall into the top quartile of all four specific financial metrics. The average level of Top Performing organizations’ financial metrics as compared to Non-Top Performing organizations are detailed below.

**Figure 159: Top Performing Organizations**

<table>
<thead>
<tr>
<th></th>
<th>Top Performing Top Quartile</th>
<th>Non-Top Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Per Employee</td>
<td>1,594,580</td>
<td>489,682</td>
</tr>
<tr>
<td>Profit Per Employee</td>
<td>686,574</td>
<td>291,968</td>
</tr>
<tr>
<td>Operating Income Growth (1 year)</td>
<td>61%</td>
<td>1%</td>
</tr>
<tr>
<td>Return On Equity</td>
<td>47%</td>
<td>9%</td>
</tr>
</tbody>
</table>
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:

- **Succession/Career Planning Process Maturity**: high levels of function in Succession Planning that is either Effective (i.e., aligned, best practice, and strategically focused) or Transformational (i.e., unique, stands above others, and contributes to competitive advantage financially, enabling the organization to be an employer of choice)
- **Succession Planning**: systematic solutions addressing workforce changes
- **HR Analytics Outcomes**: leveraging HR analytics to accomplish key talent outcomes. Organizations must identify at least one of three key talent outcomes addressed by HR analytics:
  - Employee Engagement
  - Employee Retention Risks
  - Identifying Top Talent

The average behaviors of Talent Driven organizations as compared to Non-Talent Driven organizations' index qualifiers are detailed below.

### Figure 160: Talent Driven Organizations

<table>
<thead>
<tr>
<th></th>
<th>Talent Driven</th>
<th>Non-Talent Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Succession/Career Planning Process Maturity</strong></td>
<td>3.03 Effective</td>
<td>1.14 Random</td>
</tr>
<tr>
<td><strong>Succession Planning</strong></td>
<td>100%</td>
<td>82%</td>
</tr>
<tr>
<td><strong>HR Analytics to ID Top Talent</strong></td>
<td>63%</td>
<td>36%</td>
</tr>
<tr>
<td><strong>HR Analytics to ID EE Retention Risks</strong></td>
<td>75%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>HR Analytics to ID EE Engagement</strong></td>
<td>84%</td>
<td>48%</td>
</tr>
</tbody>
</table>
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 reporting Effective or better levels of BI Process Maturity
- **Manager Access to BI Analytics**: managers supporting their workforce decision-making directly with HR analytics and BI
- **BI Data Sources**: HR analytics processes integrating additional workforce data, including core HR, WFM, TM, financials, sales, and various operational systems
- **Categories of Metrics Tracked**: organizations making informed business decisions and optimizing their workforce with the help of metrics from Recruiting, Turnover/Retention, Learning, Compensation, Absence, Performance, Productivity, and Demographics categories

The average behaviors of Data Driven organizations as compared to Non-Data Driven organizations’ index qualifiers are detailed below.

**Figure 161: Data Driven Organizations**

<table>
<thead>
<tr>
<th></th>
<th>Data-Driven</th>
<th>Non-Data-Driven</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BI Process Maturity</strong></td>
<td>3.13</td>
<td>1.67</td>
</tr>
<tr>
<td></td>
<td>Effective</td>
<td>Efficient</td>
</tr>
<tr>
<td><strong>Manager Access to BI Analytics</strong></td>
<td>75%</td>
<td>43%</td>
</tr>
<tr>
<td><strong>BI Data Sources</strong></td>
<td>4.6</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Categories of Metrics Tracked</strong></td>
<td>5.25</td>
<td>3.49</td>
</tr>
</tbody>
</table>
Emerging Technology Organizations

Emerging Technology organizations are entities that support an environment of using Emerging Technology to advance 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:

- **Mobile-Enabled HR**: processes accessible through mobile technology
- **Socially Enabled Applications**: strategic use of social tools, such as LinkedIn, Twitter, Instagram, etc., for HR activities
- **Intelligent Technology**: using of any of the following Intelligent Platforms to advance the future of work:
  - Benchmarking Databases
  - Predictive Analytics
  - Sentiment Analysis
  - Machine Learning
  - Robotics Process Automation
  - Blockchain

The average behaviors of Emerging Technology organizations as compared to Non-Emerging Technology organizations’ index qualifiers are detailed below.

**Figure 162: Emerging Technology Organizations**

<table>
<thead>
<tr>
<th></th>
<th>Emerging Tech</th>
<th>Non-Emerging Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile-Enabled HR</td>
<td>100%</td>
<td>53%</td>
</tr>
<tr>
<td>Apps Accessed via Mobile</td>
<td>8.8</td>
<td>5.8</td>
</tr>
<tr>
<td>Socially-Enabled Applications</td>
<td>5.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Intelligent Technology</td>
<td>100%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Socially Responsible Organizations

Socially Responsible organizations’ HR practices support an environment of Social responsibility as it relates to their workforce. When identifying these organizations, we use a unique index of Social responsibility qualifiers that provide us with a year-over-year review of these cohorts. Each year, we ask organizations to rate themselves—from Terrible to Excellent on a scale of 1–5—on how well they address a variety of Social Responsibility initiatives:

- Diversity and Inclusion
- Compensation/Pay Equality
- Flexible Scheduling/Remote Work
- Paid Family Leave
- Healthcare Benefits
- Employee Assistance Programs (EAPs)
- Corporate Wellness Programs
- Financial/Retirement Wellness
- Tuition Assistance/Loan Repayment Programs
- Employee Engagement & Recognition Programs
- Contingent Workforce Management
- Outplacement Services
- Community Volunteering

Organizations that are in the Top 10% of overall ratings are considered Socially Responsible organizations. The average level of rating for each Social Responsibility initiative area for Socially Responsible organizations compared to the remaining Non-Socially Responsible organizations are detailed below.

**Figure 163: Socially Responsible Organizations**

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Socially Responsible</th>
<th>Non-Socially Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity and Inclusion</td>
<td>4.68</td>
<td>3.67</td>
</tr>
<tr>
<td>Compensation/Pay Equality</td>
<td>4.49</td>
<td>3.52</td>
</tr>
<tr>
<td>Flexible Scheduling/Remote Work</td>
<td>4.38</td>
<td>3.28</td>
</tr>
<tr>
<td>Paid Family Leave</td>
<td>4.65</td>
<td>3.24</td>
</tr>
<tr>
<td>Healthcare Benefits</td>
<td>4.94</td>
<td>3.90</td>
</tr>
<tr>
<td>Employee Assistance Programs (EAPs)</td>
<td>4.93</td>
<td>3.58</td>
</tr>
<tr>
<td>Corporate Wellness Programs</td>
<td>4.42</td>
<td>3.03</td>
</tr>
<tr>
<td>Financial/Retirement Wellness</td>
<td>4.80</td>
<td>3.35</td>
</tr>
<tr>
<td>Tuition Assistance/Loan Repayment</td>
<td>4.29</td>
<td>2.65</td>
</tr>
<tr>
<td>Employee Engagement/Recognition</td>
<td>4.72</td>
<td>3.15</td>
</tr>
<tr>
<td>Contingent Workforce Management</td>
<td>3.74</td>
<td>2.36</td>
</tr>
<tr>
<td>Outplacement Services</td>
<td>3.05</td>
<td>1.75</td>
</tr>
<tr>
<td>Community Volunteering</td>
<td>4.38</td>
<td>2.96</td>
</tr>
</tbody>
</table>
The Sierra-Cedar 2019–2020 HR Systems Survey, 22nd Annual Edition was conducted from April 9th through June 10th, 2019. Responses are subject to an extensive cleansing process resulting in the final totals below based on unique entities divided into three organization sizes. The 2019–2020 data set includes Small organizations down to 30 employees because organizations at this size leverage enterprise-level HR technologies at early stages of their growth trajectory. A wide range of organizations participate in the Survey annually; the data is categorized into 12 primary industries.

Figure 164: Demographics Information: All Respondents
The 1,892 organizations represent multiple organization types. Survey respondents are a mixture of HR and IT practitioners, along with professionals who have led technology selections, implementations, or Change Management efforts. These respondents are intimately involved as HR technology decision makers.

**Figure 165: Organization Types, Participants by Function, and Participants by Role**

Organizations Types
- Privately Owned: 50%
- Publicly Traded: 19%
- Nonprofit: 17%
- Government Owned: 9%
- Subsidiary/Other: 5%

Participants by Function
- Human Resources: 66%
- Finance: 5%
- Information Tech: 7%
- Line of Business: 2%
- TM & Learning: 11%
- Other: 9%

Participants by Role
- Manager/Director: 52%
- Individual contributor: 28%
- Executive: 14%
- Other: 6%

On average, Survey respondents have been employed for three years in their current role and more than one-third have a Master/Graduate degree. Approximately half of Survey participants have either an HR or IT-related certification. Examples of HR certifications that respondents actively hold include Human Resource Information Professional (IHRIM-HRIP), Professional in Human Resources (HRCI-PHR), SHRM Certified Profession (SHRM-CP), and Senior Professional in Human Resources (HRCI-SPHR).

**Figure 166: Survey Respondents’ Experience**

<table>
<thead>
<tr>
<th>Years in Role</th>
<th>Education Level</th>
<th>HR &amp; IT Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 Year</td>
<td>H.S. Graduate/ Equivalent: 1%</td>
<td>Yes: 50%</td>
</tr>
<tr>
<td>1–3 Years</td>
<td>Some College: 9%</td>
<td>No: 50%</td>
</tr>
<tr>
<td>3–5 Years</td>
<td>Associates Degree: 5%</td>
<td></td>
</tr>
<tr>
<td>5–10 Years</td>
<td>Bachelor’s/ Undergraduate Degree: 46%</td>
<td></td>
</tr>
<tr>
<td>&gt;10 Years</td>
<td>Master’s/ Graduate Degree: 35%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Doctorate/ Professional Degree: 4%</td>
<td></td>
</tr>
</tbody>
</table>

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The Sierra-Cedar HR Systems Survey’s worldwide audience includes Global organizations operating in multiple countries outside their headquartered country.

Figure 167: Demographics – International and Global Organizations

In order to gain additional insight into technology adoption within organizations, we asked Survey respondents to estimate the age range of their workforce. We show those breakouts by size below and have included further analysis on generations in previous sections of the paper, categorizing organizations by whether they have on average an older workforce, younger workforce, or a workforce equally spread across all generations.

Figure 168: Generations

For more details or questions on this year’s Annual HR Systems Survey data set, please contact us at HRSystemsSurvey@Sierra-Cedar.com.
About Sierra-Cedar

Sierra-Cedar helps organizations navigate their application and technology roadmap, whether modernizing an existing portfolio or moving to emerging technologies. The integration of industry knowledge, deep technology capabilities, breadth of service offerings, and a global delivery model translate into best-value solutions for your organization. Our services are categorized into industry-based consulting services and industry-agnostic shared services that focus on strategic, implementation, and upgrade services across multiple technologies.

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