

Estimating Labor and Non-Labor Costs Associated with Common Human Resources (HR) Functions/Tasks Cost Update 2021

July 2021



Executive summary

This report estimates the labor and non-labor costs associated with the completion of common Human Resources (HR) tasks. This is an update of the costs in the 2018 report, using the survey data from 2018 inflated using appropriate inflation factors.

For the original 2018 report, EY surveyed 504 individuals who work:

- at companies headquartered in the United States,
- for companies who employ between 250 and 4,999 total employees
- with either the HR department or executive management/senior leadership
- in a supervisory role

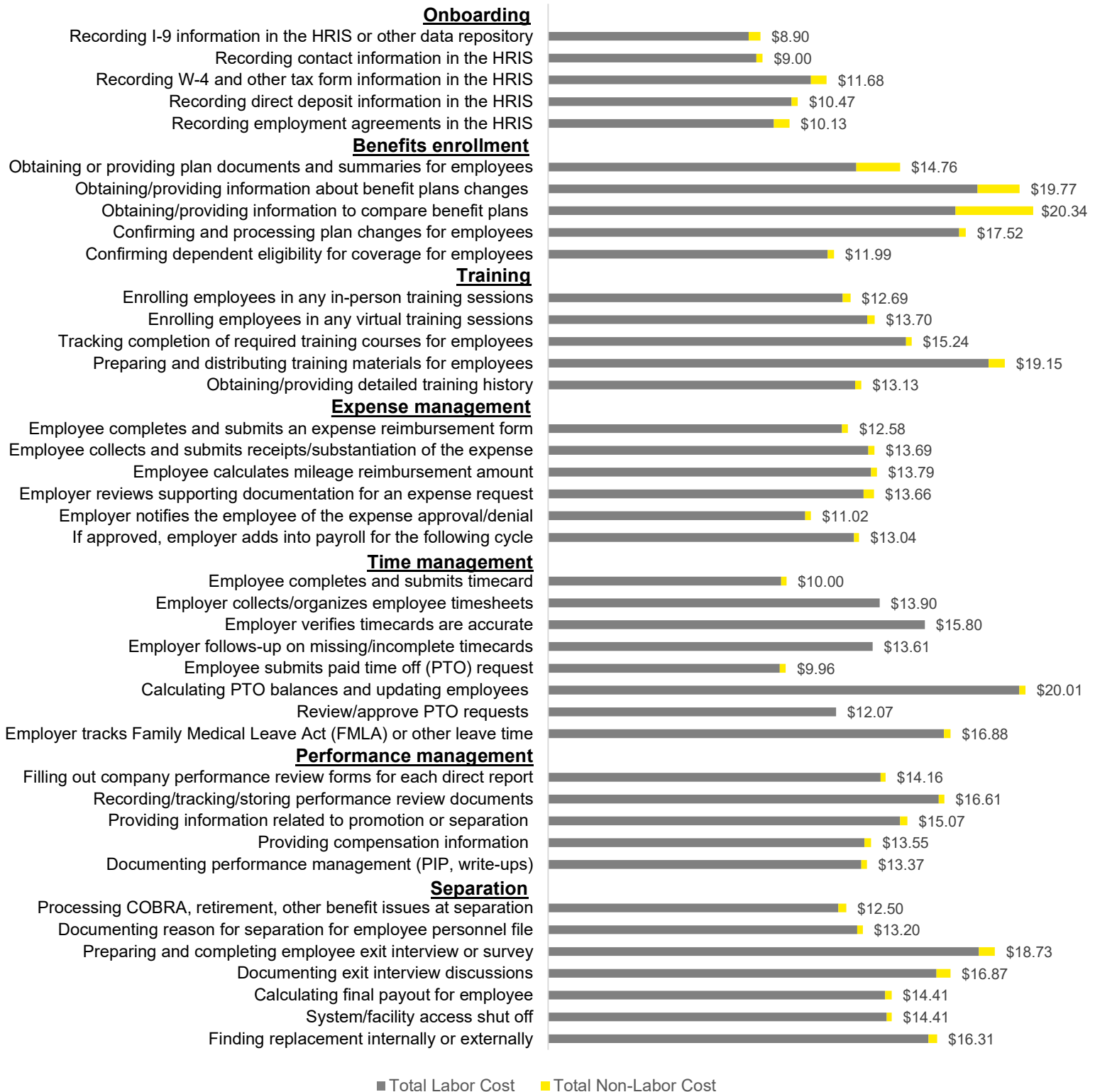
Survey respondents answered questions on their organization's approach to the completion of common HR tasks under the following everyday scenarios.

1. Onboarding new employees
2. Benefits enrollment
3. Learning management (training)
4. Expense management
5. Time management
6. Performance management
7. Employee separation from the organization

The goal of the 2018 study was to estimate the total costs (both labor and non-labor) associated with completing tasks pertaining to these scenarios, and ultimately determining the average cost of a single data entry associated with these tasks. In particular, we were interested in the costs when the company does not use a fully-automated self-service Human Capital Management (HCM) software solution. Figure ES-1 below displays the estimated total labor and non-labor costs associated with the selected tasks in each scenario updated for 2021. A few things stand out from these results:

- Labor costs continue to constitute nearly all the total costs related to all these tasks – this suggests that an ability to reduce or eliminate the time associated with performing these tasks could result in significant cost savings
- The area with the most potential cost savings is benefits enrollment, particularly around tasks related to providing plan information to employees, whether to inform them about plan changes or providing data to facilitate comparisons between plans
- Interestingly, onboarding tasks are generally less expensive than tasks related to employee separation

Figure ES-1. Estimated Total Labor and Non-Labor Costs by HR Task



Source: EY analysis

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Estimating Labor and Non-Labor Costs Associated with Common HR Functions/Tasks

I. Introduction

The field of Human Resources (HR) primarily concerns the management of people within organizations, focusing on policies and systems. HR departments are responsible for overseeing many different aspects of an organization's workforce spanning the entire employee lifecycle from employee onboarding to eventual employee separation from the company.

There is wide variation amongst companies in their approach to managing people and completing associated HR tasks. Some employers may decide to make an investment in a full-service Human Capital Management (HCM) software solution. Such systems enable employees to carry out many basic HR functions and tasks independently (e.g., recording their own contact information in an HR system) and can save organizations time and money by freeing up other resources within the organization to focus on more value-added tasks. Implementing HCM software helps automate processes and tasks to the extent possible and can also reduce error rates by enabling employees to control much of their own HR data/information.

Despite the existence of self-service HCM software, many organizations still manage common HR functions through manual processes and/or require the time and effort of individuals within the organization other than the employee. The goal of this research was to estimate the labor and non-labor costs associated with the management and completion of common HR functions/tasks, and ultimately determining the average cost of a single data input associated with those tasks, when employers do not use self-service HCM software. To accomplish this purpose, in 2018 we conducted a survey of individuals in HR and/or supervisory roles. EY surveyed 504 individuals who work:

- at companies headquartered in the United States,
- for companies who employ between 250 and 4,999 total employees
- with either the HR department or executive management/senior leadership
- in a supervisory role

Survey respondents answered questions on their organization's approach to the completion of common HR tasks under the following everyday scenarios:

1. Onboarding new employees
2. Benefits enrollment
3. Learning management (training)
4. Expense management
5. Time management
6. Performance management
7. Employee separation from the organization

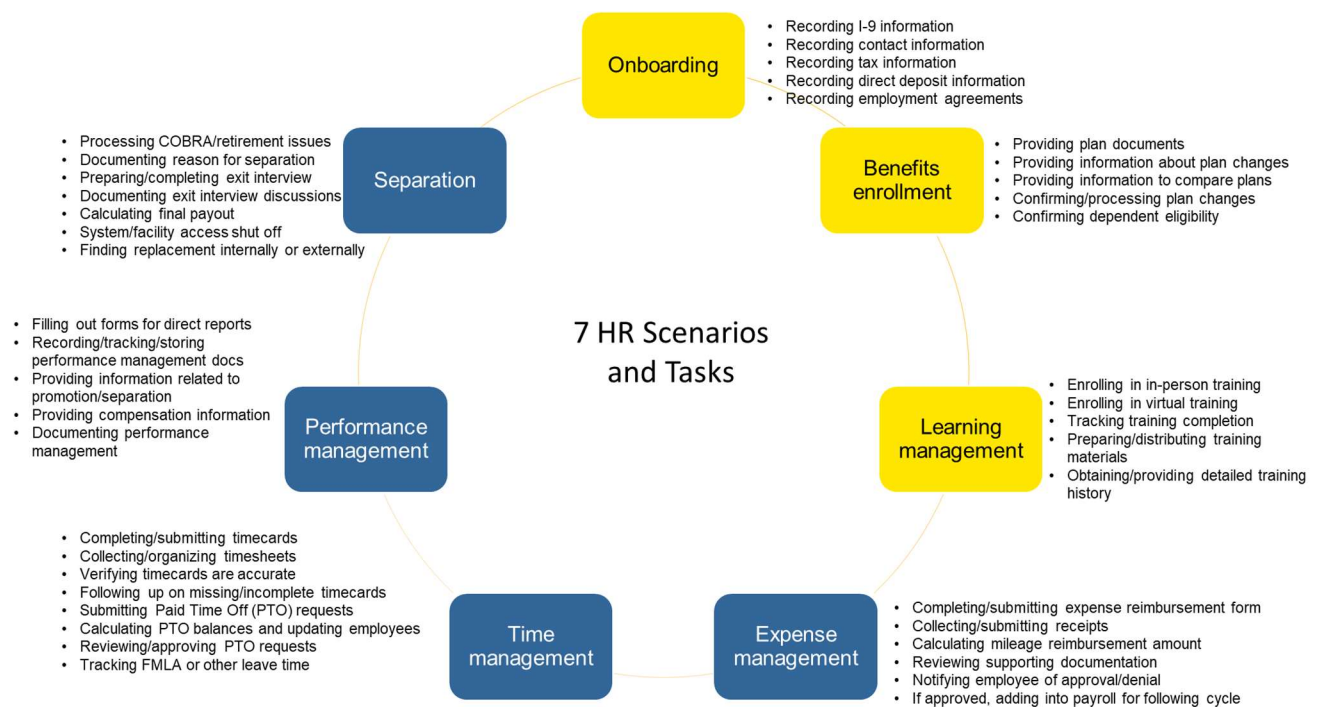
II. HRIS Information Collection Scenarios

Figure 1 shows typical scenarios within the lifecycle of an employee and lists common tasks associated with each scenario. Broadly, our survey asked respondents to provide:

- the time required to complete these tasks
- the hourly wage rate of individuals performing the tasks
- the % of records that have errors requiring re-work and the associated re-work time, and
- non-labor costs associated with the tasks

EY used this information to calculate the total costs associated with each task, as described in the next section of this report.

Figure 1. HR stages and associated tasks



The three scenarios in the yellow boxes (onboarding, benefits enrollment, and learning management) include tasks that an employee can perform independently when a company effectively uses a full-service HCM solution. In the absence of such a solution, a company must involve other personnel to help employees complete the task. For example, when completing the I-9 employee verification form at the onboarding stage, an HR employee may need to:

- print/copy the form
- share the form with the employee
- check the accuracy of the reported information and remedy any errors, and
- transfer the completed information into an HR information system (HRIS)

When using a full-service HCM solution, employees can accomplish these tasks independently without intervention from supervisors and/or HR personnel. For this reason, respondents reported only the time associated with tasks for which an employee *does not* perform the task independently using a full-service HCM solution.

For tasks associated with scenarios in the blue boxes (expense management, time management, performance management, and separation) the issue is not so much if an employee can perform the task independently. Rather, the issue is if the company uses a fully automated process to complete the task. For example, under the performance management scenario, documenting performance management is certainly not a task that an employee can perform independently. However, a full-service HCM solution can still save companies significant time by obviating the need to transfer the data from printed forms to an electronic system. Again, respondents reported only the time associated with tasks that are not fully automated using a full-service HCM solution.

III. Metrics and Results

Next, we proceeded to calculate the total cost of the tasks listed in Figure 1 absent the use of a self-service HCM solution. The total cost includes:

- labor costs,
- non-labor costs, such as printing, copying and postage, and
- costs to identify and remedy data entry errors – in most cases, the use of a self-service HCM solution can significantly reduce or even eliminate such errors.

Labor Costs for Each Task – Input and Corrections

To estimate the labor costs for each task, we multiplied the average time spent to perform a task by the average hourly rate of the individual performing it. As noted above, survey respondents provided this information for tasks that employees do not perform independently, or which are not fully automated. Returning to the I-9 example from the preceding section of this report, respondents reported taking approximately 18 minutes on average to record I-9 information in an HRIS system. In 2018, they also reported that the average hourly rate for the person who typically performs this task is \$24/hour. Multiplying the two, we calculated that the labor cost typically required to record I-9 information for a single employee into an HRIS system is \$7.08 in 2018. We then used data on inflation in private industry employee compensation for the past 2 years and a half (7.1 percent) and added that to produce an updated 2021 cost of \$7.58. Please see appendix B for detailed information about the methodology used for this and other calculations.

Besides costs required to perform the task, there are also costs associated with correcting errors arising from completion of the task. We asked respondents to provide the percentage of records in which errors occurred, as well as the time spent to correct any errors. We estimated the costs associated with correcting errors by multiplying the percentage of tasks with errors by the average time spent correcting errors and then by the average hourly rate of the individual performing the task. Again returning to the I-9 example, survey respondents in 2018 reported an average of 12% of I-9 records that include errors. These errors take an average of 17 minutes to correct – again the average hourly wage for those correcting the errors was \$24/hour. Multiplying these three numbers together and then applying the inflation factor of 7.1 percent, we calculated the labor cost required to correct erroneous I-9 records as \$0.83. Adding this to the cost of inputting the I-9 records yields a total update labor cost of \$8.41 for 2021. Please see Table C-1 in the Appendix for a detailed breakdown of the labor costs for each task in our HR scenarios.

Non-Labor Costs for Each Task

To estimate the non-labor costs for each task, we asked respondents to report whether the task included printing, copying and/or postage costs. We assumed the following costs associated with each of these non-labor components:

- Printing costs – 10 cents per page
- Copying costs – 14 cents per page
- Postage costs – 55 cents per envelope

For the printing and copying costs, we made an assumption on the total number of pages associated with the completion of a given task. We then applied an inflation cost factor related to printing and copying (7.0 percent) to calculate an updated cost for 2021. Continuing to consider the I-9 as an example, respondents reported printing forms 57% of the time, copying 50% of the time and using postage 23% of the time. Multiplying these percentage by the costs and applying the inflation factor suggests that the total non-labor costs for the typical I-9 form is 49 cents in 2021. Adding this to the labor costs above yields an average total cost of \$8.90 for each I-9 form that employees do not complete independently. Please see Table C-2 in the Appendix for a detailed breakdown of the non-labor costs for each task in our HR scenarios.

Data Entries for Each Task

Besides understanding the total cost for each task, we also wanted to estimate the costs on a per data entry item basis. For example, examination of the I-9 form reveals 49 pieces of information requiring data entry. Dividing the \$8.90 cost for a typical I-9 form by 49 pieces of information yields an average cost of 18 cents for an I-9 form on a per data entry item basis in 2021. Because the number of data entry items may be hard for respondents to estimate depending on the task, we used professional judgment to estimate the average number of data entry fields per task. To help provide these estimates, we relied on internal research and consultation with EY's People Advisory Services (PAS) practice.

Table 1 below summarizes the average labor costs, non-labor costs, total costs, number of data entries and total cost per data entry for each task within our seven scenarios. Here we can see data entries and cost per data entry as described in the preceding paragraph for the typical I-9 record. The table also includes each cost component for the I-9 as derived above - \$8.41 for labor costs and \$0.49 for non-labor costs yielding a total cost of \$8.90 for the typical I-9 record.

A few observations stand out from the results summarized in this table:

- Labor costs constitute nearly all the total costs related to all these tasks – this suggests that an ability to reduce or eliminate the time associated with performing these tasks could result in significant cost savings
- The area with the most potential cost savings is benefits enrollment, particularly around tasks related to providing plan information to employees, whether to inform them about plan changes or providing data to facilitate comparisons between plans
- Interestingly, onboarding tasks are generally less expensive than tasks related to employee separation
- Across all 41 tasks, the average cost per data entry is \$4.70.

Table 1. Average costs by task

	Labor costs	Non-Labor costs	Total costs	Data entries	Cost per data entry
Onboarding new employees					
Recording I-9 information in the HRIS or other data repository	\$8.41	\$0.49	\$8.90	49	\$0.18
Recording contact information in the HRIS	\$8.74	\$0.26	\$9.00	11	\$0.82
Recording W-4 and other tax form information in the HRIS	\$11.02	\$0.66	\$11.68	40	\$0.29
Recording direct deposit information in the HRIS	\$10.22	\$0.26	\$10.47	18	\$0.58
Recording employment agreements in the HRIS	\$9.46	\$0.66	\$10.13	17	\$0.60
Benefits enrollment					
Obtaining or providing plan documents and summaries for employees	\$12.93	\$1.83	\$14.76	1	\$14.76
Obtaining/providing information about benefit plans changes	\$18.01	\$1.76	\$19.77	1	\$19.77
Obtaining/providing information to compare benefit plans	\$17.09	\$3.26	\$20.34	2	\$10.17
Confirming and processing plan changes for employees	\$17.24	\$0.28	\$17.52	7	\$2.50
Confirming dependent eligibility for coverage for employees	\$11.72	\$0.27	\$11.99	5	\$2.40
Training					
Enrolling employees in any in-person training sessions	\$12.35	\$0.33	\$12.69	27	\$0.47
Enrolling employees in any virtual training sessions	\$13.38	\$0.32	\$13.70	27	\$0.51
Tracking completion of required training courses for employees	\$15.01	\$0.23	\$15.24	4	\$3.81
Preparing and distributing training materials for employees	\$18.47	\$0.68	\$19.15	1	\$19.15
Obtaining/providing detailed training history	\$12.88	\$0.25	\$13.13	4	\$3.28
Expense management					
Employee completes and submits an expense reimbursement form	\$12.32	\$0.26	\$12.58	17	\$0.74
Employee collects and submits receipts/substantiation of the expense	\$13.43	\$0.26	\$13.69	1	\$13.69
Employee calculates mileage reimbursement amount	\$13.54	\$0.24	\$13.79	11	\$1.25
Employer reviews supporting documentation for an expense request	\$13.23	\$0.43	\$13.66	29	\$0.47
Employer notifies the employee of the expense approval/denial	\$10.78	\$0.24	\$11.02	1	\$11.02
If approved, employer adds into payroll for the following cycle	\$12.83	\$0.21	\$13.04	4	\$3.26
Time management					
Employee completes and submits timecard	\$9.77	\$0.23	\$10.00	42	\$0.24
Employer collects/organizes employee timesheets	\$13.90	\$0.00	\$13.90	1	\$13.90
Employer verifies timecards are accurate	\$15.80	\$0.00	\$15.80	42	\$0.38
Employer follows-up on missing/incomplete timecards	\$13.61	\$0.00	\$13.61	1	\$13.61
Employee submits paid time off (PTO) request	\$9.72	\$0.25	\$9.96	11	\$0.91
Calculating PTO balances and updating employees	\$19.76	\$0.25	\$20.01	4	\$5.00
Review/approve PTO requests	\$12.07	\$0.00	\$12.07	4	\$3.02
Employer tracks Family Medical Leave Act (FMLA) or other leave time	\$16.60	\$0.28	\$16.88	5	\$3.38
Performance management					
Filling out company performance review forms for each direct report	\$13.94	\$0.21	\$14.16	30	\$0.47
Recording/tracking/storing performance review documents	\$16.38	\$0.24	\$16.61	30	\$0.55
Providing information related to promotion or separation	\$14.76	\$0.31	\$15.07	4	\$3.77
Providing compensation information	\$13.27	\$0.28	\$13.55	4	\$3.39
Documenting performance management (PIP, write-ups)	\$13.14	\$0.23	\$13.37	30	\$0.45
Separation					
Processing COBRA, retirement, other benefit issues at separation	\$12.17	\$0.33	\$12.50	17	\$0.74
Documenting reason for separation for employee personnel file	\$12.96	\$0.24	\$13.20	1	\$13.20
Preparing and completing employee exit interview or survey	\$18.06	\$0.67	\$18.73	38	\$0.49
Documenting exit interview discussions	\$16.28	\$0.59	\$16.87	38	\$0.44
Calculating final payout for employee	\$14.13	\$0.28	\$14.41	6	\$2.40
System/facility access shut off	\$14.20	\$0.21	\$14.41	1	\$14.41
Finding replacement internally or externally	\$15.95	\$0.36	\$16.31	8	\$2.04
Average	\$13.65	\$0.44	\$14.09	14	\$4.70

Appendix A – Questionnaire

Human Resources (HR) Task Questionnaire

Thank you for participating in our survey. Before we begin, we would like to ask a few questions to learn more about your organization and your role within it.

Screening/Demographic Questions

D1. Where is your organization headquartered?

- ☐ United States [QUALIFY]
- ☐ Canada
- ☐ United Kingdom
- ☐ Australia
- ☐ New Zealand
- ☐ None of the above

D2. Which of the following best describes your department or current functional role at work?

- ☐ Accounting / Finance
- ☐ Design / Engineering
- ☐ Executive management/senior leadership [QUALIFY]
- ☐ Human Resources [QUALIFY]
- ☐ Information Technology
- ☐ Infrastructure (Non-IT)
- ☐ Legal Professional
- ☐ Manufacturing
- ☐ Marketing / Advertising
- ☐ Procurement / Purchasing
- ☐ Sales / Business Development
- ☐ Supply Chain / Demand Management
- ☐ Warehouse / Transportation / Shipping
- ☐ Other

D3. Which of the following best describes your business title?

- ☐ C-Level Executive [QUALIFY]
- ☐ EVP/SVP [QUALIFY]
- ☐ VP [QUALIFY]
- ☐ Director [QUALIFY]
- ☐ Manager [QUALIFY]
- ☐ Supervisor [QUALIFY]
- ☐ Individual Contributor
- ☐ Other (Please Specify)

D4 How many total employees work for your organization?

- Less than 250 [SCREEN OUT]
- 250-499
- 500-999
- 1,000-2,499
- 2,500-4,999
- 5,000 or more [SCREEN OUT]

D5. Which best describes the industry you work in?

- Energy
- Advanced manufacturing & mobility
- Consumer products/retail
- Technology, media and telecommunications
- Health sciences
- Financial services
- Smart infrastructure
- Private equity
- Other (specify): ____

D6. How many different physical office locations does your organization have?

- 0 – we have no physical office locations [Go to D8]
- 1 physical office location [Go to D8]
- 2-4 physical office locations [Go to D7]
- 5-9 physical office locations [Go to D7]
- 10-20 physical office locations [Go to D7]
- More than 20 physical office locations [Go to D7]

D7. In how many different states does your organization have physical office locations?

- 1 state
- 2 states
- 3-5 states
- 6-10 states
- 11-25 states
- 26-49 states
- All 50 states
- I don't know

D8. Please indicate your general level of familiarity with your organization’s processes and procedures related to each of the following topics.

	Not familiar at all	Not very familiar	Somewhat familiar	Very familiar	Extremely familiar
Onboarding new employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Benefits enrollment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time and expense management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Secure document destruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee separation from the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ordering employee office equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sending mass emails to employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If at least 4 of “Onboarding new employees”, “Benefits enrollment”, “Learning management”, “Time and expense management”, “Performance management” or “Employee separation from the firm” = “Somewhat familiar, very familiar, extremely familiar”, Go to D9

[Else screen out]

D9. How confident are you in your ability to report specific details regarding how your organization carries out common tasks associated with the following topics? By “specific details”, we mean items such as identifying the individuals responsible for completing various tasks, estimating the time it takes to complete the tasks, and the error rates associated with them.

	Not confident at all	Not very confident	Somewhat confident	Very confident	Extremely confident
Onboarding new employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Benefits enrollment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time and expense management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Performance management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee separation from the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[PN: Show **only** the 4-6 rows selected from D8 in D9] [If at least 4 of responses are “somewhat/very/extremely confident”, go to those sections

Else screen out]

Scenario Questions

This survey focuses on the approach your organization uses to complete tasks associated with various HR functions. We will describe a few different scenarios and will ask you a variety of questions regarding each one. [RN programmers – please put this text on its own page. Then have a page break before the rest of the section.]

Please think about the process your organization uses when onboarding a new employee.

Scenario #1 (Onboarding new employees)

[PN: Show Scenario #1 **only** if D9a = “Somewhat confident”, “very confident” or “extremely confident”]

Q1.1. Who in your organization is primarily responsible for recording the following information for a new employee? By “recording”, we mean actually inputting the necessary information into your organization’s formal Human Resources Information System (HRIS) or equivalent repository.

	The employee himself/herself	The employee’s supervisor	An HR employee	Other (specify):
Recording I-9 information in the HRIS or other data repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recording contact information in the HRIS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recording W-4 and other tax form information in the HRIS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recording direct deposit information in the HRIS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recording employment agreements in the HRIS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If All= “The employee himself/herself”, go to Scenario 2

Else go to Q1.2 for those tasks where Q1.1 = “The employee’s supervisor, an HR employee, or Other”]

Q1.2 How much time do you think the average individual responsible for each task typically spends recording the following information into the HRIS?

[List only those tasks that were selected in Q1.1 = The employee’s supervisor, An HR employee, or Other]

Task	Minutes
Recording I-9 information in the HRIS or other data repository	
Recording contact information in the HRIS	
Recording W-4 and other tax form information in the HRIS	
Recording direct deposit information in the HRIS	
Recording employment agreements in the HRIS	

Q1.3 Approximately what percentage of the following types of records require corrections due to errors and/or omissions and how much time is typically spent correcting such errors? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q1.1 = The employee's supervisor, An HR employee, or Other]

Task	% of cases with errors and/or omissions	Average time spent correcting errors (in minutes)
I-9 information		
Contact information		
W-4 and other tax form information		
Direct deposit information		
Employment agreements		

Q1.4 What is the average hourly rate (including benefits) for employees in your organization that are primarily responsible for carrying out these tasks? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q1.1 = The employee's supervisor, An HR employee, or Other]

Task	Average hourly rate (including benefits)
Recording I-9 information in the HRIS or other data repository	
Recording contact information in the HRIS	
Recording W-4 and other tax form information in the HRIS	
Recording direct deposit information in the HRIS	
Recording employment agreements in the HRIS	

Q1.5 Please think about any non-labor expenses that may be associated with recording the following information in the HRIS. Please indicate which non-labor expenses are associated with each task.

[List only those tasks that were selected in Q1.1 = The employee's supervisor, An HR employee, or Other]

Task	Printing	Postage	Copying	None
Recording I-9 information in the HRIS or other data repository	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Recording contact information in the HRIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Recording W-4 and other tax form information in the HRIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Recording direct deposit information in the HRIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Recording employment agreements in the HRIS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Scenario #2 (Open enrollment)

[PN: Show Scenario #2 **only** if D9b = "Somewhat confident", "very confident" or "extremely confident"]

Let's consider a scenario in which it is open enrollment season and an employee wants to make changes to his or her benefits.

Q2.1. Who in your organization is primarily responsible for completing the following open enrollment tasks for an employee?

	The employee himself/herself	The employee's supervisor	An HR employee	Other (specify):
Obtaining or providing plan documents and summaries for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining or providing information about changes to benefit plans for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining or providing information to compare aspects of different benefit plans for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confirming and processing plan changes for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confirming dependent eligibility for coverage for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If all= "The employee himself/herself", go to Scenario 3

Else go to Q2.2 for those tasks where Q2.1 = "The employee's supervisor, an HR employee, other"]

Q2.2 How much time do you think the average responsible individual typically spends completing each of the following open enrollment tasks?

[List only those tasks that were selected in Q2.1 = The employee's supervisor, An HR employee, or Other]

Task	Minutes
Obtaining or providing plan documents and summaries for employees	
Obtaining or providing information about changes to benefits plans for employees	
Obtaining or providing information to compare aspects of different benefit plans for employees	
Confirming and processing plan changes for employees	
Confirming dependent eligibility for coverage for employees	

Q2.3 Approximately what percentage of the following open enrollment records require corrections due to errors and/or omissions and how much time is typically spent correcting such errors? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q2.1 = The employee's supervisor, An HR employee, or Other]

Task	% of cases with errors and/or omissions	Average time to correct errors (in minutes)
Obtaining or providing plan documents and summaries for employees		
Obtaining or providing information about changes to benefits plans for employees		
Obtaining or providing information to compare aspects of different benefit plans for employees		
Confirming and processing plan changes for employees		
Confirming dependent eligibility for coverage for employees		

Q2.4 What is the average hourly rate (including benefits) for employees in your organization that are primarily responsible for carrying out these tasks related to open enrollment? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q2.1 = The employee's supervisor, An HR employee, or Other]

Task	Average hourly rate (including benefits)
Obtaining or providing plan documents and summaries for employees	
Obtaining or providing information about changes to benefits plans for employees	
Obtaining or providing information to compare aspects of different benefit plans for employees	
Confirming and processing plan changes for employees	
Confirming dependent eligibility for coverage for employees	

Q2.5 Please think about any non-labor expenses that may be associated with the following open enrollment tasks. Please indicate which expenses are associated with each task.

[List only those tasks that were selected in Q2.1 = The employee's supervisor, An HR employee, or Other]

Task	Printing	Postage	Copying	None
Obtaining or providing plan documents and summaries for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Obtaining or providing information about changes to benefits plans for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Obtaining or providing information to compare aspects of different benefit plans for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Confirming and processing plan changes for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Confirming dependent eligibility for coverage for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Scenario #3: Learning management

[PN: Show Scenario #3 **only** if D9c = "Somewhat confident", "very confident" or "extremely confident"]

Let's think about how learning management (i.e. training) is handled within your organization.

Q3.1. Who in your organization is primarily responsible for completing the following learning management tasks for an employee?

	The employee himself/herself	The employee's supervisor	An HR employee	Other (specify):
Enrolling employees in any in-person training sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enrolling employees in any virtual training sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tracking completion of required training courses for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing and distributing training materials for employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining or providing employees with a detailed list of their training history	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If All= "The employee himself/herself", go to Scenario 4

Else go to Q3.2 for those tasks where Q3.1 = "the employee's supervisor, an HR employee, or Other"]

Q3.2 How much time do you think the average individual responsible for learning management typically spends on each of the following tasks?

[List only those tasks that were selected in Q3.1 = The employee's supervisor, An HR employee, or Other]

Task	Minutes
Enrolling employees in any in-person training sessions	
Enrolling employees in any virtual training sessions	
Tracking completion of required training courses for employees	
Preparing and distributing training materials for employees	
Obtaining or providing employees with a detailed list of their training history	

Q3.3 Approximately what percentage of learning management records require corrections due to errors and/or omissions and how much time is typically spent correcting such errors? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q3.1 = The employee's supervisor, An HR employee, or Other]

Task	% of cases with errors and/or omissions	Average time to correct errors (in minutes)
Enrolling employees in any in-person training sessions		
Enrolling employees in any virtual training sessions		
Tracking completion of required training courses for employees		
Preparing and distributing training materials for employees		
Obtaining or providing employees with a detailed list of their training history		

Q3.4 What is the average hourly rate (including benefits) for employees in your organization that are primarily responsible for carrying out the following learning management tasks? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q3.1 = The employee's supervisor, An HR employee, or Other]

Task	Average hourly rate (including benefits)
Enrolling employees in any in-person training sessions	
Enrolling employees in any virtual training sessions	
Tracking completion of required training courses for employees	
Preparing and distributing training materials for employees	
Obtaining or providing employees with a detailed list of their training history	

Q3.5 Please think about any non-labor expenses that may be associated with each of the following learning management tasks. Please indicate which non-labor expenses are associated with each task.

[List only those tasks that were selected in Q3.1 = The employee's supervisor, An HR employee, or Other]

Task	Printing	Postage	Copying	None
Enrolling employees in any in-person training sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Enrolling employees in any virtual training sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Tracking completion of required training courses for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Preparing and distributing training materials for employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Obtaining or providing employees with a detailed list of their training history	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Scenario #4 – Expense Management

[PN: Show Scenario #4 **only** if D9d = “Somewhat confident”, “very confident” or “extremely confident”]

Let’s consider a scenario in which an employee goes on a business trip and must then submit their travel expenses for reimbursement.

Q4.1 How are the following expense management tasks completed within your organization? Does your organization employ a 100% fully automated process, a semi-automated process or a primarily manual process?

	Using a 100% fully automated process	Using a semi- automated process	Using a primarily manual process
Employee completes and submits an expense reimbursement form	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee collects and submits receipts/substantiation of the expense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee calculates mileage reimbursement amount	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer reviews supporting documentation for an expense request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer notifies the employee of the expense approval/denial	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If approved, employer adds into payroll for the following cycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If All= “using a 100% fully automated process”, go to Scenario 5

Else go to Q4.2a or Q4.2b for those tasks where Q4.1 = “Using a semi-automated process” or “Using a primarily manual process”]

Q4.2a. How much time do you think the average employee typically spends on each expense management task?

[List only those tasks that were selected in Q4.1=Semi automated or manual]

Task	Minutes
Completing and submitting an expense reimbursement form	
Collecting and submitting receipts/substantiation of the expense	
Calculating mileage reimbursement amount	

Q4.2b How much time do you think the average individual responsible for reviewing expense management documents typically spends on the following tasks?

[List only those tasks that were selected in Q4.1=Semi-automated or manual]

Task	Minutes
Reviewing supporting documentation for an expense request	
Notifying the employee of the expense approval/denial	
If approved, adding into payroll for the following cycle	

Q4.3 Approximately what percentage of the expense reports that employees submit have errors and require modification prior to re-submittal? (Also program Don't Know option for this question)

____%

Q4.4 Approximately how long does it take employees on average to correct these errors and re-submit the report? (Also program Don't Know option for this question)

____minutes

Q4.5 What is the average hourly rate (including benefits) for employees in your organization carrying out these tasks? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q4.1=Semi-automated or manual]

Task	Average hourly rate (including benefits)
Completing and submitting an expense reimbursement form	
Collecting and submitting receipts/substantiation of the expense	
Calculating mileage reimbursement amount	
Reviewing supporting documentation for an expense request	
Notifying the employee of the expense approval/denial	
If approved, adding into payroll for the following cycle	

Q4.6 Please think about any non-labor expenses that may be associated with the following expense management tasks. Please indicate which non-labor expenses are associated with each task.

[List only those tasks that were selected in Q4.1=Semi-automated or manual]

Task	Printing	Postage	Copying	None
Completing and submitting an expense reimbursement form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Collecting and submitting receipts/substantiation of the expense	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Calculating mileage reimbursement amount	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Reviewing supporting documentation for an expense request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Notifying the employee of the expense approval/denial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
If approved, adding into payroll for the following cycle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Scenario #5: Time Management

[PN: Show Scenario #5 **only** if D9d = "Somewhat confident", "very confident" or "extremely confident"]

Let's think about how your organization handles time management.

Q5.1 How are the following time management tasks completed within your organization? Does your organization employ a 100% fully automated process, a semi-automated process or a primarily manual process?

	Using a 100% fully automated process	Using a semi- automated process	Using a primarily manual process
Employee completes and submits timecard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer collects/organizes employee timesheets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer verifies timecards are accurate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer follows-up on missing/incomplete timecards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employee submits paid time off (PTO) request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer calculates PTO balances and provides updates to employees on remaining time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer reviews PTO requests and communicates with employees if approved or denied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employer tracks Family Medical Leave Act (FMLA) or other leave time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If All= "using a 100% fully automated process", go to Scenario 6

Else go to Q5.2a or Q5.2b for those tasks where Q5.1 = "Using a semi-automated process" or "Using a primarily manual process"]

Q5.2a. How much time do you think the average employee typically spends on each of the following time management tasks?

[List only those tasks that were selected in Q5.1=Semi automated or manual]

Task	Minutes
Employee completes and submits timecard	
Employee submits PTO request	

Q5.2b How much time do you think the average individual responsible for reviewing employee timesheets and PTO requests typically spends on each of the following time management tasks?

[List only those tasks that were selected in Q5.1=Semi-automated or manual]

Task	Minutes
Employer collects/organizes employee timesheets	
Employer verifies timecards are accurate	
Employer follows-up on missing/incomplete timecards	
Employer calculates PTO balances and provides updates to employees on remaining time	
Employer reviews PTO requests and communicates with employees if approved or denied	
Employer tracks FMLA or other leave time	

Q5.3 Approximately what percentage of the following time management records require corrections due to errors and/or omissions and how much time is typically spent correcting such errors? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q5.1=Semi automated or manual]

Task	% of cases with errors and/or omissions	Average time to correct errors (in minutes)
Completed and submitted timecards		
Submitted PTO requests		
PTO balances and information		
FMLA or other leave time		

Q5.4 What is the average hourly rate (including benefits) for employees in your organization carrying out these tasks? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q5.1=Semi automated or manual]

Task	Average hourly rate (including benefits)
Employee completes and submits timecard	
Employer collects/organizes employee timesheets	
Employer verifies timecards are accurate	
Employer follows-up on missing/incomplete timecards	
Employee submits paid time off (PTO) request	
Employer calculates PTO balances and provides updates to employees on remaining time	
Employer reviews PTO requests and communicates with employees if approved or denied	
Employer tracks Family Medical Leave Act (FMLA) or other leave time	

Q5.5 Please think about any non-labor expenses that may be associated with each of the following tasks. Please select whether the following types of expenses are likely to be associated with each task.

[List only those tasks that were selected in Q5.1=Semi automated or manual]

Task	Printing	Postage	Copying	None
Completed and submitted timecards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Submitted PTO requests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
PTO balances and information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
FMLA or other leave time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Scenario #6: Performance Management

[PN: Show Scenario #6 **only** if D9e = "Somewhat confident", "very confident" or "extremely confident"]

Let's think about how performance management is typically managed within your organization.

Q6.1 How are the following performance management tasks completed within your organization? Does your organization employ a 100% fully automated process, a semi-automated process or a primarily manual process?

	Using a 100% fully automated process	Using a semi-automated process	Using a primarily manual process
Filling out company performance review forms for each direct report	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recording, tracking completion and storing performance through performance review documents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing employees with information related to promotion or separation of employment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing employees with information pertaining to their compensation (base salary, bonuses, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Processing changes and updating records for performance management (PIP, write-ups)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If All= "using a 100% fully automated process", go to Scenario 7

Else go to Q6.2 for those tasks where Q6.1 = "Using a semi-automated process" or "Using a primarily manual process"]

Q6.2 How much time do you think the average individual responsible typically spends on the following performance management tasks?

[List only those tasks that were selected in Q6.1=Semi-automated or manual]

Task	Minutes
Filling out company performance review forms for each direct report	
Recording, tracking completion and storing performance through performance review documents	
Providing employees with information related to promotion or separation of employment	
Providing employees with information pertaining to their compensation (base salary, bonuses, etc.)	
Processing changes and updating records for performance management (PIP, write-ups)	

Q6.3 Approximately what percentage of performance management records require corrections due to errors and/or omissions and how much time is typically spent correcting such errors? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q6.1=Semi-automated or manual]

Task	% of cases with errors and/or omissions	Average time to correct errors (in minutes)
Filling out company performance review forms for each direct report		
Recording, tracking completion and storing performance through performance review documents		
Providing employees with information related to promotion or separation of employment		
Providing employees with information pertaining to their compensation (base salary, bonuses, etc.)		
Processing changes and updating records for performance management (PIP, write-ups)		

Q6.4 What is the average hourly rate (including benefits) for employees in your organization carrying out these tasks? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q6.1=Semi-automated or manual]

Task	Average hourly rate (including benefits)
Filling out company performance review forms for each direct report	
Recording, tracking completion and storing performance through performance review documents	
Providing employees with information related to promotion or separation of employment	
Providing employees with information pertaining to their compensation (base salary, bonuses, etc.)	
Processing changes and updating records for performance management (PIP, write-ups)	

Q6.5 Please think about any non-labor expenses that may be associated with each of the following performance management tasks. Please indicate which non-labor expenses are associated with each task.

[List only those tasks that were selected in Q6.1=Semi-automated or manual]

Task	Printing	Postage	Copying	None
Filling out company performance review forms for each direct report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Recording, tracking completion and storing performance through performance review documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Providing employees with information related to promotion or separation of employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Providing employees with information pertaining to their compensation (base salary, bonuses, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Processing changes and updating records for performance management (PIP, write-ups)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

Scenario #7: Separation from your organization

[PN: Show Scenario #7 **only** if D9f = “Somewhat confident”, “very confident” or “extremely confident”]

Let’s think about how your organization approaches separation with an employee, via retirement, transition or termination.

Q7.1 How are the following tasks completed within your organization? Does your organization employ a 100% fully automated process, a semi-automated process or a primarily manual process?

	Using a 100% fully automated process	Using a semi-automated process	Using a primarily manual process
Processing COBRA, retirement, other benefit issues at separation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Documenting reason for separation for employee personnel file	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing and completing employee exit interview or survey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Documenting exit interview discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculating final payout for employee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
System/facility access shut off	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with recruiting/new job posting for replacement or promoting/transferring employee into open spot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[If All= “using a 100% fully automated process”, go to END

Else go to Q7.2 for those tasks where Q7.1 = “Using a semi-automated process” or “Using a primarily manual process”]

Q7.2 How much time do you think the average individual responsible typically spends on the following employee separation tasks ?

[List only those tasks that were selected in Q7.1=Semi-automated or manual]

Task	Minutes
Processing COBRA, retirement, other benefit issues at separation	
Documenting reason for separation for employee personnel file	
Preparing and completing employee exit interview or survey	
Documenting exit interview discussions	
Calculating final payout for employee	

System/facility access shut off	
Working with recruiting/new job posting for replacement or promoting/transferring employee into open spot	

Q7.3 Approximately what percentage of employee separation records require corrections due to errors and/or omissions and how much time is typically spent correcting such errors? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q7.1=Semi-automated or manual]

Task	% of cases with errors and/or omissions	Average time to correct errors (in minutes)
Processing COBRA, retirement, other benefit issues at separation		
Documenting reason for separation for employee personnel file		
Preparing and completing employee exit interview or survey		
Documenting exit interview discussions		
Calculating final payout for employee		
System/facility access shut off		
Working with recruiting/new job posting for replacement or promoting/transferring employee into open spot		

Q7.4 What is the average hourly rate (including benefits) for employees in your organization carrying out the following employee separation tasks? (Also program Don't Know option for this question)

[List only those tasks that were selected in Q7.1=Semi-automated or manual]

Task	Average hourly rate (including benefits)
Processing COBRA, retirement, other benefit issues at separation	
Documenting reason for separation for employee personnel file	
Preparing and completing employee exit interview or survey	
Documenting exit interview discussions	
Calculating final payout for employee	
System/facility access shut off	
Working with recruiting/new job posting for replacement or promoting/transferring employee into open spot	

Q7.5 Please think about any non-labor expenses that may be associated with each of the following employee separation tasks. Please indicate whether the following non-labor expenses are associated with each task.

[List only those tasks that were selected in Q7.1=Semi-automated or manual]

Task	Printing	Postage	Copying	None
Processing COBRA, retirement, other benefit issues at separation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Documenting reason for separation for employee personnel file	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Preparing and completing employee exit interview or survey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Documenting exit interview discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Calculating final payout for employee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
System/facility access shut off	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>
Working with recruiting/new job posting for replacement or promoting/transferring employee into open spot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/>

END. Thank you for your time.

Appendix B – Methodology and Demographics

Methodology

We consider two main types of error in survey research; variable and systematic errors. Variable errors are the cumulative effect of the total error for a particular observation, either positive or negative. When the frequency of variable error is high, the data are often referred to as ‘noisy’, since variable error limits our ability to understand what the data are telling us. Systematic errors arise from faults in the measurement process; these errors lead to bias.

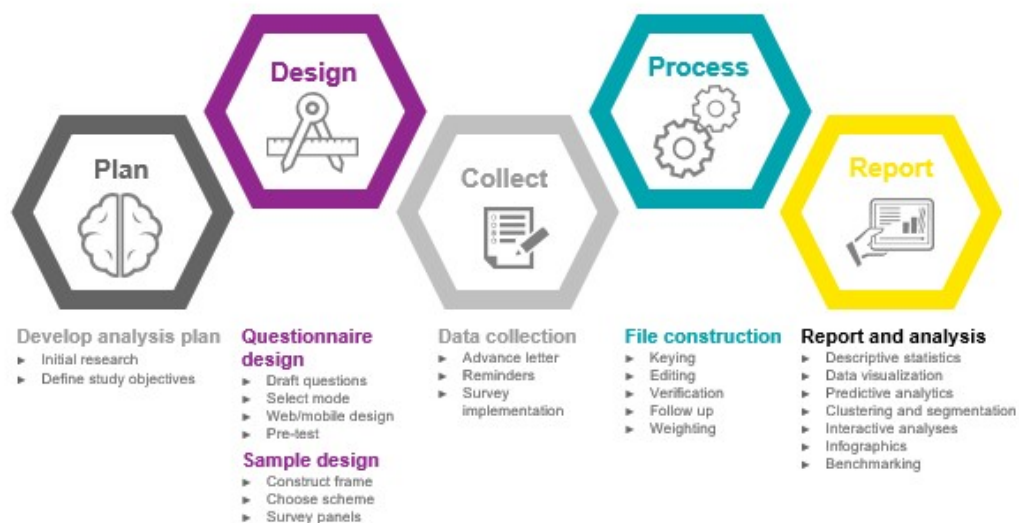
Variable errors are unavoidable but can be reduced using appropriate techniques of statistical inference. Systematic errors can be reduced by making improvements to the survey process – these errors are the chief focus of our survey quality process.

Survey error can also be classified by its two main sources – sampling error and non-sampling error. Sampling error arises from basing an estimate for the population value on a sample rather than the entire population. In general, sampling error contributes to increased variability in the data. It is measurable and often can be reduced by increasing the sample size or using more sophisticated sample designs.

Non-sampling errors are those arising from sources other than sampling. They tend to contribute to the systematic errors which can be mitigated through good survey practice.

For this project, we took steps to mitigate survey error at each of the five stages of the project outlined in Figure B-1 below.

Figure B-1. 5 Survey Stages



The following steps were taken at each stage of the 2018 survey process to mitigate survey error:

Stage 1: Plan

- Conducted kickoff meeting to align survey objectives
- Consulted with EY's People Advisory Services (PAS) practice for human resource perspective
- Developed analysis plan that would facilitate calculation of final metrics of interest

Stage 2: Design

- Programmed custom web survey with review of questions from survey methodological perspective
- Extensive testing of survey instrument by EY staff
- Finalized sampling criteria to facilitate the development of screener criteria for survey respondents

Stage 3: Collect

- Employed a panel of survey respondents to facilitate data collection (see demographics section below for detailed information about this panel)
- Soft launched survey and reviewed preliminary data prior to full launch
- Tracked demographic characteristics of respondents to ensure robust distribution of responses across variables of interest

Stage 4: Process

- Reviewed responses to flag outliers as needed
- To address the effect of outliers in our survey, we use 95% trimmed means for average
- Compared distribution of hourly wage data collected in the survey to an external Bureau of Labor Statistics (BLS) data source to confirm accuracy

Stage 5: Report

- Independently verified all calculations with two EY staff

2021 Update Methodology

To update the costs for 2021, we started with the survey responses from 2018.

For labor costs, we consulted the Bureau of Labor and Statistics inflation for “Compensation in private industry and state and local government, 3-month percent change, seasonally adjusted”¹ for the four most recent periods released since the survey was conducted (November 2018). We assumed that the inflation factor for the whole year since the survey was released will remain consistent with this time period. Table B-1 below includes the inflation factors:

Table B-1. Inflation for Compensation in Private Industry, 3-month Percent Change

Period	Compensation Inflation
Dec-18	0.7%
Mar-19	0.6%
Jun-19	0.7%
Sep-19	0.7%
Dec-19	0.7%
Mar-20	0.7%
Jun-20	0.5%
Sep-20	0.6%
Dec-20	0.8%
Mar-21	1.0%

For non-labor costs, we:

- Updated the postage to reflect the 2021 cost of 55 cents², and
- Adjusted the printing and copying costs using an inflation factor developed from the Bureau of Labor and Statistics Producer Price Index for “commercial printing”³, which was reported as an increase of 7.0 percent from November 2018 to May 2021.

¹ “Compensation in private industry and state and local government, 3-month percent change, seasonally adjusted through March 2020” <https://www.bls.gov/charts/employment-cost-index/compensation-in-private-industry-and-state-and-local-government-3-month-percent-change.htm#>

² USPS Mailing & Shipping Prices for 2021 <https://www.usps.com/business/prices.htm>

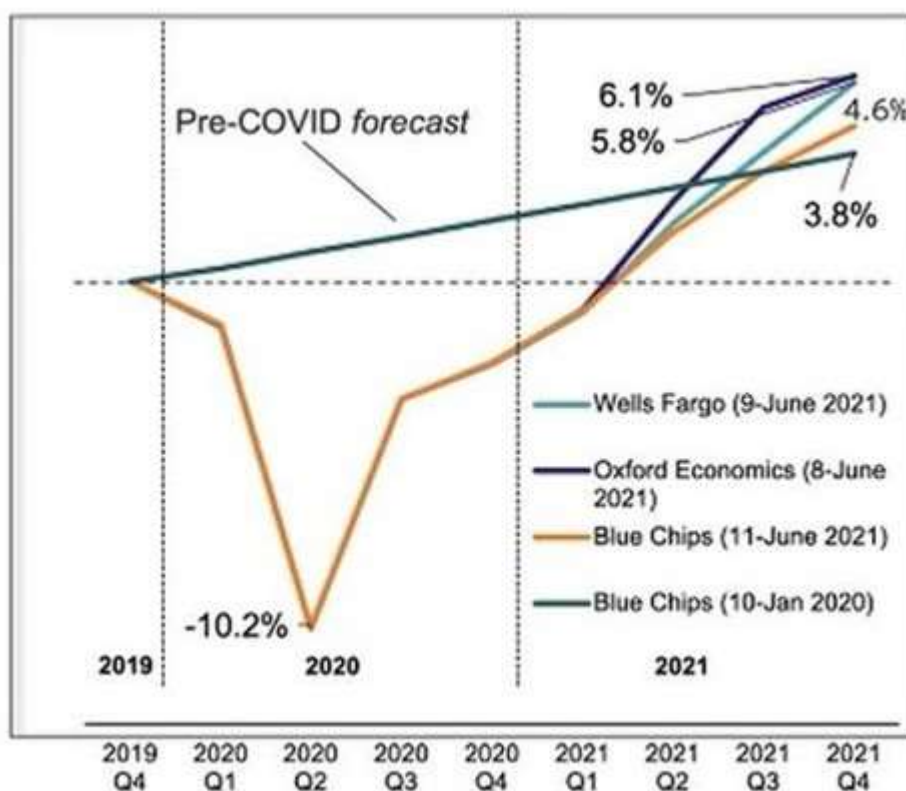
³ “PPI Commodity Percent Change Report May 2021” <https://www.bls.gov/web/ppi/comperch.pdf>

COVID-19 Economic Effects

In preparing this 2021 update to the report, we considered potential cost effects of the COVID-19 pandemic. Many businesses have taken on additional costs related to adjusting their systems to allow for some or all employees to be able to work from home, including additional technology costs (e.g., for purchase of new equipment, updated or new software for team collaboration, upgrades to networks to accommodate additional remote traffic). While this has increased the costs for 2020-21, these costs are believed to be in most cases one-time fixed costs. For this reason, no adjustments were made for these increased costs, as they would artificially inflate the long-term costs associated with the listed HR activities.

In addition, the COVID-19 pandemic has slowed the US economy, in some cases deflating input prices during the period. But the economy has begun to return to normal, with many forecasters expecting the economy to be at or above the level originally projected pre-COVID. Figure B-2 shows the pre-COVID GDP forecast compared to recent forecasts through the end of 2021.

Figure B-2. US GDP Forecasts, Pre-COVID Compared to Current



The inflation factor used for copying and printing costs has already made up for 2020 losses in the first few months of 2021. For this reason, we have made no additional adjustments to the cost factors due to COVID-19 and the pandemic.

Demographics

To estimate the costs associated with completing various HR tasks absent the use of a self-service HCM system, our EY team fielded a survey in 2018 targeting 500 supervisors and above of U.S.-headquartered companies. Specifically, survey respondents qualified for the survey if they met the following criteria:

1. Their organization was headquartered in the United States
2. They reported their department or current functional role at work to be either “Executive management/senior leadership” or “Human resources”
3. They reported their business title as one of the following:
 - a. C-Level Executive
 - b. EVP/SVP
 - c. VP
 - d. Director
 - e. Manager
 - f. Supervisor
4. They reported that their organization had anywhere between 250 and 4,999 employees

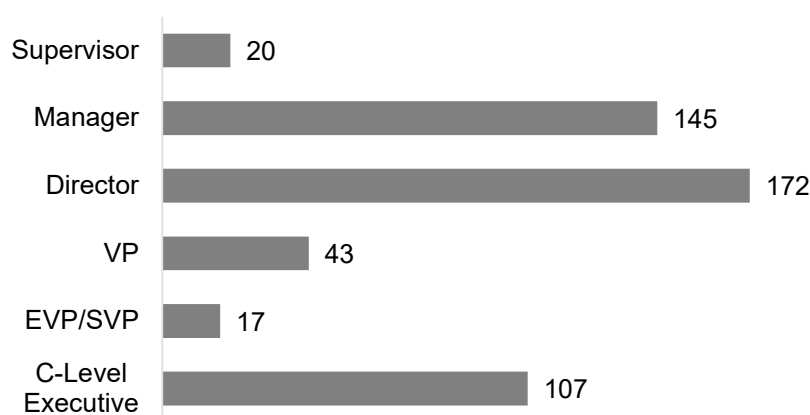
We partnered with Research Now SSI to obtain the panel for this study. Research Now SSI has been ranked #1 in Quality Deliverables for five years running by [marketresearchcareers.com](https://www.marketresearchcareers.com), owing to a relentless focus on panel quality and management, all the way from panelist recruitment to in-field data cleaning and analysis. Research Now SSI’s Total Research Quality® (or TRQ) system is a comprehensive integrated system of tools, metrics, procedures, and policies that operates throughout the entire lifecycle of each panelist across every project to ensure clients are receiving the highest quality data available. Achieving quality in survey responses requires a unique understanding of what constitutes good and bad quality and through specific process behavior, pattern analysis, statistics, and algorithms, the experts at Research Now SSI can ensure top quality data and stop fraudulent activity in its tracks. The Total Research Quality system validates the accuracy, consistency, and reliability of data collected to ensure that Research Now SSI provides the best panel available for one’s research needs.

In addition to the above screening criteria, respondents only qualified for the survey if they expressed a certain level of confidence in answering the types of detailed questions found in the core portion of our survey instrument. This additional qualification process was accomplished through two stages. First, survey respondents were asked to indicate their general level of familiarity with their organization’s processes and procedures related to a variety of HR topics (i.e. onboarding new employees, benefits enrollment, learning management, etc.). For those topics for which respondents indicated they were at least somewhat familiar with their organization’s associated processes and procedures, a secondary question was then asked of respondents to indicate their level of confidence in answering detailed questions about each topic. Only respondents that indicated they were at least somewhat confident to answer questions for a particular topic were then presented those questions.

Finally, only those survey respondents who indicated being at least “somewhat confident” to answer questions for at least 4 of the topics of interest were determined to qualify for the survey. This final screening logic check was implemented to enable our EY team to gather enough data from each respondent. In other words, we wanted to be able to screen out those individuals who might have felt confident about one or two topics (i.e. onboarding new employees) but not the majority of them. As a result, respondents only qualified for the survey if they indicated a minimum level of confidence for at least 4 of the 7 topics.

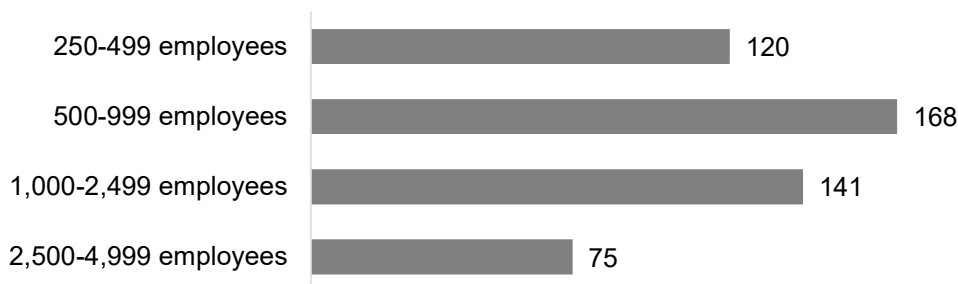
Data collection took place from October 16, 2018 through October 22nd, 2018. 504 total survey respondents qualified for the survey. Figure B-3 below displays the job title of the respondents who qualified for the survey while Figure B-4 indicates the size of their organization by number of employees.

Figure B-3. Number of Responses by Business Title



Source: EY analysis.

Figure B-4. Number of Responses by Organization Size (Number of Employees)



Source: EY analysis.

Table B-5 below displays the number of survey respondents that were asked questions about each different topic in the survey. As mentioned above, only those respondents that indicated being either “somewhat confident”, “very confident”, or “extremely confident” in their ability to

report specific details regarding their organization's approach to said topics were directed to those questions pertaining to the applicable topic.

Table B-5. Number of Respondents by Topic

Topics	Total
Onboarding new employees	496
Benefits enrollment	487
Learning management	493
Time management	478
Expense Management	478
Performance management	502
Employee separation from the firm	480

As one can see from the above table, we had very good representation across all topics.

Appendix C – Detailed Data Tables

Table C-1. Labor Costs by Task

	Average time to complete	Average error rate	Average time to correct errors	Hourly rate	Total Labor Costs
Onboarding new employees					
Recording I-9 information in the HRIS or other data repository	18 min	12%	17 min	\$25/hr	\$8.41
Recording contact information in the HRIS	16 min	12%	16 min	\$30/hr	\$8.74
Recording W-4 and other tax form information in the HRIS	19 min	13%	18 min	\$31/hr	\$11.02
Recording direct deposit information in the HRIS	17 min	12%	16 min	\$32/hr	\$10.22
Recording employment agreements in the HRIS	18 min	11%	18 min	\$28/hr	\$9.46
Benefits enrollment					
Obtaining or providing plan documents and summaries for employees	28 min	11%	19 min	\$26/hr	\$12.93
Obtaining/providing information about benefit plans changes	30 min	12%	21 min	\$33/hr	\$18.01
Obtaining/providing information to compare benefit plans	29 min	13%	22 min	\$32/hr	\$17.09
Confirming and processing plan changes for employees	28 min	14%	22 min	\$33/hr	\$17.24
Confirming dependent eligibility for coverage for employees	24 min	13%	22 min	\$26/hr	\$11.72
Training					
Enrolling employees in any in-person training sessions	24 min	12%	17 min	\$28/hr	\$12.35
Enrolling employees in any virtual training sessions	22 min	12%	19 min	\$33/hr	\$13.38
Tracking completion of required training courses for employees	26 min	13%	19 min	\$31/hr	\$15.01
Preparing and distributing training materials for employees	31 min	12%	21 min	\$33/hr	\$18.47
Obtaining/providing detailed training history	24 min	13%	19 min	\$30/hr	\$12.88
Expense management					
Employee completes and submits an expense reimbursement form	25 min	25%	28 min	\$23/hr	\$12.32
Employee collects and submits receipts/substantiation of the expense	25 min	0%	0 min	\$32/hr	\$13.43
Employee calculates mileage reimbursement amount	23 min	0%	0 min	\$35/hr	\$13.54
Employer reviews supporting documentation for an expense request	23 min	0%	0 min	\$34/hr	\$13.23
Employer notifies the employee of the expense approval/denial	19 min	0%	0 min	\$33/hr	\$10.78
If approved, employer adds into payroll for the following cycle	20 min	0%	0 min	\$38/hr	\$12.83
Time management					
Employee completes and submits timecard	21 min	16%	23 min	\$24/hr	\$9.77
Employer collects/organizes employee timesheets	27 min	0%	0 min	\$31/hr	\$13.90
Employer verifies timecards are accurate	29 min	0%	0 min	\$33/hr	\$15.80
Employer follows-up on missing/incomplete timecards	26 min	0%	0 min	\$32/hr	\$13.61
Employee submits paid time off (PTO) request	20 min	14%	21 min	\$26/hr	\$9.72
Calculating PTO balances and updating employees	25 min	16%	22 min	\$42/hr	\$19.76
Review/approve PTO requests	21 min	0%	0 min	\$35/hr	\$12.07
Employer tracks Family Medical Leave Act (FMLA) or other leave time	25 min	15%	23 min	\$35/hr	\$16.60
Performance management					
Filling out company performance review forms for each direct report	31 min	10%	22 min	\$25/hr	\$13.94
Recording/tracking/storing performance review documents	28 min	15%	20 min	\$32/hr	\$16.38
Providing information related to promotion or separation	25 min	12%	20 min	\$33/hr	\$14.76
Providing compensation information	23 min	12%	20 min	\$31/hr	\$13.27
Documenting performance management (PIP, write-ups)	27 min	12%	21 min	\$27/hr	\$13.14
Separation					
Processing COBRA, retirement, other benefit issues at separation	26 min	10%	20 min	\$26/hr	\$12.17
Documenting reason for separation for employee personnel file	22 min	12%	22 min	\$31/hr	\$12.96
Preparing and completing employee exit interview or survey	29 min	12%	23 min	\$34/hr	\$18.06
Documenting exit interview discussions	25 min	12%	22 min	\$35/hr	\$16.28
Calculating final payout for employee	23 min	14%	22 min	\$33/hr	\$14.13
System/facility access shut off	20 min	14%	22 min	\$36/hr	\$14.20
Finding replacement internally or externally	31 min	12%	24 min	\$28/hr	\$15.95

Table C-2. Non-labor costs by task

Task Description	% of cases requiring printing	Cost of printing (per page)	% of cases requiring postage	Cost of postage (per envelope)	% of cases requiring copying	Cost of copying (per page)	# of pages per task	Total Non-labor Cost
Onboarding new employees								
Recording I-9 information in the HRIS or other data repository	57%	\$0.10	23%	\$0.55	50%	\$0.14	3	\$0.49
Recording contact information in the HRIS	47%	\$0.10	27%	\$0.55	47%	\$0.14	1	\$0.26
Recording W-4 and other tax form information in the HRIS	53%	\$0.10	32%	\$0.55	51%	\$0.14	4	\$0.66
Recording direct deposit information in the HRIS	47%	\$0.10	24%	\$0.55	55%	\$0.14	1	\$0.26
Recording employment agreements in the HRIS	58%	\$0.10	25%	\$0.55	55%	\$0.14	4	\$0.66
Benefits enrollment								
Obtaining or providing plan documents and summaries for employees	66%	\$0.10	28%	\$0.55	55%	\$0.14	12	\$1.83
Obtaining/providing information about benefit plans changes	62%	\$0.10	29%	\$0.55	53%	\$0.14	12	\$1.76
Obtaining/providing information to compare benefit plans	58%	\$0.10	32%	\$0.55	52%	\$0.14	24	\$3.26
Confirming and processing plan changes for employees	57%	\$0.10	27%	\$0.55	54%	\$0.14	1	\$0.28
Confirming dependent eligibility for coverage for employees	54%	\$0.10	27%	\$0.55	51%	\$0.14	1	\$0.27
Training								
Enrolling employees in any in-person training sessions	54%	\$0.10	20%	\$0.55	43%	\$0.14	2	\$0.33
Enrolling employees in any virtual training sessions	45%	\$0.10	23%	\$0.55	38%	\$0.14	2	\$0.32
Tracking completion of required training courses for employees	49%	\$0.10	23%	\$0.55	42%	\$0.14	1	\$0.23
Preparing and distributing training materials for employees	60%	\$0.10	24%	\$0.55	57%	\$0.14	4	\$0.68
Obtaining/providing detailed training history	58%	\$0.10	23%	\$0.55	48%	\$0.14	1	\$0.25
Expense management								
Employee completes and submits an expense reimbursement form	63%	\$0.10	21%	\$0.55	56%	\$0.14	1	\$0.26
Employee collects and submits receipts/substantiation of the expense	58%	\$0.10	24%	\$0.55	55%	\$0.14	1	\$0.26
Employee calculates mileage reimbursement amount	42%	\$0.10	26%	\$0.55	44%	\$0.14	1	\$0.24
Employer reviews supporting documentation for an expense request	41%	\$0.10	21%	\$0.55	48%	\$0.14	3	\$0.43
Employer notifies the employee of the expense approval/denial	42%	\$0.10	26%	\$0.55	39%	\$0.14	1	\$0.24
If approved, employer adds into payroll for the following cycle	43%	\$0.10	21%	\$0.55	42%	\$0.14	1	\$0.21
Time management								
Employee completes and submits timecard	50%	\$0.10	21%	\$0.55	46%	\$0.14	1	\$0.23
Employer collects/organizes employee timesheets	0%	\$0.10	0%	\$0.55	0%	\$0.14	1	\$0.00
Employer verifies timecards are accurate	0%	\$0.10	0%	\$0.55	0%	\$0.14	1	\$0.00
Employer follows-up on missing/incomplete timecards	0%	\$0.10	0%	\$0.55	0%	\$0.14	1	\$0.00
Employee submits paid time off (PTO) request	53%	\$0.10	23%	\$0.55	49%	\$0.14	1	\$0.25
Calculating PTO balances and updating employees	52%	\$0.10	26%	\$0.55	45%	\$0.14	1	\$0.25
Review/approve PTO requests	0%	\$0.10	0%	\$0.55	0%	\$0.14	1	\$0.00
Employer tracks Family Medical Leave Act (FMLA) or other leave time	51%	\$0.10	30%	\$0.55	47%	\$0.14	1	\$0.28
Performance management								
Filling out company performance review forms for each direct report	60%	\$0.10	14%	\$0.55	56%	\$0.14	1	\$0.21
Recording/tracking/storing performance review documents	52%	\$0.10	23%	\$0.55	44%	\$0.14	1	\$0.24
Providing information related to promotion or separation	59%	\$0.10	32%	\$0.55	53%	\$0.14	1	\$0.31
Providing compensation information	52%	\$0.10	29%	\$0.55	49%	\$0.14	1	\$0.28
Documenting performance management (PIP, write-ups)	54%	\$0.10	20%	\$0.55	52%	\$0.14	1	\$0.23
Separation								
Processing COBRA, retirement, other benefit issues at separation	63%	\$0.10	36%	\$0.55	56%	\$0.14	1	\$0.33
Documenting reason for separation for employee personnel file	62%	\$0.10	20%	\$0.55	48%	\$0.14	1	\$0.24
Preparing and completing employee exit interview or survey	56%	\$0.10	29%	\$0.55	54%	\$0.14	4	\$0.67
Documenting exit interview discussions	46%	\$0.10	25%	\$0.55	50%	\$0.14	4	\$0.59
Calculating final payout for employee	48%	\$0.10	31%	\$0.55	44%	\$0.14	1	\$0.28
System/facility access shut off	40%	\$0.10	22%	\$0.55	38%	\$0.14	1	\$0.21
Finding replacement internally or externally	47%	\$0.10	27%	\$0.55	45%	\$0.14	2	\$0.36