

The ROI of Pre-Employment Assessments





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Introduction

Tying Assessments to the Bottom Line

Pre-employment assessments help organizations make more informed hiring decisions. Better hiring decisions lead to better outcomes across an entire organization, from job performance and productivity to employee engagement and long-term retention. However, it can be a challenge to tie the impact of those hiring decisions at the start of the process, to outcomes that can happen anywhere from six months to several years after a hire was made.

This eBook explores the different metrics that organizations can use to calculate the ROI of assessments. It also outlines real-life examples of how organizations were able to quantify and achieve significant ROI from those metrics.

Measuring the ROI of assessments is not only possible but also illuminating. Taking the time to measure outcomes and to tie them to assessments can bolster HR's impact as a strategic partner within the business by demonstrating the impact of stronger decision-making in the hiring process.

Where the Data is Coming From

Most of the data cited in this eBook are derived from over a decade's worth of studies conducted by Criteria Corp on behalf of our customers. Criteria regularly conducts local validity studies with customers, both to continually validate the predictive validity of our assessments and to directly measure ROI and outcomes for those customers.



Defining ROI for Assessments

What is ROI?

ROI is a simple calculation that divides the total return from an activity by the total investment.

$$\frac{\text{Return}}{\text{Investment}} = \frac{\text{Benefit}}{\text{Cost}}$$

While ROI is traditionally a financial calculation, the concept can also serve as a useful lens through which to think about the benefits of any investment, even if those benefits are not easily measured in dollar values.

The calculation may look deceptively simple, but the hardest part is selecting the proper inputs for the costs and the benefits.

Costs

Fortunately, the costs are relatively easy to quantify for pre-employment assessments. The investment is simply the annual price paid for your assessment service. If you use a pay-per-test provider, then you may need to add up the expenditures at the end of the year. If you use a subscription service, your costs are already pre-determined, so you can simply use your annual subscription cost.



Benefits

While some benefits may seem intangible, many of them can at least be measured. From there, the financial return can be estimated using simple calculations that we will demonstrate later. This eBook will focus on the ROI that can be achieved through the following benefits:

1. Reduced Time to Hire
2. Reduced Cost per Hire
3. Higher Training Completion
4. Better Job Performance
5. Higher Sales Revenue
6. Lower Turnover

Because the costs are relatively straightforward, this eBook will focus primarily on how to measure the benefits (or the return) derived from assessments.

Evidence-Based Decisions Drive Results

The ability to consistently achieve ROI from assessments is only possible if the assessments have been scientifically validated to predict job outcomes. Criteria's pre-employment assessments, for example, are evidence-based because they have undergone rigorous validation. This validation provides the "evidence" that the assessments are correlated with job outcomes like retention, job performance, and more.

By incorporating evidence-based, objective data into each hiring decision, organizations increase the likelihood that their new hires will be a success.

WHAT IS EVIDENCE-BASED HIRING?

An approach that relies on scientific or data-driven evidence to guide decision-making. Contrast it with decision-making that relies heavily on intuition or habit.





Tracing the ROI from New Hire to Long-Term Employee

With a validated, evidence-based assessment program in place, it is possible to trace ROI cross every stage of the employee life cycle, from pre-hire to post-hire.

We will trace how to measure and attain ROI across four different stages:

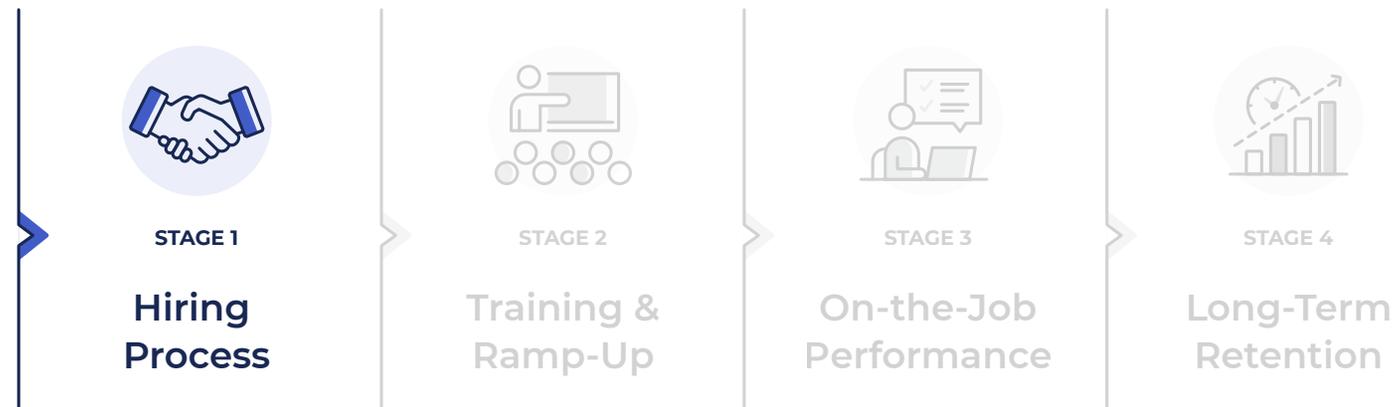




STAGE 1

ROI from the Hiring Process

Pre-employment assessments offer the most visible ROI at the first stage of the employee life cycle: the hiring process. This is because assessments play a direct role in supporting your hiring decisions.





Time to Hire

One of the clearest metrics that you can calculate in the hiring process is Time to Hire.

How assessments lead to shorter Time to Hire:

Assessments can reduce Time to Hire by helping you prioritize your candidate pool. This is especially true if you place assessments earlier in the hiring process. By adding an objective data point at the start of the hiring process, you can make a more informed hiring decision about who to invite to the interview stage, which is significantly more time-consuming.

In addition, the objectivity enables you to reduce unconscious bias that can come from reviewing resumes, ultimately enabling you to identify potential in applicants you may have overlooked based on resume alone. This can expand your typical hiring pool and help you hire a more diverse workforce.

KEY METRIC

Time to Hire

The average time it takes to hire one person from the day the position was posted to the day the position was filled.

How to Calculate

Total Time to Hire

of Hires



Average Time to Hire in the US is about 24 days. On average, top candidates stay available for just 10 days before getting hired.

Source: Glassdoor Research Study



Real World Example:

Reducing Time to Hire with Assessments

One Criteria customer managed a customer service call center. Like most call centers, the organization faced high turnover, requiring the company to spend a significant amount of time finding and hiring new employees to keep the seats filled. This particular company was spending 40 hours per week on simply interviewing new candidates, not counting the additional time spent screening resumes and performing administrative tasks.

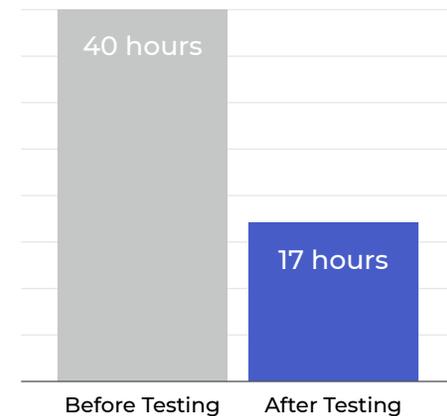
The organization decided to administer Criteria's assessments at the start of the hiring process to help prioritize its applicant pool. This act alone enabled the company to reduce its interview time by 58%, from 40 hours a week to 17 hours a week. And because they were bringing in higher quality candidates from the start, the company also experienced a 60% reduction in turnover at the same time, enabling them to spend even less time backfilling open positions.

HIRING TIP: Assessments can be placed anywhere in the hiring process, but if reducing time to hire is the key goal, then placing assessments earlier in the process leads to better ROI.

Hiring Funnel



Time Spent Interviewing





Cost per Hire

Cost per Hire is the result of a lot of other factors, including Time to Hire. For example, by reducing Time to Hire, you are simultaneously reducing Cost per Hire by reducing the labor hours spent in the hiring process.

How assessments reduce Cost per Hire:

While assessments are a financial investment, a well-designed testing program will lead to cost-savings for an organization in the long-term. These cost-savings can be derived from a lot of sources – stronger performers, higher revenue, lower turnover, etc. But within the hiring process itself, assessments can immediately reduce Cost per Hire by reducing Time to Hire.

Calculations for Cost per Hire typically include any and all costs associated with hiring and recruiting. This includes:

Internal recruiting costs:

- ✓ Recruiters' salaries
- ✓ Hiring managers' labor hours
- ✓ Employee referral programs

External recruiting costs:

- ✓ Job board fees
- ✓ ATS or HRIS platform
- ✓ Pre-employment assessment provider
- ✓ Background screening service
- ✓ Attendances of job fairs
- ✓ And more

KEY METRIC

Cost per Hire

The average cost to hire one person.

How to Calculate

Total Hiring Costs

of Hires



Average Cost per Hire is about \$4,000.

Source: SHRM Human Capital Benchmarking Report



Real World Example:

Cost Savings from Time Saved

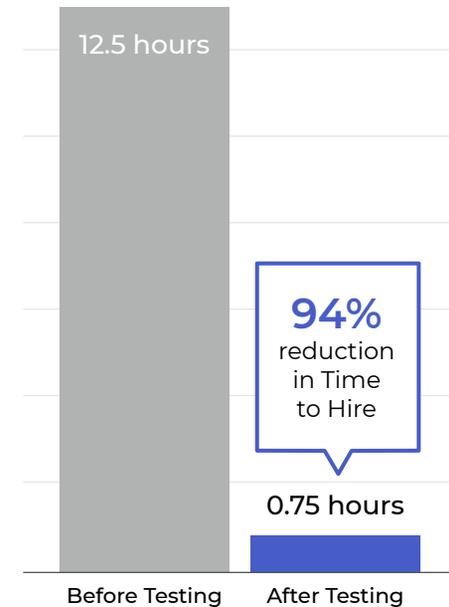
If time is money, then saving time in the hiring process saves money for the organization. This makes it simple to calculate the cost savings associated with spending less time in the hiring process.

One Criteria customer managed a chain of healthcare clinics and wanted to streamline its hiring process. The company began using a combination of Criteria's aptitude and personality assessments at the start of the process, to determine which applicants should be invited to the interview stage.

Within the year, the assessments helped the company slash time to hire by 94%, dramatically reducing the amount of time the company spent in the interview process.

From there, the company was easily able to calculate its cost savings by multiplying the number of hiring cycles per year by the hours spent in the hiring process, then multiplying that by the wages of each interviewer involved. In total, the savings came out to about \$15,000 for the year for the 80-person company. This conservative estimate did not include any additional intangible savings from reduced turnover, higher quality of hire, and shorter training time.

Time to Hire 1 Employee





STAGE 2

ROI from Training and Ramp-Up

The training phase can be make or break. If a new employee cannot pick up on the training and become a full contributor, it's back to the drawing board for your hiring team.





Training Completion Rates

The training process is the first time a new employee is put to the test. Depending on the job, this can be a 1-week process to even an 18-month process for higher level roles. The faster an employee can get up and running, the faster they can start contributing to the organization.

How assessments improve training completion rates:

Assessments help improve training completion and ramp-up time because they can identify candidates who are trainable and able to learn quickly.

A candidate's trainability is an amalgamation of a number of other factors that predict someone's ability to learn quickly and pick up new skills successfully. One of the key underlying components of trainability comes from cognitive aptitude. Cognitive aptitude, also called cognitive ability or general intelligence, refers to a person's ability to think critically, solve problems, and digest and apply new information.

Decades of research in industrial-organizational (I/O) psychology have demonstrated that cognitive aptitude is one of the most predictive factors of job performance, far more predictive than a person's job experience or the quality of their interview. Studies also show that cognitive aptitude is equally predictive of job performance across every job level, from entry level to C-suite.

This is good news in today's job market. Employers may be struggling to find candidates with the right set of acquired skills, but a candidate's past job experience isn't nearly as valuable as general cognitive aptitude when it comes to predicting their ultimate job performance.

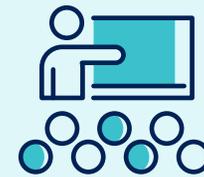
KEY METRIC

Training Completion Rate

The percentage of new hires who successfully pass through training.

How to Calculate

$$\frac{\text{\# of New Hires Who Completed Training}}{\text{Total \# of New Hires}} \times 100\%$$



46% of new hires fail within 18 months

Source: Leadership IQ



Real World Example:

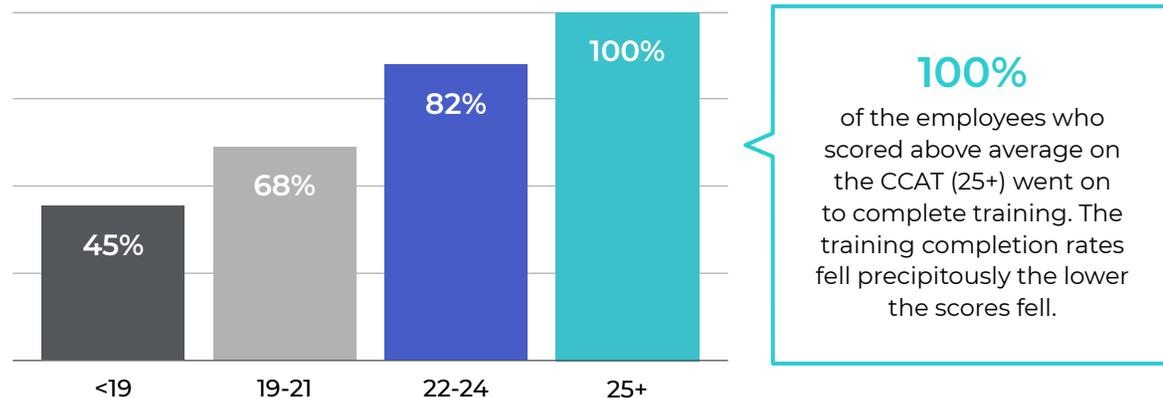
Improving Training Outcomes with Assessments

A large consumer lending company wanted to improve its quality-of-hire and reduce hiring and training costs. In particular, the company wanted to improve training completion rates for its loan officers, who had to complete an extensive 3-4 week training course and pass a federally mandated licensing exam before they could start contributing.

This organization began administering the Criteria Cognitive Aptitude Test (CCAT) to its applicants and found that those who scored higher on the assessment were significantly more likely to ultimately pass training. In short, the test was highly correlated with training completion (.51, $p < .05$).

Armed with this information, the company was able to reduce turnover and dramatically reduce training costs.

Training Completion Rates by CCAT Score





STAGE 3

ROI from On-the-Job Performance

When it comes to hiring, job performance is the ultimate metric of success.





Job Performance

The hiring process seeks to answer one simple question: will this person be a good performer? The challenging part is defining and measuring job performance in a consistent way.

How assessments improve job performance:

Assessments lead to better job performance by increasing the quality of hire that is coming in through the door. By assessing job candidates on their general aptitude (ability to do the job) as well as their personality fit (ability to be comfortable and content in the role), assessments increase your batting average with each new hire. In time, assessments help to increase the proportion of top performers that make up the team.

When it comes to measuring job performance, most organizations take the approach of using manager-assigned performance ratings of employees. These ratings can then be compared with assessment results to identify correlations between the assessments and job performance.

Job performance ratings are not a perfect science, and bias can occasionally seep into the equation. Here are a few best practices you can implement to reduce some of that bias:

- ✓ Create a rubric for evaluating each employee consistently and fairly
- ✓ Use better prompts that require managers to give specific, measurable feedback about employees
- ✓ Consider getting more than one manager to provide additional ratings per employee

ROI FROM ON-THE-JOB PERFORMANCE

KEY METRIC

Job Performance

A measure of an employee's performance within a given role.

How to Calculate

There is no single calculation or easy answer to this question. Many organizations use performance ratings or evaluations to create an approximate measurement



82% of companies conduct regular performance reviews

Source: 2019 Pre-Employment Testing Benchmark Report – Criteria Corp



Real World Example:

Tying Assessments to Job Performance

A market research firm was struggling with unproductive research associates, many of whom would only remain at the company for less than six months.

The company began administering Criteria's assessments to candidates. The company then compared those results with productivity and performance ratings later on in their tenure. What they uncovered was that employees who passed the assessments were 56% more likely to achieve a good performance rating. The company also rated employees on productivity, and found that employees who passed the assessments were 63% more productive than those who did not.



Those who pass Criteria's tests are **29%** more productive than those who don't.



Salespeople who pass Criteria's tests generate **25%** more sales than those who don't.



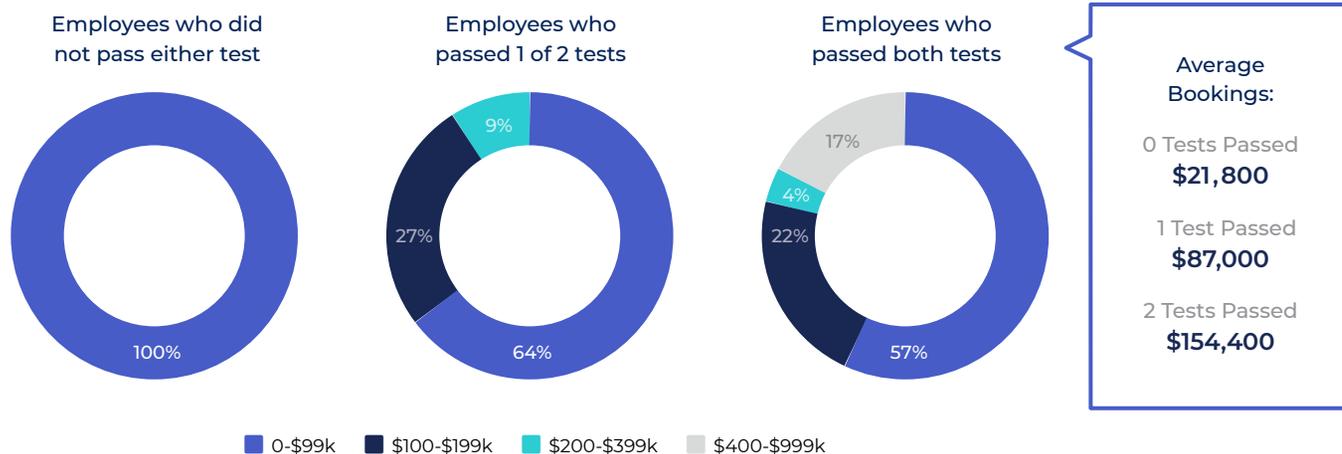
Real World Example:

Sales Performance

For sales roles, job performance can be measured in a very direct way – through sales revenue that the employee generates.

A digital media company started administering two of Criteria's tests in the hiring process to sales candidates. The first was a cognitive aptitude assessment, which is highly predictive of overall job performance. The second was a personality assessment, which can help evaluate general job fit and comfort in a position. Using both a cognitive aptitude assessment and a personality assessment provided a more holistic understanding of each candidate's suitability for the role.

The result was that both tests drove higher sales performance, and even more so when the two tests were used together. Of the employees who didn't pass any of the tests, their average bookings were \$21,800. For employees who passed only one of the tests, their average bookings were about \$87,000, already a huge improvement. But for employees who passed both of the tests, the average bookings were \$154,400. Using both of these assessments in the hiring process made it easier for this company to change the makeup of their workforce by hiring more top performers. This improvement in performance led to a huge increase in actual bottom line revenue for the organization.

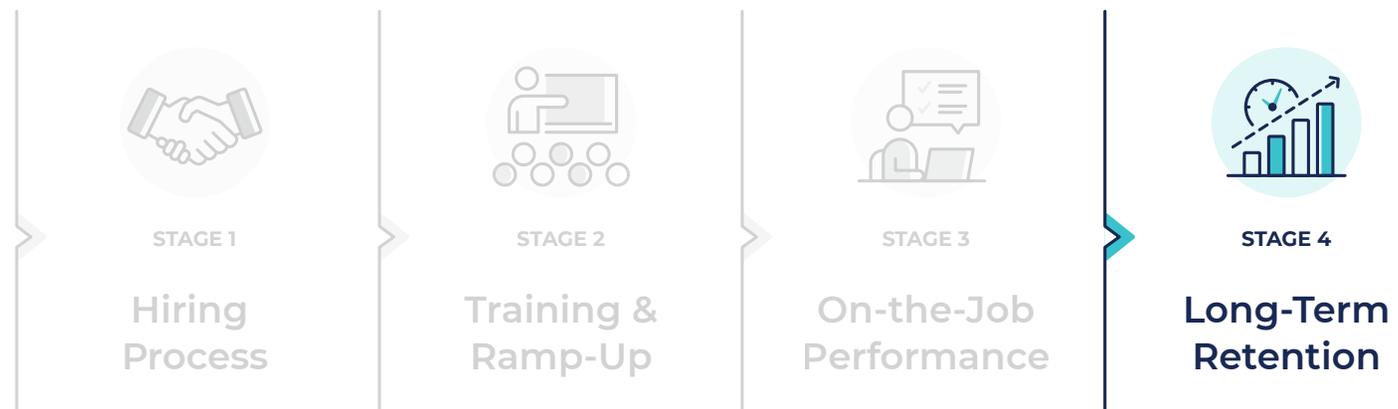




STAGE 4

ROI from Long-Term Retention

While job performance is the ultimate determining factor for a good hire, the larger goal is to hold onto top performers for a long time.





Long-Term Retention

A lot of factors can affect retention – from company culture to compensation. However, our data demonstrates that decisions made in the hiring process can dramatically impact retention by predicting the likelihood that employees will stay.

How assessments improve retention:

Assessments help to improve retention by assessing how well someone will be able to do a job, as well as how well their personality and behaviors fit with the nature of the work. In other words, will this person be successful long-term in this kind of role, and will they also be happy doing this type of work for a long period of time?

ROI from increased retention can be calculated fairly easily. Simply compare the retention rate from one period to the next, find the difference between the two periods, and multiply it by an estimated value for the cost of turnover based on the salary of the employees.

As a rule of thumb, you can use these estimates for the cost of turnover for different job levels:

- ✓ Entry-level: 30-50% of the employee's salary
- ✓ Mid-level: 100-150% of the employee's salary
- ✓ Senior-level: 200-400% of the employee's salary

Example: If a company lost 20 fewer entry-level employees from one period to the next, and these employees had an average salary of \$45,000, the ROI of this reduction in turnover would equal:

$$40\% * \$45,000 \times 20 = \$360,000$$

**40% was selected as the average of 30-50% for an entry-level role.*

KEY METRIC

Retention Rate

Retention rate refers to the percentage of employees who stay after a certain period of time. Turnover is a related term that essentially means the reverse: the percentage of employees who leave.

How to Calculate

$$\frac{\text{\# of Employees Retained During the Period}}{\text{Total \# of Employees in that Period}} \times 100\%$$



Criteria's assessments reduce turnover by 48% on average, in high turnover environments

Source: Case Studies by Criteria Corp.



Real World Example:

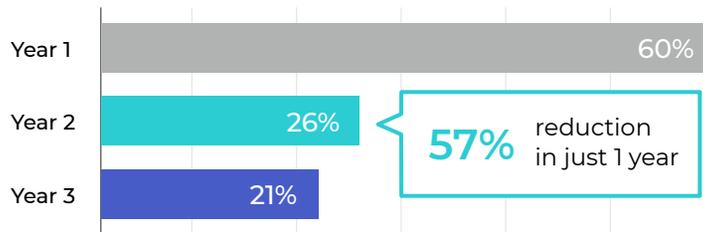
Reduction in Turnover

A healthcare facility was experiencing 60% turnover. The high turnover wasn't just increasing the time the company had to spend hiring replacements or training new employees – it was also having an impact on patient care. To combat this, the organization took the step to incorporate Criteria's assessments into the hiring process to identify those applicants who were the most likely to succeed on the job and to be comfortable with the nature of the work long-term. The company used a combination of aptitude, personality, and skills tests to get a comprehensive view of its candidates.

Within a year, this healthcare company had reduced its turnover down to 26%, a 57% reduction in just one year. The turnover rate continued to trend down the following year as well, indicating a consistent, lasting improvement to the organization's entire hiring process.

The true cost savings from this reduction in turnover is almost immeasurable because it impacts the bottom line in so many ways. To the left, you will find a back-of-the-envelope calculation that provides a conservative estimate for the cost savings gained by reducing turnover from Year 1 to Year 2. Assuming the company has 300 employees and the average salary was \$45,000, the cost savings reach nearly two million dollars.

Annual Turnover Rate



ROI FROM LONG-TERM RETENTION

ESTIMATE OF COST SAVINGS

Based on an assumption of 300 entry-level employees with salaries of \$45,000.

Year 1 (60% Turnover)

$$180 \text{ Employees Lost} \\ \times 40\% \times \$45,000 \\ \hline \$3,240,000$$

Year 2 (26% Turnover)

$$78 \text{ Employees Lost} \\ \times 40\% \times \$45,000 \\ \hline \$1,404,000$$

Total Cost Savings

$$\$3,240,000 \text{ (Year 1)} \\ - \$1,404,000 \text{ (Year 2)} \\ \hline$$

\$1,836,000



Conclusion

Some metrics are more measurable than others. Similarly, some metrics can be more easily tied to costs and, by extension, ROI. Using assessments in the hiring process can lead to ROI beyond just the hiring process itself. These bottom-line improvements reverberate across the organization as a whole, improving everything from the ability of employees to get up and running, to their ability to be a top performer, and finally to their ability to stay long-term and contribute immense value to the organization.

Even more importantly, organizations typically benefit from more than one of these benefits, leading to an even higher ROI over time. While your organization may immediately feel the benefits of faster time to hire, this is soon to follow by greater training completion rates, stronger job performance across the board, and lower turnover.

82% of organizations are using assessments of some form in the hiring process. By using scientifically validated, evidence-based assessments to inform their hiring decisions, best-in-class organizations are able to drive bottom-line value from the hiring process up.



Criteria is an assessment company dedicated to helping organizations make better talent decisions using objective, multidimensional data. By combining leading-edge data science with rigorous validation backed by I-O psychologists, we provide the most precise assessments available. Our suite of assessments is the most comprehensive on the market and covers aptitude, personality, emotional intelligence, and skills to provide the most robust picture of talent. Since launching in 2006, our assessments have been administered more than 20 million times through our user-friendly platform.

To learn more or to start a free trial, visit www.criteriacorp.com | (877) 909-8378