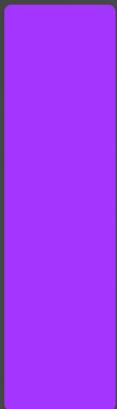# TALOGY

The comprehensive
guide to

HIRING IN
MANUFACTURING

Manufacturing expertise

For decades, the world's top manufacturers have trusted Talogy to build solutions to help make the best hiring decisions and build productive, skilled workforces.

In this eBook, our team of experts discusses some of the more common challenges organizations face in selecting high-quality manufacturing employees and provides guidance on how to overcome them.

Contents

Identify and select productive employees:
Three key methods

Selecting and hiring the right people for a job is a crucial facet of any successful organization. By hiring the right people, organizations can improve or enhance productivity, customer service, teamwork, quality, performance, and profitability.

With so many hiring decisions and options, identifying the best process can be difficult. A well-defined hiring process not only finds great employees but can also save time and money by reducing the need to replace and train new people who were not a good fit.

Here are three methods that will help ensure that you are engaging in an effective selection process:

1   Use a job analysis

Before starting any selection process, you must ensure that you fully understand the open role. This is commonly done through a Job Analysis. A Job Analysis allows organizations to identify and select the predictors that assess critical competencies, thereby better predicting success for a role.

2   Add a selection tool

Once you have identified the key aspects and competencies that successful individuals possess, you can use this information to select the right assessment that will guide your decisions into who will be a fit or not. Adding a selection tool, such as an online assessment, allows organizations to efficiently screen out those employees who do not possess those key competencies for success.

3   Refine your interview process

Typically, behavioral-based interviews are the last hurdle for applicants in a selection process. Behavioral-based interviews require hiring managers to ask job-relevant questions about how one has handled situations in the past to assess the important competencies or skill sets needed, where past performance is one of the best predictors of future behaviors.
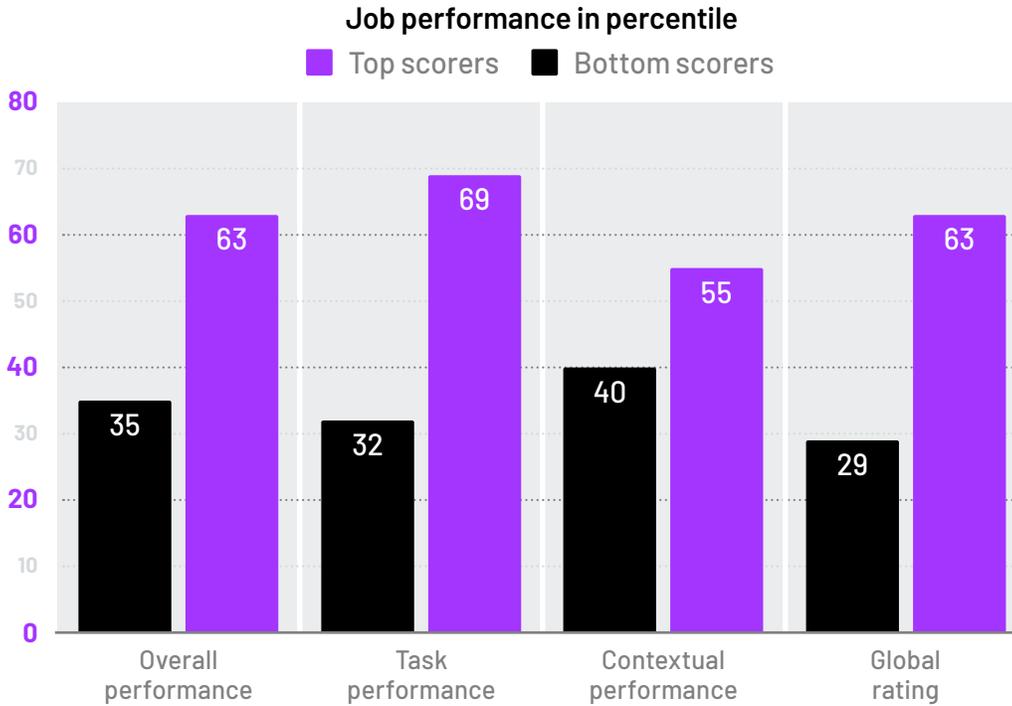
Does it work?

Talogy worked with a large manufacturer to implement a hiring process that included the **Talogy Modular System for Manufacturing**, an in-depth online assessment that measures the key competencies for success in a manufacturing environment. The organization wanted to examine the validity of the assessment to see how well it was working.

Results

Talogy Modular System for Manufacturing was positively related to overall **job performance**, **task performance**, **contextual performance**, and **global ratings**.

Those who were identified as the top scorers on SAM had significantly higher job performance ratings.

In this study, the assessment improved overall job performance, which for a position that pays $30,000 a year is worth $10,320 over the salary per individual.

Job performance in percentile

■ Top scorers ■ Bottom scorers

Category	Bottom scorers	Top scorers
Overall performance	35	63
Task performance	32	69
Contextual performance	40	55
Global rating	29	63

Finding individuals who outperform their wages is critical to driving growth

TALOGY MODULAR SYSTEM
Manufacturing

Develop a more efficient hiring process
with HR technology: Four steps

Previously, efficiency in the hiring process was a luxury. It was an added benefit, but not necessarily required or easily achieved. However, efficiency is a requirement today.

With the current state of the labor market, the skills gap, and fewer recruitment resources, the hiring process needs to be streamlined. This provides benefits to recruiters, talent acquisition, the organization, and most importantly, the candidate. Recruiters can spend their time doing less administrative work and more time doing what they specialize in and would benefit from – recruiting. Candidates benefit because they can get through the process much faster, and it can provide a more positive experience and reflection on the organization.

Technology has advanced in ways that allow recruiters and talent acquisition teams to make this challenge a reality. Some of the ways that technology can make the process more streamlined for recruiters and candidates include:

1 Integrating applicant tracking systems with assessment systems

Instead of having a "broken" process and managing two different systems for candidate flow, it's possible to make both systems "talk to each other." When systems are integrated, TA can make the decision to have all candidates complete an initial application and then immediately be taken into a screening assessment. This allows the recruiter to get a quick view of candidates and offer an efficient candidate experience.

2 Creating automatic email reminders

It takes work to get candidates through the process. Recruiters would lose out on several candidates if they didn't reach out and encourage them to complete each step of the process. There are various reasons why candidates may not complete the full application initially (e.g. passive candidates, didn't allocate enough time for the application), but it doesn't mean that they are less viable. Programming automatic email reminders to complete a step in the process removes the need for recruiters to do this themselves.

3 Making the process fully unproctored

Technology and assessments have evolved in a way that makes us (i.e. developers of assessments) much more comfortable administering soft-skilled based assessments unproctored. Years ago, this was blasphemy. Now, it's commonplace. By removing the need to hold testing sessions onsite, recruiters don't have to spend their time scheduling testing sessions, proctoring assessments, and dealing with no-shows. Candidates don't need to worry about taking off another day of work to come onsite to test. They can complete the assessment on their own time.

4 Going mobile with assessments

Similar to the above, making assessments accessible and convenient is important for efficiency. It's a reality that less people own desktop computers. By having a PC-dependent assessment, several candidates may be limited in terms of their ability to complete the assessment with ease. They would need to work with recruiters to find a place to test onsite, find a testing center, or go to a library. This barrier could lengthen the overall process.

Talogy worked with one of our manufacturing clients to make changes to their process to integrate the technology improvements above. Overall, the efficiency of the hiring process was significantly improved. In particular, some of the benefits the client observed included:

Gained more time for recruiting

building a larger pipeline to start

Saw a higher yield rate

more candidates were getting through the process without reminding them incessantly

Spent less time on the phone with candidates

trying to find an alternative they could use to take the PC-dependent assessment and spent less time dealing with the "no-show" candidates from the testing sessions

Reduce time to fill

Improve safety performance in manufacturing operations with SafetyDNA®

Manufacturers are increasingly realizing the importance of workplace safety and injury prevention efforts.

Safety is now often positioned as a top priority and a core company value for many organizations, creating a need for tools and processes that can promote safety in a sustainable manner. This has led to improvements over time, but there is still much to be done.

While minor injuries have decreased over time, serious injuries and fatalities (SIFs) have generally plateaued over the past decade. These types of events not only result in death or life-altering injuries, but they often have tremendous monetary costs to manufacturers. When combining both direct (e.g. workers' compensation costs, fines) and indirect costs (e.g. lost productivity, incident investigation costs), the National Safety Council (NSC) estimates that the average overall cost of a workers' compensation claim is nearly $40,000 USD, with the average cost of a workplace fatality being over $1 million USD.

For this reason, more and more top manufacturing companies are seeing the value in a more preventive approach to safety. In fact, various studies have shown that $1 invested in injury prevention typically provides a return on investment ranging between $2 and $6. Most companies focus these investments on increased safety procedures, additional technical training, and engineering controls. While these are all important, they ignore a major component of risk on the manufacturing floor – the inherent psychological differences between individuals and how these influence risk every day.

Decades of research in Industrial & Organizational Psychology show that there are key individual traits that are highly predictive of safety behavior. These are not distributed equally across the population, which is why we often see the 80/20 Rule in safety, where as many as 80% of incidents are directly associated with only 20% of the employees. These traits, otherwise known as SafetyDNA, can be measured reliably and accurately using validated online assessments.

As important as employee behavior is, one can easily argue that leaders play an even more critical role when it comes to safety because they shape the culture, set the example, and impact so many people and processes every day. Thus, safety leadership is one of the cornerstones of safe and reliable operations. Yet too often, organizations promote individuals into critical supervisor roles based only on their technical skills, rather than on their actual leadership potential.

Research has found several leadership traits and competencies that consistently predict safety leadership performance. Characteristics such as leadership style, vision, coaching, and credibility, when combined with one's SafetyDNA® profile, are highly predictive of safety leadership performance. For example, supervisors with high scores on our SafetyDNA® for Leaders assessment tend to have three-and-a-half times fewer injuries on the crews they supervise.

Does it work?

Talogy has helped organizations in various manufacturing sectors to improve their safety performance through selection and development efforts targeted at safety.

Below are just a few examples:

2.1 million hours
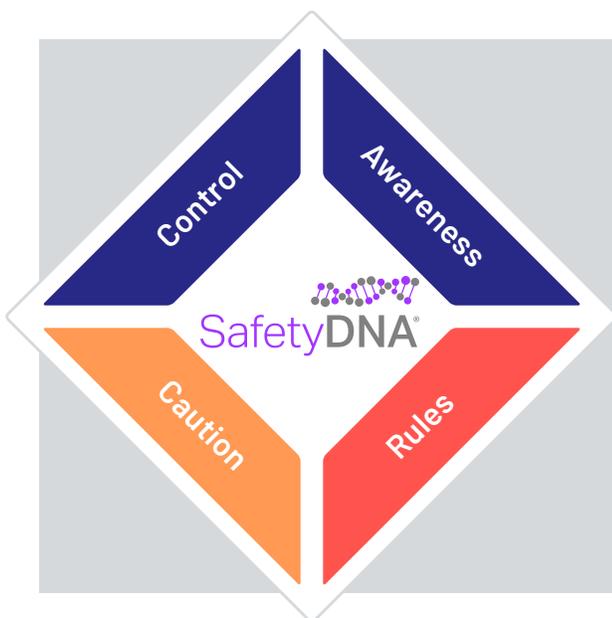without recordable injury
post-implementation

72% reduction
in overall safety incidents

30% reduction
in total recordable incident rate (TRIR)

53% reduction
in number of recordable injures

63% reduction
in lost days due to injury

36% improvement
in employee perceptions of safety

CONTROL:
Emotional control under stress and control of outcomes

AWARENESS:
Attention to details, alertness over time, cognitive overload, short-term memory recall

CAUTION:
Discomfort level with risk, thrill-seeking, impulsivity

RULES:
Respect for rules, responsibility, rule bending/breaking

Reduce turnover by understanding its root cause

Stating the obvious, the causes of turnover are complicated. It is truly a multifactorial matrix of reasons that interact with each other.

While a good, robust, and validated selection process can have a business impact, it is only one piece of the puzzle. Among other important drivers are:

- Whether the job meets the worker's expectations, personal, and family situation
- The individual's personal disposition
- The fit with a direct supervisor (and the supervisor's interaction and leadership skills)
- Work conditions
- Schedule
- Compensation

The starting point for any business is measuring turnover and trying to understand the various underlying reasons and impact. This was the case with a manufacturing client experiencing high levels of turnover in their entry-level production jobs.

They had a number of facilities dispersed geographically that were experiencing dramatic turnover. Before countermeasures could be put in place, this client sought Talogy's help in understanding the extent of the problem. A turnover study was conducted, and a key objective was to provide the evidence to enable a well-informed business decision to extend the selection system to all facilities.

The turnover study analysis involved three levels of comparison:

- **Turnover rate for facilities** based on use of the selection system (i.e. using versus not using). Was the selection system having an impact on turnover rate?
- **The 'survival' rate of employees** based on their selection system score. Were higher scoring employees more likely to remain on the job for a longer period?
- **The rate of turnover** based on selection score at key time periods that resonate in a manufacturing environment (i.e. 30, 90, 180 days, and one year). Did higher scoring employees have a lower turnover rate at key time periods?

In addition, the reasons for turnover, both voluntary and involuntary, were examined to determine what countermeasures might be used to reduce turnover rates.

Does it work?

- **Turnover was substantially higher (12%)** in the facilities not using the selection system

- At each of the key time periods, high scorers on the test were **less likely to turnover** compared to low scorers on the test

- **Three reasons accounted for 60% of the turnover,** with voluntary job abandonment being the leading reason, followed by the involuntary reasons of absenteeism and policy violations

Identify high-potential employees
for frontline leadership roles:
HiPro vs. HiPo

> "
> The paint shop remains
> leaderless, and we lost
> our best paint specialist.
> "

An auto manufacturing ops manager described. A vacant leadership position in their paint shop needed filling. Company philosophy said promote from within. There were several viable employees that were interviewed. Management decided to promote the highest performing employee in the department. This guy was a technical whiz. He was a go-getter with high standards and very strong work ethic. He got things done!

The promotion decision was sensible, explainable, and a disaster. Missing the distinction between HiPro and HiPo is one of the most common errors in promotion decisions within the manufacturing industry.

- **HiPro:** Demonstrating a high level of competence for the position. A go-getter. Reliable. Knowing what to do, how to do it, and executing in the current job.
- **HiPo:** Possessing abilities for increased responsibilities. Leadership ability. Potential for growth into higher levels in the organization.

The HiPro vs. HiPo distinction restates the Peter Principle. People in an organization tend to rise to their "level of incompetence." Employees are promoted based on their success in previous jobs until they reach a level at which they are no longer competent. Skills in one job to do not always translate into another job.

Frontline supervisors are the most important positions in manufacturing facilities. They drive safety, quality, and production. They translate plant management's vision into team action. Supervisors advocate for their team and communicate concerns upwards. They live between management and direct labor. They enforce standards and drive for results. For many, it is their first leadership opportunity. Frontline supervisors often are HiPro operators who were promoted. Many of them are not good supervisors. Skills in one job to do not always translate into another job.

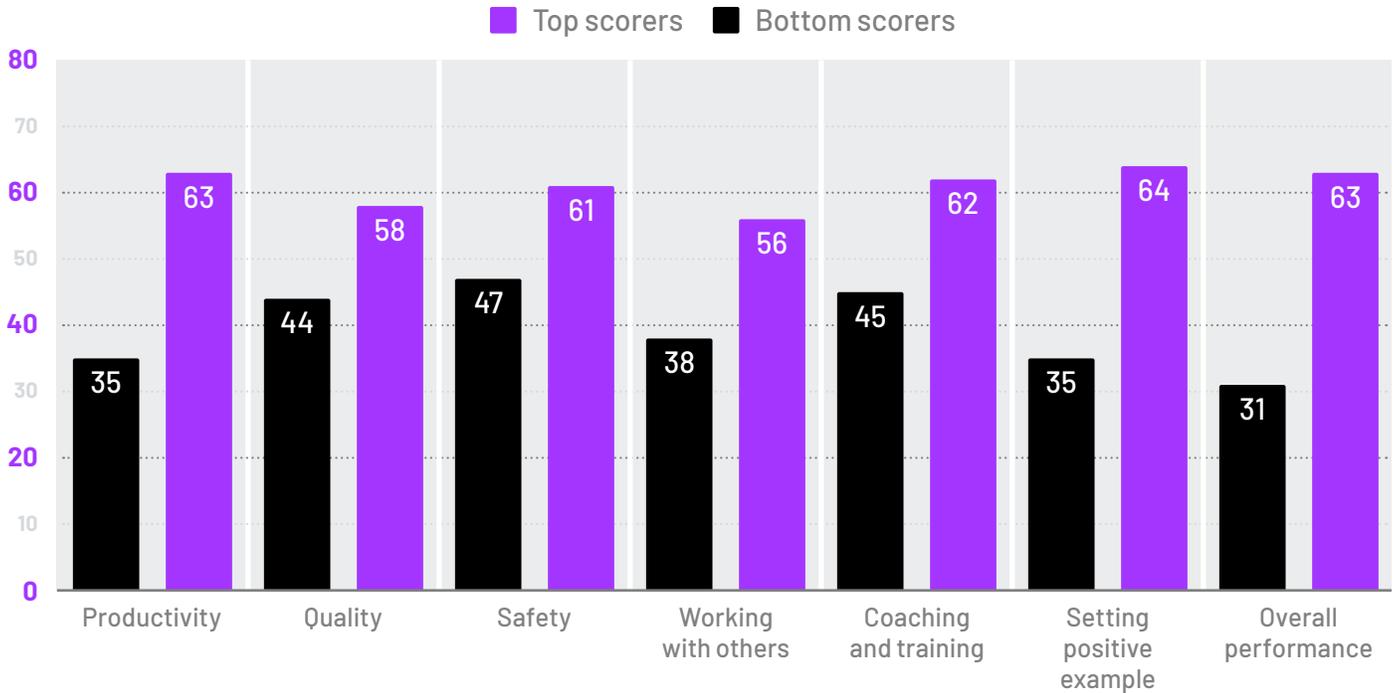**Performance reviews measure HiPro. Assessments measure HiPo.**

High-performing organizations understand this. Well-designed assessments counter the Peter Principle. They measure the abilities and aptitude needed for the next level. These are muscles that employees don't have the opportunity to flex in their current position. Leadership ability, managing resources, and coaching ability are all competencies that can be measured with an effective assessment. It's the fairest way to identify those employees ready for a leadership position, and companies use these assessments to avoid the double-whammy that happened to the paint shop.

One industry-leading auto-manufacturer implemented an assessment as part of their Team Leader promotion position. The company measured the effectiveness of the tool by assessing their existing Team Leader population. Assessment performance was compared to their performance in the Team Leader position. Those scoring higher on the assessment proved to be better Team Leaders.

Implementing the HiPo assessment process eliminated bias and improved accuracy. Assessments have proven to be an effective way to retain HiPros and grow HiPos.

Performance rating in percentile by assessment results

■ Top scorers   ■ Bottom scorers

Category	Bottom scorers	Top scorers
Productivity	35	63
Quality	44	58
Safety	47	61
Working with others	38	56
Coaching and training	45	62
Setting positive example	35	64
Overall performance	31	63

Identify candidates with strong work ethic using assessments

Time and time again when Talogy meets with manufacturing clients to understand production roles, there is one key competency or attribute that hiring managers and other leaders are looking for in an employee. They want employees with a strong work ethic.

People who are willing to work hard to get their reward. Mike Rowe, the popular host of Dirty Jobs and founder of the mikeroweWORKS Foundation went so far as to create a Work Ethic Scholarship Program and have applicants sign a S.W.E.A.T. Pledge (Skill & Work Ethic Aren't Taboo). He's trying to "make work cool again!" But what does work ethic actually mean, and how can you predict if someone has what it takes to follow through on a S.W.E.A.T. Pledge?

Someone with a strong work ethic is generally a hard worker who is committed to giving his or her best effort, every day, regardless of circumstance. These individuals set goals for themselves and set them with high standards. They are both conscientious and exhibit an internal locus of control. What are these dimensions, though?

Conscientiousness is a personality trait that has been shown to be predictive of job performance across industries and position levels. Individuals who are high in conscientiousness tend to be reliable, dependable, responsible, hardworking, and intrinsically motivated to produce high-quality work. They like to solve problems and are willing to put in the extra hours to achieve their goals. They take pride in it.

Locus of Control (LOC) refers to the extent to which an individual believes that they are in control of what happens to them. Generally speaking, LOC is on a continuum from internal to external. Those with internal LOC believe they can control future events through their own personal actions and decisions. They "own" their outcomes and these are the type of employees you want. The less desirable are those with an external position, as they are more likely guided by fate, blame others for their problems, and are more cynical. They do not see the connection between hard work and success due to the perception that the future is out of their hands.

Popular opinion feels that work ethic is dead but that's just not true. These gems are out there, young and old, and employers just need some assistance to mine them. When utilizing an assessment tied with a behavioral-based interview, employers can uncover one's work ethic during the hiring process. Web-based psychometric assessments help to predict work ethic and its dimensions with personality, behavioral, and situational-type measures. Adding a structured behavioral interview with a trained interviewer will help you understand the candidate's past behavior, actions, and results as they pertain to this competency. After all, one of the best predictors of future behavior is past behavior.

We at Talogy have been helping manufacturers mine these gems for over 70 years! The overall benefit is a more productive, stable, and safer workforce.

Implement the right production simulation for your organization

An increasing number of manufacturing organizations are seeking to close a gap in their hiring process. While online assessments offer organizations the ability to use targeted solutions to collect important applicant data, manufacturing organizations wish to understand applicants' performance in a hands-on physical work environment.

Production Simulations offer that ability, and other benefits, but only when thoughtful consideration is taken before implementing. Production Simulations are "high-fidelity" hands-on selection tests that objectively measure candidates' skills while they perform tasks similar to the activities they would perform in the targeted position.

Not all manufacturing organizations are equal so, consequently, careful planning should be taken when customizing a Production Simulation for your organization. Consider these important options:

- **Selection versus training**
Clearly establishing the purpose of the Production Simulation, whether for selection or training, is critical. Simulations for selection are designed to introduce applicants to fundamental tasks that, if able to master, will predict success at training and on the job. In contrast, training simulators are designed to take individuals with previous knowledge and help them understand how to accomplish different tasks.

- **Automated versus manually scored simulations**
Automated simulations help reduce the number of staff needed and help provide unbiased results more quickly, but they cost more and typically take longer to implement. Manually scored simulations cost less and are easier to implement but can require more staff and longer result wait times and as well as risk human error.
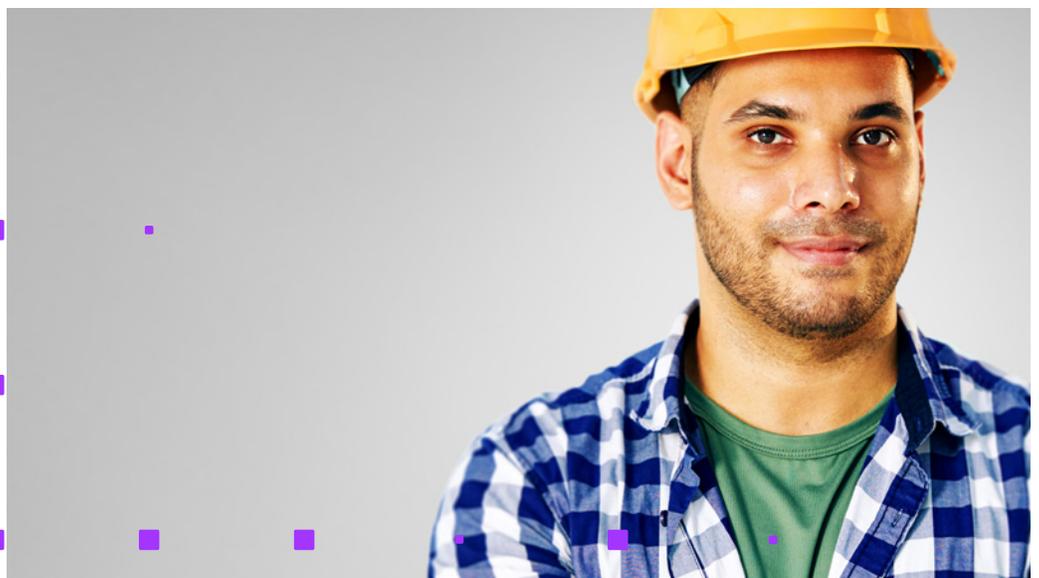
Regardless of the options that are chosen here, there are clear benefits that Production Simulations provide to organizations. For example:

Decreased turnover

Individuals who pass the production simulation are **6.2 times less likely** to turnover due to poor performance and **4 times less likely** to involuntarily turn over

Strong positive correlations with overall job performance and safety

Candidates who score high on these simulations receive higher job performance and safety ratings by their supervisors

Face-valid

Seen as fair by the candidate

Interactive and engaging

Candidates show more positive applicant reactions compared to other assessment tools

Job preview

Candidates are given a realistic job preview of the target position

Job transparency

Accurately recreates the fast-paced, strenuous work of an assembly line

Realizing the benefits of a Production Simulation is attainable, and we can help guide you to achieve that goal. **We can work together to understand the problems you seek to solve while partnering to develop the best course of action for success.**

Incorporate cultural fit in the hiring process to improve production and retention

Organizations are increasingly turning to the concept of culture fit for successful recruiting and hiring. Ensuring that new hires have values and beliefs that align with those of the existing organizational culture can be even more important than skills, qualifications, and experience when it comes to successful hiring decisions

For example, an organization that thrives on teamwork among its employees should aim to hire candidates who enjoy and do well working within a team setting. An employee who prefers explicit instruction and supervision would struggle in an organization that emphasizes employee empowerment and autonomy. Employees whose values are congruent with those of their organization are more satisfied with their jobs, more productive, and less likely to turn over.

The challenge for assessing candidates is being able to clearly identify the company culture in order to best define fit. Culture can be a vague and subjective concept. Often times, hiring managers need guidance for properly assessing culture fit. This is where assessments can play a key role, whereby certain key cultural competencies can be identified and measured as part of the screening process. At Talogy, we have developed tools designed to identify individuals who best fit within various organizational cultures.

However, if leadership isn't practicing the values of the culture, employees will observe this over time and may leave the organization, despite the fact their values were indeed in line with the intended organizational values. Ultimately, it is much more about what leaders do than what they say that makes the culture what it is. Mangers play the key role in promotion and preservation of the organizational culture, which makes it even more important that personnel at all levels reflect and foster the organizational culture. In order to maintain a healthy organizational culture, cultural fit criteria must also be used to select and hire management.

Does it work?

At Talogy, we've helped organizations hire and retain employees across all levels by incorporating cultural fit into the hiring process with a focus on improving productivity and retention.

Our data show that people who were not screened by a cultural fit assessment were almost three times more likely to turnover

Cost reduction associated with turnover reduction can reach hundreds of thousands and even millions of dollars. One client was able to reduce turnover by **26%**, resulting in a cost savings of **$13 million**!

Candidates who fit in an organizational culture are over two times less likely to engage in counterproductive work behaviors and two times more likely to be promoted

Ensure your hiring process is **legally compliant**

The best selection systems accomplish two things: they hire quality applicants, and they follow all established legal requirements. Unfortunately, compliance is not a straightforward process nor is it a checklist of rules to enforce that is then run on autopilot.

Your best defense is to understand the underlying principles of legal compliance and then apply those principles in a continuously evolving context.

The most well-known principle in this realm is the illegality of discrimination. Most organizations put good faith efforts toward this: using non-discriminatory language and displaying EEOC messages about reasonable accommodations are two of the most common efforts. However, there are many ways that a selection system can unintentionally violate anti-discrimination laws. Unless your system has been thoroughly vetted by a selection expert, you may be including culturally biased language in your screening questions or assessments. You may also be asking illegal questions in your interview, even if those questions seem harmless or job-related. Lastly, even if your system has not historically resulted in adverse impact across genders, races, or other protected groups, this will commonly fluctuate over the years as your local demographics grow and change. A process that was approved last decade and then never analyzed again could easily be in violation of compliance today.

At Talogy, we continually monitor all selection tools to ensure that any adverse impact trends are caught before they become an issue. We use advanced statistical models to incorporate your specific applicant's demographic data and scoring trends to create a process that is consistently predictive, yet always compliant. All of our tools undergo several rounds of bias testing to ensure that applicant scores are purely a reflection of performance and ability and unrelated to any legally protected demographics. Lastly, when it comes to litigation, research shows that one of the most predictive factors in an applicant's decision to sue over discriminatory hiring practices is the perception of unfairness.
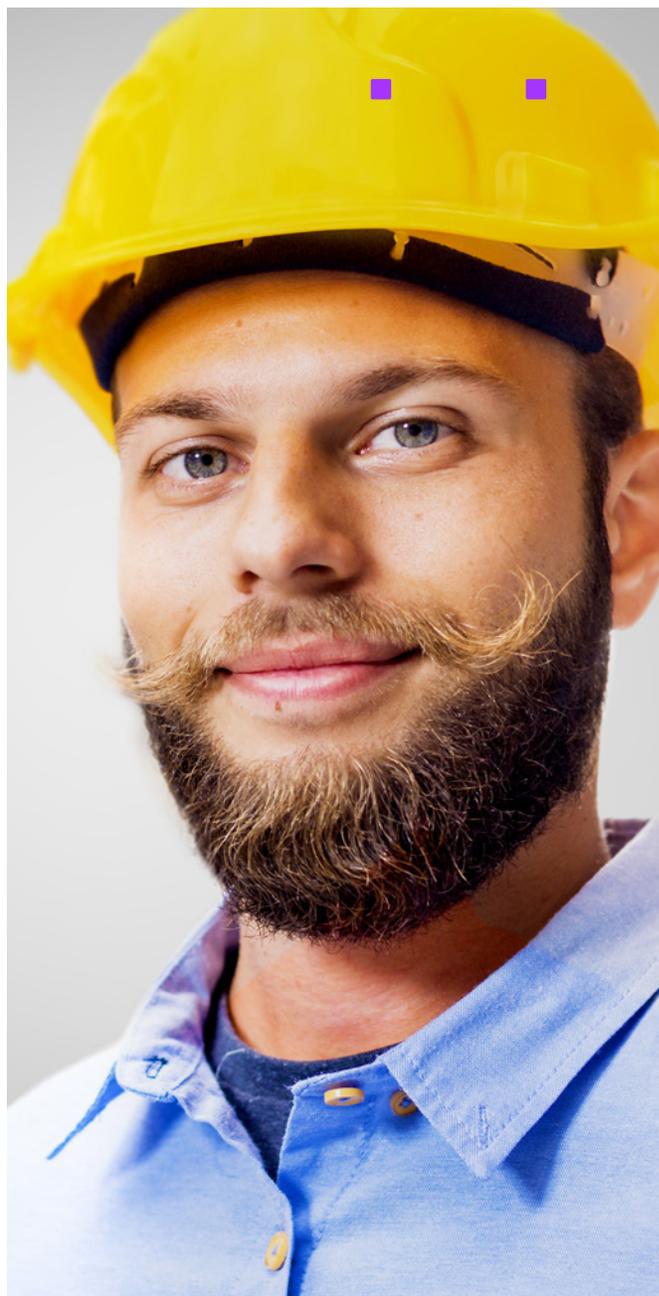
Does it work?

At Talogy, we collect applicant reactions toward the Talogy Modular System for Manufacturing. Here are just a few of the averaged responses:

Over

90%
of all applicants
report that the assessment was fair

Over

85%
of all applicants
felt that the content of the assessment was related to the job

Over

95%
of all applicants
stated that the assessment provided a positive first impression of the company's commitment to hiring the best employees

Improve time-to-hire
in your hiring process

One of the key indicators of a successful hiring process is the time-to-hire metric. Human resources often reviews this metric to get a better understanding of the candidate experience.

It also allows HR to gauge their ability to efficiently communicate with candidates. Time-to-hire simply measures the time it takes from the first contact with the candidate until the candidate has received a job offer. Depending on complexity and details of the target job, the acceptable time-to-hire window could vary. In a survey by Robert Half International, they found that 39% of job candidates say that 7-14 days is too long for time-to-hire. Only 23% of candidates are willing to wait one week to hear back after a job interview. According to a Global Recruiting Trends report, only 30% of companies had an average time-to-hire time less than 30 days; 50% average 1-2 months. The gap in time-to-hire expectations between employer and candidate seems to be concerning.

So how can companies reduce their time-to-hire while still maintaining a high-quality hiring process? A search on Google will yield plenty of articles with various good suggestions. One common theme that occurs throughout those articles is the need to establish a standardized hiring process with hiring assessments. An online hiring assessment tool can provide at least four benefits that will enhance the hiring process and help reduce time-to-hire.

■ **Seamless transitions**
After a candidate applies for a position, it could be days or weeks before an HR contact reviews the application and decides to move them to a pre-screening call. If an online hiring assessment is automatically sent to the candidate after an application is submitted, they are instantly moved into the pre-screening phase. No time wasted.

■ **Standardized questions and scoring**
If the hiring tool is developed correctly, there will be a standard set of questions and scoring. This means that not only can you benchmark the results with jobs across multiple locations and organizations, but you can also make quicker hiring decisions.

■ **Data collection is king**
AI practices such as machine learning are taking the business world by storm. The lifeblood of machine learning is data collection. Hiring assessments are a great way to constantly collect new data. These data will provide fuel for developing and refining machine learning models that will make the hiring process that much faster.

■ **Mobile testing**
In a project completed for a large automotive manufacturing organization, Talogy saw a reduction in time-to-hire by allowing individuals to complete online assessments on their mobile devices.
- Pre-mobile average completion time: 3.98 days.
- Post-mobile average completion time: 2.82 days.

Does it work?

Talogy was able to reduce the time to hire by 40%. This reduction was met through process design and improvement, not a reduction in the effectiveness of the hiring procedure.

Incorporate mobile testing to improve your candidate experience

The way in which candidates access and interact with the internet continues to evolve and become confounded with our daily lives. Where once we were required to sit down at our computer and wait for the phone line to connect, we now have instant access on any number of devices including refrigerators and appliances.

This paradigm shift has led to changes in how we receive news, communicate with each other, and engage in a whole host of other activities and that includes how we look for and apply for jobs.

As the percentage of individuals who had readily accessible internet increased, job seekers found themselves being asked to complete applications and assessments solely on the internet. However, how we access that internet continues to change greatly. For example, a recent investigation showed that nearly 40% of candidates who applied to an entry-level manufacturing position chose to access the application and assessment process via a mobile device. Of those, nearly 60% indicated the reason was because it was the only device that they had to access the internet.

These statistics are becoming more and more common in the selection world, so ensuring that your selection process can accommodate this is more critical. However, making sure that an assessment is mobile-friendly is only part of the solution. Having the technology to administer testing on a mobile device does not necessarily mean that candidates will have a positive experience. Worse yet, taking an assessment not designed for mobile could negatively impact the candidate's ability to score well and, thus, reduce your ability to hire the right people.

At Talogy, we have the right expertise to provide a technology-forward solution that uses the proper scientific methodology to ensure a quality candidate experience and an effective organizational tool.
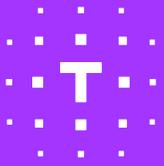
We recently implemented a new mobile assessment tool within a large automotive manufacturer and saw positive outcomes across the board, including:

28% increase in candidate engagement

Increase in female applicants

Over 95% of candidates indicated a **positive** candidate experience