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# TOOLS FOR THE HIRING, PROMOTION, AND TALENT DEVELOPMENT OF SHEET METAL AND MECHANICAL CONTRACTOR PERSONNEL

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**Prepared By:**

*Jake Smithwick, PhD, MPA*

*University of North Carolina at Charlotte*

*Brian Lines, PhD, P.E.*

*University of Kansas*

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*Carol Goguen*

## PROJECT TASK FORCE

*Guy Gast*, The Waldinger Corporation  
2601 Bell Ave.  
Des Moines, IA 50321-1120  
Ph: (515) 323-5135  
[ggast@waldinger.com](mailto:ggast@waldinger.com)

*Matthew Cramer*, Dee Cramer, Inc.  
4221 East Baldwin Rd.  
Holly, MI 48442  
Ph: (810) 579-5000  
[mattc@deecramer.com](mailto:mattc@deecramer.com)

*William Reardon*, SMCA of Philadelphia  
& Vicinity  
955 Louis Drive  
Warminster, PA 18974  
Ph: (610) 828-4055  
[wreardon@carlinmgt.com](mailto:wreardon@carlinmgt.com)

*Thomas J. Soles, Jr.*, New Horizons Foundation  
P.O. Box 222784  
Chantilly, VA 20153  
Ph: (703) 222-9001  
[tsoles@newhorizonsfoundation.org](mailto:tsoles@newhorizonsfoundation.org)

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## INTRODUCTION

We are in the human capital business. Every day we put people in the field, and we hope—and expect—that they are going to perform their jobs correctly. We have to constantly trust and verify. Our top-performing employees are our greatest resource, but not all employees are top performers and every company has made hiring mistakes. Unfortunately, a hiring mistake is typically not discovered until *after* the hire is made and the new employee has been integrated into the company for a time. When the wrong person is hired, profitability suffers and discord among project teams increases, which can result in higher employee turnover. The familiar adage that you can't fit a square peg in a round hole applies to finding the right person for the right position. This adage is also relevant to promotion decisions and internal talent development. Research shows that the *more than half the variability (and uncertainty) in hiring and promotion decisions can be reduced by considering factors that are not revealed in typical résumés and interviews.*

This white paper is based on the results of interviewing a variety of contractors—including general contractors and SMACNA contractors—to understand how personality and aptitude assessments are being used in the construction industry. The interviews found that *personality and aptitude assessments enhance the hiring process* and are also useful in internal talent development.

## KEY FINDINGS AND RECOMMENDATIONS

The interview responses indicate that personality and aptitude assessments are used to different extents in the construction industry, but several findings are clear:

- In various parts of the country, the ability to use personality and aptitude assessments with union tradespeople may be a sensitive issue. Most contractors are not using assessments as a hiring process from the union hall. However, many contractors are successfully using assessments when moving tradespeople into positions outside

of traditional Trade Jurisdiction within their companies, such as Project Manager, BIM / VDC Modeling, Detailing, etc.

- Paying attention to soft skills that are predictors of success can help contractors create clearer job descriptions.
- Numerous personality and aptitude assessments are commercially available. Pricing typically ranges from \$20 to \$50 per assessment administered. Some assessments offer certification courses often ranging from a few hundred to several thousand dollars. Although there is not a standard set of assessments that are universally used in the construction industry, many SMACNA contractors have benefited from applying one or more assessment tools within their companies.
- Personality and aptitude tests are viable tools in the hiring process because they help quantify factors that may not be revealed in typical résumés and interviews. These tests are not a replacement for effective recruiting practices such as interviews; instead, they are an additional tool in the toolbox. The assessments provide a deeper understanding of personnel (instead of just “they interview well”). Also, the tools can be used at all levels, and especially at the apprentice level.
- Contractors should assess the top-performing employees in their companies. This enables contractors to create benchmarks that show the characteristics of successful employees within key job positions and career pathways. These benchmarks can be used to accomplish the following:
  - Compare job applicants to determine who best matches the model profile.
  - Better determine whether a job applicant will fit with the company's culture.
  - Improve internal talent development programs by identifying the skills needed for current employees to become more successful.
  - Help manage employees who are transitioning roles in the company.

- Supervisors can use personality and aptitude information to better understand their staff and improve communication with individual employees.
- These assessments can be used as leadership tools to assist managers internally within the company. For example, if a manager is having a difficult time with an employee, the assessments can be used to get the two of them together to learn more about each other's communication styles, break down walls, and help them work together more cohesively.
- Assessments can be used for on-going development of employees after the hiring process. There can be significant value gained by focusing on further development with individual employees to help them better understand their strengths and opportunities for development.
- Using these tools may improve employee retention by increasing the odds of hiring the right employee, tailoring training and support programs to help that employee grow, and assigning the employee to team environments where they will thrive.

## CURRENT INDUSTRY CHALLENGES

In the interviews, the SMACNA contractors identified several challenges that can be addressed through using personality and aptitude assessments:

### Hiring the wrong person comes at great cost.

Uncovering a poor hiring decision can take a long time because it is typically not discovered until after negative outcomes have occurred. Usually, a company invests anywhere from one to five years before the company recognizes that a change is needed due to an employee's weak performance. Beyond poor performance, an employee who is an energy sucker can hurt company morale and encourage poor performance in other employees. Additionally, hiring a person who is a bad fit is a crushing blow for the individual because he or she went through the effort to obtain the job and/or transferred from somewhere else.

### There are flaws in many traditional talent development processes.

Just as it is critical to identify the right person for a position, it is also essential to develop employees' skills and teach them how to lead so that they can reach their maximum potential in the company. SMACNA contractors identified several flaws in traditional talent development processes:

- Sometimes, an employee automatically becomes the boss because he or she has worked at the company long enough, even if the employee lacks the required skill set.
- Field superintendents might promote who they like, not necessarily who is most qualified.
- Sometimes people are promoted because they state, "I want to be the boss some day!" Those who do not verbalize this interest may be overlooked.
- Companies often teach technical aptitudes to apprentices but not necessarily desirable personality traits. Sometimes, apprentices have a good attitude for the first few years but then get beaten down by field leadership.
- Employees who are overlooked may become frustrated by the lack of challenge, promotion, and/or growth. A key question is how can contractors identify good leaders and recognize employees who have drive or are frustrated that they are not being promoted.

### Teamwork is as important as ever.

The construction industry has changed. Today's field personnel need to have more soft skills than were required in years past. But general contractors are hiring individuals with less field experience and lower performance than ever before. This situation has several impacts on SMACNA contractors:

- In the past, the site superintendents for general contractors usually came from the field (framers, drywallers, concrete workers, etc.), which meant they knew how to sequence activities and drive construction schedules with their specialty trade partners.

- Now, general contractors appear to be hiring individuals with less construction experience but more technological skills. These employees often want to apply their computer skills by using scheduling software but lack understanding of realistic expectations for a project (versus blindly accepting what the software tells them).
- This changing demographic is negatively affecting SMACNA contractors' schedules, adding paperwork, and increasing the litigiousness of the industry.

Several SMACNA contractors commented that they view personality assessments as a tool to bridge the gap in field experience and align new hires' experience with positions that best match their skill sets.

### Retaining existing talent is more challenging.

Data show that younger generations are transitioning between jobs more rapidly than are older generations of employees. In fact, one general contractor commented that his company has tracked new hires since the late 1990s and found that 80% of new hires left within five years. The company has been trying to solve this problem for decades because “we cannot afford to lose 70%–80% of new hires and maintain our business, let alone grow our business.” When the company studied the employees who stayed, common themes included that the employee's supervisor cared about the employee's individual success, the employee had promotion opportunities, and the employee's growth was recognized. The general contractor stated that the company wants to find a way to better identify the 20%–30% of new hires who are likely to stay. One way to increase the retention rate could be to use personality and aptitude assessments to match applicants with the types of employees who have historically stayed with the company.

## ASSESSMENTS CURRENTLY USED IN THE CONSTRUCTION INDUSTRY

Numerous personality and aptitude assessments have been successfully implemented in the construction industry. *Figure 1* provides a list of assessments that are currently used by contractors in the United States. These findings are based on a review of current literature as well as the interviews conducted in this study.

- ***Personality assessments*** are tools that measure traits, characteristics, and styles that are part of an individual's personality. An individual's personality is understood in the psychological sciences as a set of behaviors, cognitive processes, and emotional patterns.
- ***Aptitude assessments*** measure skills, talents, and inclinations that an individual possesses. These aptitudes can be inherent abilities and can also include a person's capacity to learn certain skills.

**Figure 1**

**Assessments Used by SMACNA Contractors**

***Personality Assessments***

- DiSC Profile
- Myers-Briggs Type Indicator
- Personametrics
- Predictive Index
- Hogan Personality Inventory

***Aptitude Assessments***

- Wonderlic
- Emotional Intelligence
- Gallup Strengths Finder/  
CliftonStrengths 34
- Space Visualization Test
- Value Drivers Continuum

**Assessments Used by General Contractors**

***Personality Assessments***

- DiSC Profile
- Myers-Briggs Type Indicator
- Personametrics
- HEXACO Personality Inventory—Revised
- Predictive Index
- California Psychological Inventory
- Birkman Method
- ProfileXT
- Herrmann Brain Dominance Instrument

***Aptitude Assessments***

- Wonderlic
- Emotional Intelligence
- Gallup Strengths Finder/  
CliftonStrengths 34
- Watson-Glaser Critical Thinking Appraisal
- Bennett Mechanical Comprehension Test
- Numerical Reasoning Test
- Leadership Effectiveness Analysis
- Activity Vector Analysis

***Note:** SMACNA data based on interviews performed in this study. General Contractor data based upon interviews performed in this study plus a separate survey of ENR Top 400 Commercial Contractors conducted by Childs et al. 2017.*

## SUCCESSFUL APTITUDES AND PERSONALITY TRAITS IN SMACNA CONTRACTORS

Interviews with five SMACNA contractors revealed that the highest-performing employees possess certain aptitudes and personality traits. It was also revealed that these traits and aptitudes differ based on the job, since different positions obviously require different skill sets.

Below are summaries of the aptitudes and personality traits possessed by the highest-performing project managers, foremen, and superintendents; journeypersons; and sales and business development personnel. SMACNA contractors who participated in this study predominantly used the assessment tools on project managers, foremen, superintendents, and journeypersons; therefore, the bulk of the feedback gathered is focused on these roles.

[Appendix 1](#) provides a simplified checklist that illustrates the assessment process for various personnel. See [Appendix 2](#) for a detailed list of assessment tools.

## Project Managers, Foremen, and Superintendents

- Pays strong attention to detail and technical focus. Needs to be actively engaged.
- Has ability to manage multiple tasks at once. A project manager must be able to balance multiple competing interests (foreman, customer, schedule, etc.).
- Possesses an influencing style that is assertive and authoritative. Has to influence a number of parts and cannot be quiet or passive. If introverted, inarticulate, or self-conscious about reaching out for resources, the person will probably not be successful in a leadership role running a crew.
- Possesses strong drive. Needs to be proactive and have tenacity to solve issues as they occur. If a person has a tendency to wait, the person will not do well, even if he or she has favorable traits in other areas. Success requires energy; low energy can signify stress, fatigue, and a lack of capacity.
- Is innovative and enterprising. Because project management is not black and white, employees need to be able to think quickly, be successful problem solvers, and have critical-path thinking skills.
- Values relationships. It is important to lead, mentor, and teach others. For example, some foremen are great at bringing in a project but are so traditional and tough to get along with that very few people can stand to work with them. Must also get along with people in other crafts.
- Has emotional control. A high emotional-control score indicates the employee is professional and calm under pressure.

**Note:** *The most important indicators of high performance can vary based upon the trade specialty. For example, a slightly different profile may be preferred for a sheet metal project manager versus a piping project manager because*

*one group has a greater framework and support, whereas the other has more owner-facing or general-contractor-facing positions.*

## Journeypersons

- Is detail oriented
- Is actively engaged and focused on the work when installing HVAC and plumbing and piping systems.
- Is adaptable.
- Has a positive attitude. Cannot be an energy sucker who brings down other employees. Needs a can-do attitude; frequently says, “Sounds good!”
- Seek out further training, such as on AutoCAD, drafting, thermodynamics, and psychometrics. Asks, “What can I do to move up?”
- Has a technical focus; less extroversion needed.
- Is proactive.

**Note:** *In contrast to project managers, it is not essential for journeypersons to be able to handle multiple tasks. Journeypersons typically focus on a specific area, such as only domestic hot water. Similarly, it is not as important for journeypersons to be assertive or authoritative; journeypersons just need to know how to complete their own work.*

## Sales and Business Development

- Values relationships, because sales staff are the personnel who interact with customers most often.
- Is self-motivated. Candidates could be exceptional in other areas but won’t do well in sales if they have only moderate drive.
- Has high assertiveness.
- Has a sense of urgency. Will not be overly patient while waiting or hoping to make a sale that never comes.
- Is not afraid to fail. Great sales staff need to know when to move on.



- Must have the ability to close. Do not need to be overly service-oriented to the point that they are meeting with prospective clients for too long without driving results.
- Is tenacious and innovative.

## SUCCESSFUL APTITUDES AND PERSONALITY TRAITS IN GENERAL CONTRACTORS

The aptitudes and personality traits of successful general contractors were similar to the aptitudes and traits for SMACNA contractors. Highlights regarding general contractors are listed below:

### General Contractor Operations Staff (Project Managers, Engineers, etc.)

- Has critical thinking ability. Can review a range of data and identify the relevant indicators needed to develop an effective answer. This ability is the top predictor of new-hire success.
- Is an effective leader. This characteristic can be used to assess an employee's potential for growth in promotion decisions.
- Is self-motivated. Leaders can use motivational assessments to more effectively manage relationships with direct reports. One general contractor's company looks for candidates who have a fear of failure, rather than candidates who are looking for money, power, or prestige.

### General Contractor Field Supervision (Site Superintendents, General Foremen, etc.)

- Has high mechanical comprehension. This characteristic has the highest correlation with field supervision capability. One general contractor reported that his company's field leaders tend to score in the 95th percentile or better on the Bennett Mechanical Reasoning Test.

## HOW SMACNA CONTRACTORS USE ASSESSMENTS

SMACNA contractors have used personality and aptitude assessments in both the hiring and internal development processes. This section provides summaries of how four medium to large SMACNA contractors are currently using these tools.

### SMACNA Contractor 1

Contractor 1 has been using a variety of assessments since the mid-1990s. Every candidate who applies is tested via a combination of psychological and aptitude assessments. Results are compared against target parameters for specific positions. The results do not stop an applicant from moving forward unless a disastrous fit is identified; managers review the information to help prepare for each candidate's interview.

Managers review assessment results when making internal promotion decisions. Mainly, managers use the results to identify potential weaknesses. By the time that an employee is being considered for promotion, he or she has been at the company long enough for managers to know if the employee is promotable.

### SMACNA Contractor 2

For the past 35 years, contractor 2 has been using psychological assessments to examine job candidate finalists, to assist with internal development decisions, and to review (or retest) individuals before promotions. All nonunion employees have been tested for the past 20 years for every position, including truck drivers. The company has developed model profiles for top performers in accounting, clerical, administrative support, sales, senior project management, assistant project management, estimating, and superintendent roles.

The assessments are also a valuable tool when considering talent development of current employees. Leaders can use the assessments to guide conversations with individuals employees and to coach them through tough interpersonal issues they are experiencing with other employees, supervisors, or direct reports.

### SMACNA Contractor 3

Contractor 3 uses a variety of assessments, primarily for internal staff development. Several assessments are used tailor team-building initiatives and effective-communication training. Other assessments are used more often to help employee achieve their professional goals.

At times, detailed assessments are used for hiring purposes, mainly to help executive team members ensure that candidates are a truly a good fit for the leadership team and broader organization. The company does not use specific benchmarks for comparison but would be interested in developing benchmarks over time if the number of positions being measured were to expand.

### SMACNA Contractor 4

Around 15 years ago, contractor 4 used psychological assessments exclusively for hiring and developing individuals for upper-management roles (director and VP levels). Within the last five years, the company started requiring a psychological assessment to be on file for each employee, including craft workers (journeypersons, field supervisors, foremen, and general foremen). Benchmarks have been developed based on top-performing individuals in various jobs, to identify core competencies for a position. New applicants are compared against acceptable ranges.

The assessments are also used as an internal coaching tool to assist leaders in understanding how individuals fit within the company and how they differ from one another. Managers who used the assessments improved the performance of their teams more rapidly than managers who did not use the tools. The company is also beginning to assess interactions between entire workgroups and departments that require a lot of collaboration (e.g., between accounting/payroll and HR, between sales and operations, and between field crews and CAD detailers).

## HOW GENERAL CONTRACTORS USE THE ASSESSMENTS

Below are highlights showcasing how general contractors in the construction industry are using personality and aptitude assessments.

### ENR Top 400 General Contractors

The following are results of a recent study of 78 general contractors included in ENR's list of top 400 commercial contractors:

- One-third used personality and/or aptitude assessments.
- 20% were either unaware of personality and aptitude assessments or did not know enough about how to effectively use them.
- The contractors who used assessments did so for four main purposes:
  - 77% used the assessments for hiring decisions
  - 31% used the assessments for leadership development
  - 27% used the assessments for team placement
  - 19% used the assessments for internal promotion decisions

- Most assessments were used to get a general feel for new-hire candidates; additionally, several contractors used assessments to compare a candidate's traits with model characteristics for certain positions.
- Very little consistency was found in terms of the assessments used; the 78 contractors used at least 17 different assessments.

**Citation:** Brian R. Childs, Justin E. Weidman, Clifton B. Farnsworth, & Jay P. Christofferson. (2017). *Use of Personality Profile Assessments in the U.S. Commercial Construction Industry. International Journal of Construction Education and Research*. DOI:10.1080/15578771.2016.1246493.

## Example of a General Contractor Using Assessments in a Highly Sophisticated Manner

The most sophisticated use of personality and aptitude assessments was found at an ENR top 40 general contractor. A company employee volunteered to be interviewed anonymously as a part of this study. For more than 30 years, this company has used a variety of assessments as part of the hiring process, promotion decisions, and leadership development, as described below. As a result of using assessments, this company rarely encountered unpleasant surprises regarding new hires. The company also has found benefits related to employee retention; the employee turnover rates are roughly one-fourth of industry averages.

### Hiring

#### For Operations Personnel (e.g., Project Managers and Project Engineers)

- The hiring process incorporates at least six assessments, including measures of personality, motivation, numerical reasoning, critical thinking, and leadership effectiveness. Collectively, the assessments take four to five hours to complete (online) and contain more than 800 questions. The results are benchmarked against model profiles of high performers in the company.

- Candidates who pass these assessments are required to complete a two-hour interview with an organizational psychologist for additional assessment.

#### For Field Supervision (e.g., Site Superintendents and General Foremen)

- Within the last 10 years, this general contractor began using the Bennett Mechanical Comprehension Test to benchmark supers and foremen coming up through the ranks.
- The company has also started to pair this assessment with other tests to develop a vetting process for general field labor (critical skilled labor categories such as millwrights and carpenters).

### Promotions and Leadership Development

- Whenever an employee is recommended for a significant promotion (e.g., from a senior project management or engineering position to a project director role), this general contractor will ask the employee to complete the hiring assessments and organizational psychologist interview again to ensure the employee will likely meet the expectations of the position. If there are no red flags, the employee will be promoted.
- Approximately every five years, the general contractor retests high-potential employees throughout the organization to determine whether the target models are accurate or whether the benchmarks are beginning to migrate due to generational changes.

## CHALLENGES & LIMITATIONS OF PERSONALITY AND APTITUDE ASSESSMENTS

Although the SMACNA contractors who use personality and aptitude assessments found them to be highly advantageous, the contractors noted several limitations and barriers to implementing the tools:



- It is important—but difficult—to develop industry-specific benchmarks of high performers for different positions and career pathways. The challenges include the following:
  - The need to use one assessment for a number of years to make the findings really useful.
  - Creating company-specific benchmarks takes time. SMACNA contractors who have successfully implemented this approach acknowledged that data has to be accumulated over many years – it is a journey for companies to embark on. Some have wondered if aggregating a larger pool of contractors to develop national and regional benchmarks would be useful for the industry.
  - Some organizational behavior consultants claim that they have developed national benchmarks for project managers. These consultants often say that ideal traits for project managers are the same across all industries—but this assertion is not true. Construction project managers need a higher level of project management skills than do industries in which project managers have more of a paper-pushing role. It is important to develop benchmarks for specific industry sectors—such as for SMACNA contractors—and not to mix data from multiple industries.
- A contractor needs an employee who is able to administer, and interpret the results of the assessments.
- Not everyone in the organization will be enthusiastic about using the assessments (e.g., a leader in operations might use the tools a lot, whereas a leader in business development may not, or vice versa). That is OK! Employees have to understand why the company is doing this. Sharing feedback about the assessment process, reasons behind it, and opportunities for its application provides allows the company to engage further with employees.
- The assessments must be easy to administer and easy to understand; otherwise, people will not take the time to use them.
- Current and prospective employees will want to know how the assessment information will be used. Companies who use these type of assessments must acknowledge that all people can be sensitive to how they are being evaluated for positions or promotions.
- Using these tools alone does not guarantee success in hiring. They must be paired with effective recruitment practices including traditional resumes and interviews. For example, assessments cannot guarantee that a prospective employee will fit within your organization from a core value perspective – an interview process should still be used to get a feel for who the applicant is, assess whether they share the right core values, and get a picture of how they will fit.
- Contractors who use these assessments should maintain the results in an orderly fashion. The assessments and the company's use of them should be systematically retained as a part of the company's employment records.
- As with any employment activity, Contractors are recommended to seek legal counsel. Statutes vary from state-to-state regarding the manner in which employment processes are required to be conducted.

## REFERENCES

Childs, B.R., Weidman, J.E., Farnsworth, C.B., and Christofferson, J.P. (2017). Use of Personality Profile Assessments in the U.S. Commercial Construction Industry. *International Journal of Construction Education and Research*, DOI: 10.1080/15578771.2016.1246493

## APPENDIX 1: SAMPLE CHECKLIST OF APTITUDES AND PERSONALITY TRAITS TO USE DURING INTERVIEWS

Trait	What to Look for	Rating
<i><b>Project Managers, Foremen, Superintendents</b></i>		
Detail Oriented	Has a technical focus; is actively engaged in the work.	L   M   H
Multitasker	Can balance multiple stakeholders and project needs (schedule, cost, customer etc.).	L   M   H
Assertive	Is an authoritative influencer; articulates positions; is not shy about asking for resources.	L   M   H
Proactive	Is tenacious in addressing issues; does not sit back and wait.	
Driven	Does not show signs of stress, fatigue, or a lack of capacity.	L   M   H
Critical Thinker	Is innovative and enterprising; can think quickly when situations are not black and white.	L   M   H
High EQ	Values relationships; is patient and mentoring; gets along with team members and those on other teams.	L   M   H
<i><b>Journeypersons</b></i>		
Detail Oriented	Has a technical focus; is actively engaged in the work; focuses on specifics.	L   M   H
Proactive	Is a self-starter, knows how to get work done.	L   M   H
Adaptable	Handles variations within the details of site, layout, etc.	L   M   H
Desire to Improve	Is willing to complete further training; takes initiative and asks, “What can I do to get better?”	L   M   H
Positive Attitude	Has a can-do attitude; says, “Sounds good!” a lot; is not an energy sucker.	L   M   H
<i><b>BIM/CAD</b></i>		
Space Visualization	Has experience with and aptitude in mechanical systems; can see and describe 3-D systems.	L   M   H
<i><b>Sales</b></i>		
Relationship Focus	Enjoys interacting with customers; is a social diplomat.	L   M   H
High EQ	Is service oriented; focuses on how people feel more than on technical details.	L   M   H
Driven	Is strongly self-motivated.	L   M   H
Overcomes Failure	Does not dwell on failure; is resilient; is not put off by hearing “no.”	L   M   H
<i><b>L = Low; M = Moderate; H = High</b></i>		

## APPENDIX 2: LIST OF COMMERCIALY AVAILABLE PERSONALITY AND APTITUDE ASSESSMENTS

### Personality, Behavior, and Motivation

#### 1. *Myers-Briggs Type Indicator (MBTI)*

##### ■ Purpose of the test

- To make the theory of psychological types described by C. G. Jung understandable and useful in people's lives.
- Most widely used personality assessment of its kind. It is based on well-researched and validated personality theory, with proven applications in a variety of fields.

##### ■ Scale description

- 16 distinctive personality types result from the following four dichotomies:
  - Favorite world: Extraversion (E) or Introversion (I).
  - Information: Sensing (S) or Intuition (N).
  - Decisions: Thinking (T) or Feeling (F).
  - Structure: Judging (J) or Perceiving (P).

##### ■ Common uses

- Improve teamwork and collaboration, identify and develop leadership, foster diversity, and solve complex personal development challenges.
  - For organizations: Develop employee engagement strategies, boost resilience, strengthen leadership, improve team dynamics, and increase productivity.

##### ■ Sample reports

- Sample reports can be found at <https://www.themyersbriggs.com/en-US/Products-and-Services/Sample-Reports#mbti>.

##### ■ Details for administering the assessment

- To use the MBTI in a professional or consultative way, the person needs to meet certain criteria and be approved by the Myers-Briggs Company.
- The certification program covers information about type theory and terminology, type dynamics and development, administration and interpretation, ethical guidelines, and hands-on delivery.
- An on-site training option is available.

##### ■ Pricing

- MBTI Assessment: \$49.95.
- MBTI Certification: \$1,795–\$2,295, depending on location.

### ■ Web links

- Become an MBTI certified practitioner: <https://www.myersbriggs.org/using-type-as-a-professional/certify-to-administer-the-mbti-tool/>.
- Schedule and registration: <https://mbtitraininginstitute.myersbriggs.org/mbti-training/>.

### ■ Note

- The Myers-Briggs Company offers reduced prices for researchers who meet certain requirements. To learn more, visit <https://www.themyersbriggs.com/en-US/Company/Research>.

## 2. California Psychological Inventory (CPI)

### ■ Purpose of the test

- To help people gain a clearer picture of their personal and work-related characteristics, motivations, and thinking styles.
- Looks at how people identify themselves at work in relation to other people, rules and values, and inner feelings.

### ■ Scale description

- 4 lifestyles of the CPI model: Implementer, Supporter, Innovator, Visualizer.

### ■ Common uses

- Leadership competencies, executive motivation, performance improvement, succession planning, selection and retention, and executive coaching.

### ■ Sample reports

- <https://www.themyersbriggs.com/en-US/Products-and-Services/Sample-Reports>
  - CPI 260 Client Feedback Report.
  - CPI 260 Coaching Report for Leaders.
  - CPI 260 Configural Report.
  - CPI 434 Profile Report.
  - CPI 434 Narrative Report.
  - CPI 434 Configural Analysis Report.

### ■ Details for administering the assessment

- Two CPI assessments:
  - CPI 260: Practical insights in an organizational context.
  - CPI 434: Designed to be administered by professionals with a solid background in personality theory and assessment methodology.
- CPI 260 certification is available through joining a 2.5-day public program or holding an on-site training program.

### ■ Pricing

- CPI 260 certification public-program price: \$1,895.

### ■ Web links

- Main page: <https://www.themyersbriggs.com/en-US/Products-and-Services/CPI>.
- CPI certification: <https://www.themyersbriggs.com/en-US/Products-and-Services/Certification-and-Training/CPI-Certification>.
- List of CPI 260/434 sample reports: <https://ap.themyersbriggs.com/sample-reports/California-Psychological-Inventory-12>.
- CPI products: [https://shop.themyersbriggs.com/en/searchentry.aspx?query=CPI&query\\_f=Y&Search\\_type=all&sort=author&krs=awcqa3zmlhxzhtziv51krvyk](https://shop.themyersbriggs.com/en/searchentry.aspx?query=CPI&query_f=Y&Search_type=all&sort=author&krs=awcqa3zmlhxzhtziv51krvyk).

## 3. HEXACO-PI-R

### ■ Purpose of the test

- To conceptualize human personality in terms of six dimensions.

### ■ Scale description

- Six major dimensions of personality: Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness, and Openness to Experience.

### ■ Details for administering the assessment

- The assessment can be a self-report inventory or an observer-report inventory.
- The user indicates agreement or disagreement with various statements.
- Immediate results upon completion.

### ■ Pricing

- Free.

### ■ Web links

- Main page: <http://hexaco.org/hexaco-online>.
- HEXACO scale descriptions: <http://hexaco.org/scaledescriptions>.
- HEXACO-PI-R materials for researchers: <http://hexaco.org/hexaco-inventory>.

## 4. Hogan Personality Inventory

### ■ Purpose of the test

- To decide which candidate is best suited for the job.
- To build strong, effective teams.
- To help high-potential managers develop into executive-level leaders.
- To maximize productivity across the organization.

### ■ **Scale description**

- Based on the five-factor model.
- Comprises seven primary scales, six occupational scales, and 42 subscales:
  - The seven scales: Adjustment, Ambition, Sociability, Interpersonal Sensitivity, Prudence, Inquisitive, and Learning Approach.

### ■ **Common uses**

- Behavioral assessments, hiring process, professional development, and team development.

### ■ **Sample report**

- HPI sample report.

### ■ **Details for administering the assessment**

- 15- to 20-minute completion time.
- Online administration.
- There is a 2-day certification workshop.

### ■ **Pricing**

- Hogan Assessment Certification Workshop: \$2,300.

### ■ **Web links**

- Main page: <https://www.hoganassessments.com/assessment/hogan-personality-inventory/>.
- Hogan assessment certification: <https://www.hoganassessments.com/certifications/hogan-assessment-certification/>.

### ■ **Notes**

- Hogan provides private, on-location workshops for groups of 8 or more people.

## **5. DiSC Profile**

### ■ **Purpose of the test**

- To measure tendencies and preferences (patterns of behavior).
  - Does *not* measure intelligence, aptitude, mental health, or values.
- To assess people's behavioral differences.
- To increase self-knowledge.
- To improve working relationships.
- To facilitate better teamwork and to teach productive conflict.
- To increase sales skills.
- To manage more effectively.

## ■ **Scale description**

- Four reference points:
  - Dominance: Emphasis on accomplishing results; the bottom line; confidence.
  - Influence: Emphasis on influencing or persuading others; openness; relationships.
  - Steadiness: Emphasis on corporation; sincerity; dependability.
  - Conscientiousness: Emphasis on quality and accuracy; expertise; competency.
- Eight scales (D, Di/iD, i, iS/Si, S, SC/CS, C, CD/DC) are used to more accurately provide personalized feedback in the Everything DiSC product family.

## ■ **Common uses**

- Professional development, career development, personal coaching, communication, customer service, conflict management, team building, etc.
- Often used as part of the hiring and onboarding process.

## ■ **Sample reports**

- Individual, group, and facilitator reports: <https://www.discprofile.com/resources-and-tools/sample-reports/>.

## ■ **Details for administering the assessment**

- Trainer kits are available for each product.
- Certification is available and is conducted by Wiley.
- Training is available in classroom and online environments.

## ■ **Pricing**

- Everything DiSC Workplace assessment: \$64.50/person.
- Everything DiSC Manual: \$49.95.
- Everything DiSC Essentials online training (no certification): \$495.00.
- Everything DiSC Workplace Certification: \$3495.00/person.

## ■ **Web links**

- Main page: <https://www.discprofile.com/>.
- How it works: <https://www.discprofile.com/what-is-disc/how-disc-works/>.
- Products: <https://www.discprofile.com/products/>.
- Certification: <https://www.discprofile.com/resources-and-tools/certification-for-trainers/>.

## ■ **Notes**

- Not recommended for preemployment screening because the assessment does not measure skills, aptitudes, or factors specific to one position.

- Not a predictive assessment. Assumptions should not be made regarding an applicant's probability of success based solely on his or her style.

## 6. Personametrics

### ■ Purpose of the test

- To magnify on-the-job behavior for management, sales, accountant, and support staff positions.

### ■ Scale description

- Consists of six graphic models that clarify a participant's behavior: Managerial Role, Subordinate Role, Motivation System, Decision Making Approach, Interpersonal Characteristics, and Performance Attitudes.

### ■ Common uses

- Hiring, promotion, and development.

### ■ Sample report

- None available.

### ■ Details for administering the assessment

- Can be completed on any internet-enabled PC; a position-specific profile, including clarification and interpretation from a WLA consultant delivered via email within 1 business day.
- A complimentary Personametrics assessment is available. Contact WLA to complete the assessment.

### ■ Pricing

- Pricing not listed, approximately \$100 per applicant to be assessed.

### ■ Web link

- Main page: <http://www.wlaconsulting.com>.

### ■ Note

- It is not a trait-based or invasive psychological measurement.

## 7. StrengthsFinder

### ■ Purpose of the test

- To measure natural patterns of thinking, feeling, and behaving.

### ■ Scale description

- 34 CliftonStrengths themes sorted into one of four domains: Strategic Thinking, Executing, Influencing, and Relationship Building.

### ■ Common uses

- Performance and engagement.

### ■ Sample report

- [Sample StrengthsFinder report](#).



- **Details for administering the assessment**

- CliftonStrength 34: hour-long assessment. 177 paired statements. Choose which option best describes the user.

- **Pricing**

- CliftonStrength 34: \$49.99.
- Top 5 CliftonStrength Report: \$19.99.
- Strengths coaching not mentioned. Contact Gallup for pricing.

- **Web links**

- Main page: <https://www.gallupstrengthscenter.com/>.
- Becoming a coach: <https://courses.gallup.com/strengths-coaching-certification>.
- Brochure: <https://s3.amazonaws.com/ecommedia/pdf/HowtoBecomeaGallup-CertifiedStrengthsCoach.pdf>.

## 8. The Predictive Index

- **Purpose of the test**

- To understand behavior and improve employee engagement.

- **Scale description**

- PI Behavioral Assessment:
  - Four core motivational drivers: Dominance, Extraversion, Patience, and Formality.
- PI Cognitive Assessment:
  - A timed assessment on general mental agility.

- **Common uses**

- Behavioral assessments, cognitive assessments, company culture, employee engagement, people management, retention and turnover, and team development.

- **Sample reports**

- PI sample reports.

- **Details for administering the assessment**

- Try the assessment for free: <https://www.predictiveindex.com/free/>.
- There is a 2-day workshop to become a PI practitioner. PI offers both open-enrollment workshops and private workshops.

- **Pricing**

- Pricing not listed.

- An annual subscription can be purchased, with the cost based on the number of employees at the company. After subscribing, clients receive an unlimited number of assessments, software licenses, and reports.
- PI workshops are priced based on the number of attendees or based on a room rate.
- **Web links**
  - Main page: <https://www.predictiveindex.com/>.
  - PI Behavioral Assessment: <https://www.predictiveindex.com/what-we-do/our-assessments/behavioral/>.
  - PI Cognitive Assessment: <https://www.predictiveindex.com/our-solutions/assessments/cognitive-assessment/>.
  - How to be a PI practitioner: <https://www.predictiveindex.com/what-we-do/management-workshops/masters/>.

## 9. The ProfileXT (PXT)

- **Purpose of the test**
  - To evaluate how an individual fits in a team in terms of skills and behavioral strengths.
- **Scale description**
  - 20 performance indicators.
  - Measures the person's thinking and reasoning, behavioral traits, and interests.
- **Common uses**
  - Placement, promotion fit, and succession planning.
  - Coaching.
  - Development of peak-job-performance models.
  - Development of job descriptions.
- **Sample reports**
  - None available.
- **Details for administering the assessment**
  - Less than 60 minutes.
  - No administrator/proctoring required.
- **Pricing**
  - Pricing not listed on the website. Third-party websites listed the assessment as costing ~\$250.
- **Web link**
  - Main page: <https://www.profilesinternational.com/>.

## 10. The Birkman Method

- **Purpose of the test**
  - To evaluate how a person fits in a team in terms of skills and behavioral strengths.
- **Scale description**
  - Measures many aspects of personality, including interests, usual behavior, needs, stress behavior, and career data.
- **Common uses**
  - Leadership development, team building, career exploration, talent selection, sales, and negotiation.
- **Sample report**
  - None available.
- **Details for administering the assessment**
  - The 30-minute online assessment has 298 questions (250 T/F, 48 multiple-choice questions).
  - 3 reports of different depth: Birkman Insight, Birkman Basics Report, and Birkman Signature Suite.
- **Pricing**
  - \$25 per test or free test with book purchase of approximately \$20
- **Web links**
  - Main page: <https://birkman.com/assessment-solutions/the-birkman-method/>.
  - Birkman Insight: <https://birkman.com/assessment-solutions/birkman-insights/>.
  - Birkman Basics Report: <https://birkman.com/assessment-solutions/birkman-basics-report/>.
  - Birkman Signature Suite: <https://birkman.com/assessment-solutions/birkman-signature-suite/>.

## 11. Activity Vector Analysis

- **Purpose of the test**
  - To render profiles of individuals, identifying their natural tendencies and predicting their workplace behaviors.
  - To measure the behavioral demands of specific positions.
  - To optimize individual productivity and organizational success.
- **Scale description**
  - Psychometric questionnaire.
  - Measures four personality factors or vectors: aggressiveness, sociability, emotional control, and social adaptability.
- **Common uses**
  - Employment.

- **Sample reports**

- None available.

- **Details for administering the assessment**

- AVA Analyst Certification is offered as a 2-day event. See the brochure for dates and more information.

- **Pricing**

- Pricing not mentioned.

- **Web link**

- Main page: <https://www.ava-assessment.com/>.

## 12. ZeroRiskHR (ZR Assessment)

- **Purpose of the test**

- To improve the hiring process, increase retention, affect critical key performance indicators, improve the communication and effectiveness of a team, and implement an employee development program.

- **Scale description**

- Uses formal science (formal axiology).
- The assessment objectively measures the candidate's value structure and emotional intelligence competencies.
- Consists of 72 items divided into four tasks. Ranks 18 items from "best" to "worst."

- **Common uses**

- Preemployment, interviewing, employee counseling, training, and development.

- **Sample report**

- Sample Benchmark Report.

- **Details for administering the assessment**

- ZR Assessment:
  - There is a free 7-day trial, and a demo can be requested.
  - It is a web-based assessment that takes about 15 minutes and cannot be manipulated. Results are emailed immediately upon completion.
- ZeroRisk Hiring System Certification Training:
  - 1.5-day course offered annually in Dallas, Texas (October 1–2 in 2019).
  - Provides an overview of the ZERORISK Hiring System and instructions on how to most effectively review and use the resulting information.
  - ZeroRisk staff can conduct the certification training at a company's site.

- **Pricing**

- Depends on company size. ZERORISK Hiring System Certification Training: \$895/person.

## ■ Web links

- Main page: <https://www.zeroriskhr.com/>.
- Certification training: <https://www.zeroriskhr.com/forms/zerorisk-hiring-system-certification-training-registration>.

## 13. *Herrmann Brain Dominance Instrument (HBDI)*

### ■ Purpose of the test

- To improve communication, problem-solving, and decision-making.
- To elevate performance and employee engagement.
- To increase thinking agility and diversity in an organization.

### ■ Scale description

- Four modes of thinking:
  - Analytical.
  - Sequential.
  - Interpersonal.
  - Imaginative.

### ■ Common uses

- Employee engagement and productivity, creativity and innovation, team performance, change management, coaching and mentoring, collaboration, and communication.

### ■ Sample reports

- HBTI Team Profile Sample.
- HBTI Profile Sample.

### ■ Details for administering the assessment

- HBDI assessment:
  - A 120-question online psychometric assessment that measure how a person prefers to think.
  - Uses Whole Brain Thinking to measure thinking preferences of individuals, teams, and organizations.
- HBDI certification:
  - 3-day in-person workshop.
  - Available in public sessions (a few team members) and dedicated sessions (ideal for organizations with several people to be certified).

### ■ Pricing

- Pricing not listed. [Request a quote](#) on both assessments and certifications.

## ■ Web links

- Main page: <http://www.herrmannsolutions.com/>.
- HBDI overview: <https://www.makingbusinessmatter.co.uk/hbdi-ultimate-guide/>.
- HBDI certification: <http://www.herrmannsolutions.com/certification-process/>.

## Aptitudes

### 14. *Watson-Glaser Critical Thinking Appraisal*

#### ■ Purpose of the test

- To assess and develop judgment and decision-making skills.

#### ■ Scale description

- Scored based on the RED critical-thinking model:
  - Recognize assumptions: Separate fact from opinion.
  - Evaluate arguments: Impartially evaluate arguments and suspend judgment.
  - Draw conclusions: Decide course of action.

#### ■ Common uses

- Applicant screening, selection, development, high-potential identification, college recruiting.

#### ■ Sample reports

- None available.

#### ■ Details for administering the assessment

- Respondents are allowed 30 minutes to complete the test.
- Suitable for unproctored administration because questions are randomly selected from a large item bank.
- Suitable for online completion in a supervised environment.

#### ■ Pricing

- Online:
  - \$28.00 for profile.
  - \$48.00 for profile + development.
  - \$29.00 for add-on development report.

#### ■ Web links

- Main page: <https://us.talentlens.com/watson-glaser-critical-thinking-test-iii>.

■ **Notes**

- The company strongly recommends using the timed W-G III version for recruitment purposes.
- An untimed version of W-G III is available in the US only.

## 15. Numerical Reasoning Test

■ **Purpose of the test**

- To assess the user's ability to understand numerical information and apply appropriate operations to find the correct answer.

■ **Scale description**

- Scores are compared against a norm group (a collection of previous results).
- Scores are then expressed as a percentile rank. The higher the percentile rank, the higher the candidate has scored compared to the norm group.

■ **Common uses**

- Recruitment, selection, and development programs.

■ **Sample reports**

- None.

■ **Details for administering the assessment**

- One of the core sections of any psychometric assessment test.
- Users deal with graphs, tables, number sequences, and text.
- Depending on the company, numerical reasoning tests could be taken at home or at an assessment center.

■ **Pricing**

- \$15 per test via [one outlet](#)

■ **Web link**

- Main page: <https://www.numericalreasoningtest.org/>.

## 16. Emotional and Social Competence Inventory (ESCI)

■ **Purpose of the test**

- To measure emotional intelligence in leaders and professionals.
- To raise awareness through powerful feedback.
- To focus coaching and development in crucial capabilities.
- To bring out the best in individuals and teams.

■ **Scale description**

- ESCI Competency scales:

- Emotional Self-Awareness.
- Emotional Self-Control.
- Adaptability.
- Achievement Orientation.
- Positive Outlook.
- Empathy.
- Organizational Awareness.
- Coach and Mentor.
- Inspirational Leadership.
- Influence.
- Conflict Management.
- Teamwork.
- **Common uses**
  - Coaching and development.
- **Sample report**
  - [ESCI Sample Report](#).
- **Details for administering the assessment**
  - Assessment:
    - Administration: Multirater.
    - Administration Time: 30–45 minutes.
    - Accreditation is available through a 2-day course.
- **Pricing**
  - ESCI Workbook and Self-Assessment: \$32.
  - ESCI Accreditation: \$2,695.
- **Web links**
  - Main page: [http://www.eiconsortium.org/measures/eci\\_360.html](http://www.eiconsortium.org/measures/eci_360.html).
  - ESCI technical manual: [http://www.eiconsortium.org/pdf/ESCI\\_user\\_guide.pdf](http://www.eiconsortium.org/pdf/ESCI_user_guide.pdf).
  - ESCI accreditation: <https://www.kornferry.com/solutions/products/emotional-and-social-competency-inventory>.



■ **Note**

- More emotional intelligence assessments can be found at <http://www.eiconsortium.org/measures/measures.html>.

## 17. Wonderlic

■ **Purpose of the test**

- To assess the aptitude of prospective employees for learning and problem-solving in a range of occupations.
- To measure the aptitudes, skills, and personality traits and attitudes that are related to success in jobs and schools.

■ **Scale description**

- A single Wonscore is created by combining the following performance indicators: Cognitive Ability, Motivation, and Personality.

■ **Common uses**

- Hiring process, college, and team-making efforts.

■ **Sample report**

- [Wonderlic Personnel Test Sample Report](#).

■ **Details for administering the assessment**

- There are different versions of the Wonderlic test. The tests are organized into four main categories: cognitive, personality, skills, and behaviors.
- A free trial is provided.

■ **Pricing**

- Wonderlic offers several enterprise pricing plans based on the number of employees a company is interested in hiring.
  - \$100/month for companies with up to 25 employees.
  - \$400/month for companies with 176–250 employees.
  - A quote is provided for companies with more than 250 employees.

■ **Web links**

- About the test: <https://wonderlictestsample.com/about-the-wonderlic-test/>.
- Wonderlic test scoring: <https://wonderlictestsample.com/wonderlic-test-scoring/>.
- Pricing: <https://reviews.financesonline.com/p/wonderlic/#price>.

## 18. Bennett Mechanical Comprehension Test

### ■ Purpose of the test

- To measure a person's aptitude for understanding and applying mechanical principles.
- To identify individuals with good mechanical reasoning abilities and spatial perception.

### ■ Scale description

- The BMCT assesses the following:
  - Mechanical aptitude.
  - Spatial visualization.
  - Application of physics.
  - Deduction of how things work.

### ■ Common uses

- Application screening and pretraining.

### ■ Sample report

- [BMCT II Sample Report](#).

### ■ Details for administering the assessment

- There are two versions of the BMCT: BMCT and BMCT II.
  - The BMCT consists of 68 multiple-choice questions and has a 30-minute time limit. It can be administered on paper or online and is available in two forms: Form S and Form T.
  - The BMCT II consists of 55 multiple-choice questions and has a 25-minute time limit. It is administered online only.
- There is a free Mechanical Aptitude Practice Test (the BMCT is part of it).

### ■ Pricing

- BMCT II: \$21.

### ■ Web links

- Mechanical Aptitude Practice Test: <https://www.jobtestprep.com/free-mechanical-aptitude-test>.
- BMCT II FAQs: <https://downloads.pearsonassessments.com/images/assets/talentlens/BMCT-II-FAQ-2017.pdf>.

### ■ Note

- For those who plan to take the BMCT, it is important to be familiar with basic concepts in physics as well as physics terminology.

## 19. Leadership Effectiveness Assessment (LEA)

### ■ Purpose of the test

- To identify specific leadership practices needed to achieve an organization's strategic goals.
- To understand the leadership behaviors currently in practice and the gaps with the desired state.
- To provide leaders with relevant, insightful feedback from a variety of observers.
- To build action and accountability into the leadership development process.
- To provide constructive coaching suggestions for key areas of leadership development.
- To assess a candidate's potential for leadership positions.

### ■ Scale description

- Scores are reported as percentile ranks in a norm group.
  - Norm groups are based on country and world region.
- Measures 22 leadership behaviors grouped into six core functions.

### ■ Common uses

- Coaching, team development, high-potential selection and development, succession planning, mergers and transitions, culture shifts, and candidate selection.

### ■ Sample Reports

- [LEA Sample Report](#).
- [LEA Sample Report 2](#).

### ■ Details for administering the assessment

- The assessment has a questionnaire design that blends elements from two formats (forced-choice and anchored-rating scales).
- LEA certification is available.

### ■ Pricing

- Assessment price not listed.
- LEA certification: \$2,100.
- Contact the Management Research Group for customized quotes.

### ■ Web links

- Brochure: <https://www.mrg.com/wp-content/uploads/2018/04/MRG-LEA-web.pdf>.
- Certification: <http://connect.mrg.com/lets-talk-learning>.