



# WHITE PAPER ON PSYCHOMETRIC ASSESSMENTS

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EVERYTHING YOU NEED TO KNOW ABOUT HR ASSESSMENTS





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# INTRODUCTION

To remain at the forefront of their field, organisations need to invest, not only in equipment and infrastructure, but also in their human capital. It is only by enriching and developing employees that they can maintain their competitive edge in today's ever-evolving business model.

Whether your organisation needs to recruit high potentials, determine skill levels, or develop your talent pool, psychometric assessments can give you key indicators as to an individual's habitual behaviour and chances of success. As of such, they enable you to make objective and non-discriminatory decisions that you can trust.

This white paper will provide you with all the information you need to become proficient at using psychometric assessments.

# 1

## WHAT ARE PSYCHOMETRIC ASSESSMENTS?



## BACKGROUND



The term “psychometrics”, derived from the Greek “psyche” (mind) and “metron” (measurement), literally means the measurement of psychological traits. This measurement is typically carried out through standardised assessments.

Intelligence assessments have been in use for over a century. In 1905, Alfred Binet and Théodore Simon created the Metric Intelligence Scale, a test designed to detect learning difficulties in children at an early stage.

The next development in the assessment of intelligence did not appear until World War II. The American army, keen to determine which position different soldiers would be best suited to, produced the Army Alpha and Army Beta tests. At around the same time, David Weschler also developed the Weschler Adult Intelligence Scale (WAIS).

Scientific personality assessments are a more recent invention than intelligence assessments. They emerged out of the Lexical Hypothesis, the theory that we will create words for the concepts that are important to us. The theory develops from this to state that relevant personality traits will have already been encoded into our language.

This theory was first investigated by Sir Francis Galton, the father of differential psychology, who created a long list of personality traits that he believed were important to us. Several years later, Raymond Cattell took Galton’s list and created the first modern personality assessment. It measured 16 personality factors, with a dozen items (or questions) per factor.

Today, a large range of assessments are used to measure individuals’ abilities within the contexts of recruitment, internal mobility, and training. All of them have grown out of these early explorations of personality and intelligence.

Psychometrics gains its methodology from differential psychology, which examines the psychological differences between individuals from both a behavioural and intellectual point of view. It is this methodology which enables psychology to be considered a rational science.

## WHY ARE PSYCHOMETRICS IMPORTANT?

Psychometric assessments are standardised questionnaires that are developed through a statistical approach. This ensures that the results are valid and reliable. In turn, it makes it possible to objectively highlight the differences between individuals or groups.

Such differences include:

- **Inter-individual differences**, i.e. the differences between individuals belonging to the same group. For example, you could measure the differences in IQ in a group of engineers.
- **Intra-individual differences**, i.e. the differences within one individual. An instance of this would be how a person’s motivation varies depending on changes in context (working independently versus alone) or their psychological state (worried versus calm).
- **Inter-group differences**, i.e. differences between groups of people. As an example, you could measure if salespeople have stronger networking ability than engineers.

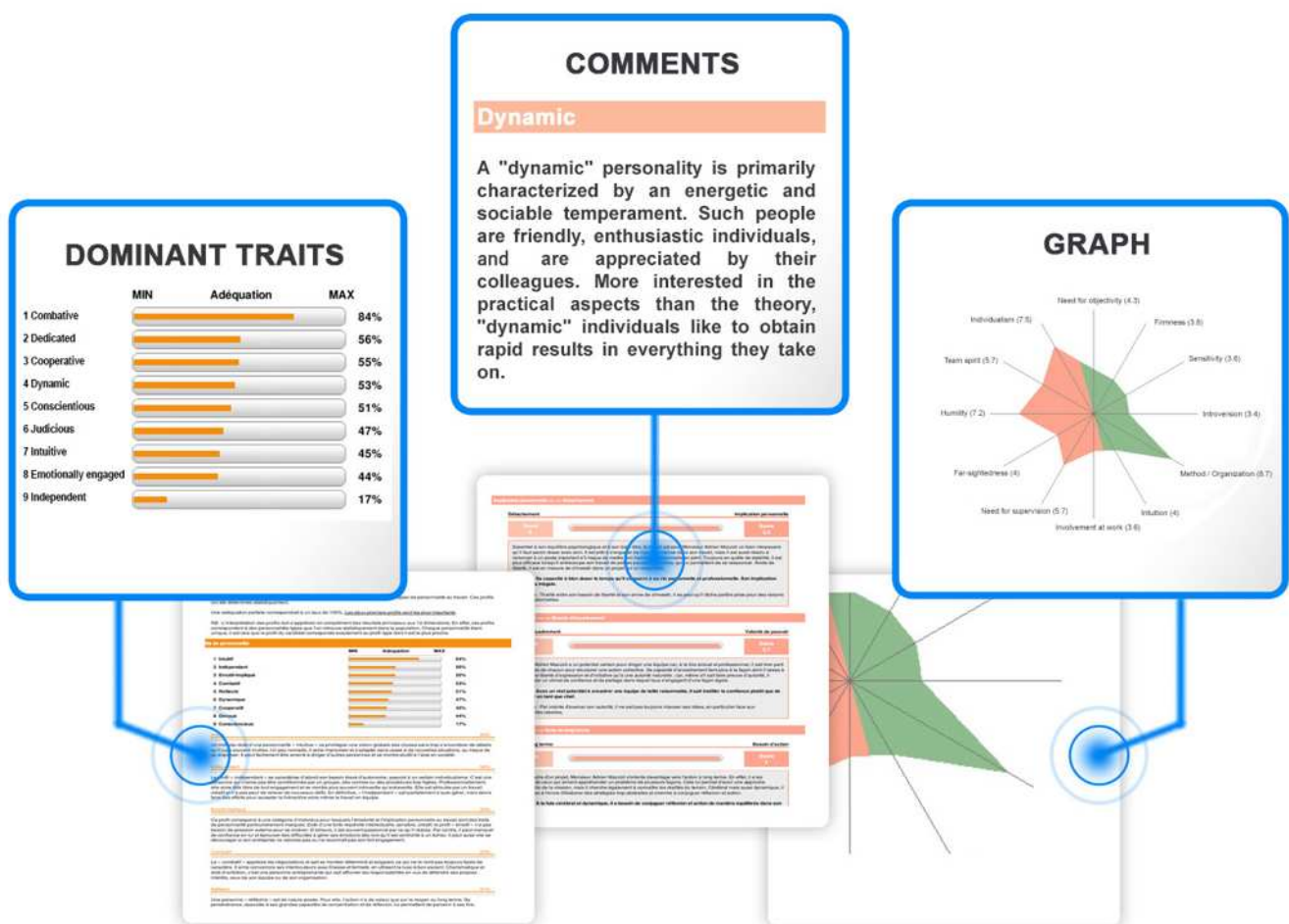


# 1.1 WHAT ARE PSYCHOMETRIC ASSESSMENTS?

Psychometric assessments are objective measurements of personality, motivations, interests, and abilities. They are measured against norms and subjected to validity studies. They can also be calibrated to various reference groups, e.g. education level or country of residence, ensuring that they are non-discriminatory and valid in the context in which they are taken.

Originally developed in academia, they are now increasingly present in the world of employment. Due to their ability to indicate behaviour and personality, they find use in both recruitment and internal assessments.

The proliferation of these assessments, helped in no small measure by the internet, has led to a wide variety of test types and prices. Yet we should not put aside the demand for high standards.



## 1.2 WHAT MAKES A PSYCHOMETRIC ASSESSMENT VALID?

Sensitivity, reliability, and validity are the three traits of a good psychometric tool. They evaluate efficacy – but the studies measuring them are not a lifetime guarantee. The assessment must be regularly updated, with new validity and reliability studies conducted, to ensure that it does not lose its relevance over time.

VALIDITY	RELIABILITY	SENSITIVITY
<p>This measures an assessment’s credibility.</p> <p>There are 3 main types of validity:</p> <ul style="list-style-type: none"> <li>- Content validity: this refers to how well an assessment measures the characteristic it has been designed to measure. If a test is designed to measure ambition, how accurately does it do that?</li> <li>- Criterion validity: this is the correlation between a candidate’s performance in a test and their real-life performance according to external criteria.</li> <li>- Conceptual/theoretical validity: this measures how well an assessment’s results conform with the results of the model on which it was based. In other words, if an assessment is based on the theory behind Binet’s 1905 IQ test, then the test-taker should obtain similar results from both tests.</li> </ul>	<p>This refers to an assessment’s consistency and stability.</p> <p>There are two important types of reliability:</p> <ul style="list-style-type: none"> <li>- Internal consistency: This is extent to which different items measure the same dimension. If question 2 and question 18 both measure introversion, do the same people give the same answer to both of them?</li> <li>- Test-retest reliability: This measures how similar a person’s results are when they take a test multiple times.</li> </ul>	<p>This refers to an assessment’s ability to make distinctions between individuals. If everybody answers a question on conscientiousness in the same way, it does not indicate that everyone is (or is not) conscientious; rather, it indicates that the assessment has failed to measure this trait in any meaningful way.</p>

### Social desirability

Social desirability is the desire to be viewed positively by others. It can cause test-takers to adapt their responses to questions, whether consciously or unconsciously.

In some tests, item (question) sensitivity is controlled to ensure that the social desirability level is the same across each of the dimensions being assessed. In others, certain questions measure the bias to indicate whether the responses can be trusted. Regardless of the method, an assessment must be designed to counter social desirability.



## 1.3 HOW CAN YOU CHOOSE THE RIGHT ASSESSMENT TOOLS?

From personality to emotional intelligence, and career interest to career-based skills, there is no shortage of assessment types available on the market. Using multiple assessments will reduce the risk of misinterpretation – yet choosing the right ones can prove difficult. Follow these 6 steps to make selecting the best assessments easier:

### 1. Define your objectives

Who will be taking the test? What are you looking for, and why? It's important to take this into account: critical thinking may not be needed by a data entry clerk but for a marketing manager, it is essential.

### 2. Check for scientific validation

Make sure you're investing in a reliable tool that has been proven to work. If an assessment's not been scientifically validated, the results cannot be trusted. Yet as the development and validation of assessments can take years, some companies may skip this step to see greater profits.

### 3. Looking for a social desirability indicator

Assessments should account for a person's inclination to – consciously or unconsciously – choose the answers they think look best rather than the answers which are the most truthful. Some assessments control this bias while others measure them. However an assessment responds to social desirability, you need to know the ways in which it will affect results.

### 4. Understand the assessments

Even though assessments are becoming more and more user-friendly, you should take the test yourself and receive training. This will ensure you can accurately interpret the results.

### 5. Choose a customisable assessment

If you can integrate your own competency map into the report, you'll be able to better understand and compare test-takers' results. It will quickly and simply indicate the degree of fit.

### 6. Always debrief

A face-to-face debriefing session is not only helpful for the test-taker, it is also helpful for the interviewer. Ask the test-taker for their opinion on the report to gain additional insight, particularly if the results do not show any strong tendencies. Try also asking them for examples of when they have manifested these traits; placing the results in a real-life context will make them easier to understand.



## 1.4 WHAT ETHICAL CODES DO YOU NEED TO FOLLOW?

Where psychometric assessments are concerned, adhering to a code of conduct has legal implications. Yet the law isn't the only reason to comply with these regulations. Doing so will ensure that you are behaving ethically and that test-takers have a positive experience.

These are the key conventions governing the use of psychometric assessments:

### Assessment administration

- Make sure test-takers know how and why assessments are used. They have the right to refuse to take assessments, and doing so must not eliminate them from any recruitment processes.
- The use of psychometric assessments as a screening tool is not recommended; they should be complementary to the interview process.
- We recommend administering aptitude tests on company premises so as to ensure test-takers receive no outside help.

### Confidentiality

- Test results cannot be forwarded to a third party without the express consent of the person being assessed.

### Interpretation

- At the very least, assessors should be aware of each assessment's objectives and the precise meanings of the assessed dimensions. This will prevent misinterpretation.
- Information assisting interpretation should be available in the report, the handbook, and the training made available.

### POINTS TO REMEMBER

- Psychometrics use statistical analysis and standardised assessments to study individuals and groups.
- To remain objective and accurate, assessments should undergo a process of validation. They should also be designed to counter something called the social desirability bias, which refers to test-takers modifying their answers to present themselves more favourably.
- Assessors should be trained in the use of tests and the interpretation of results. They should follow ethical guidelines in the application of assessments.

# 2

## AN OVERVIEW OF PSYCHOMETRIC TESTING



## BACKGROUND



In Ancient Rome, *persona* referred to the masks worn by actors: in essence, to the character an actor would assume during a play. Today, this is visible in the word *personality*, which represents the psychological characteristics of a human being.

The analysis of personality has similarly historic roots, dating back to the ancient Greeks. They believed that the human body consisted of four humours: phlegm, yellow bile, black bile, and blood. Hippocrates took this information and identified a temperament that, he believed, was associated with each humour.

Although Hippocrates' humours seem funny to us now, the theory has had a great influence on our understanding of personality. In 1967, Eysenck created a theory of personality four types with notable similarities to the humours: sanguine, phlegmatic, melancholic, and choleric.

By this time, the word *personality* had been in use for thirty years. Gordon Allport coined the term in his theory of personality traits in 1937, and since then theoreticians had established that personality traits are fundamental units for measurement for the assessment of personality. For Eysenck, personality was "a combination of traits which a person has a tendency in manifest in different situations and which remains stable over time". Similarly, Cattell (remember him?) described personality as "the combination of all of an individual's traits". He considered it to be "that which enables us to predict how a person will react or behave in a given situation".

## 2.1 PERSONALITY ASSESSMENTS

While experts down the years have not always agreed on the definition of personality, today it is widely accepted that personality traits:

- Are relatively stable over time (in adults)
- Vary from individual to individual
- Influence behaviour

Since the 1980s, personality theories have been applied to the workplace. They can indicate a person's ability to adapt within a professional framework, their self-control, and their interpersonal skills, among other things. There is a clear link between personality and a person's efficiency

## THE FIVE-FACTOR MODEL

The Big Five model, also known as the Five Factor model, has become widely accepted within the field of personality analysis. Although the theory has existed since the 1960s, it was not until the 1990s that it was popularised by Costa and McCrae. It measures five traits, which can be remembered through an OCEAN acronym:

- \* Openness to experience
- \* Conscientiousness
- \* Extraversion
- \* Agreeableness
- \* Neuroticism



## THE BIG FIVE AND THE WORK PERFORMANCE



In 1991, Barrick and Mount found that the dimensions of the Big 5 model could predict, with a fair amount of accuracy, performance at work.

They looked at:

Overall evaluation of performance at work

- Evaluation by managers and superiors
- "Objective" performance (productivity data, turnover/sales figures, promotions, etc.)
- Performance as part of a team
- Improvements from training
- 

Barrick and Mount found that conscientiousness could predict performance to quite an accurate level, regardless of the type of performance or professional group. They believed this was because conscientiousness is motivation-orientated. Being dependable, organised, results-driven, and perseverant generally helps a person to succeed at work.

However, decisions should not be made purely on the basis of an individual's conscientiousness score; rather, all the information available on them should be taken into account.

<sup>1</sup> M.R. Barrick and M.K. Mount (1991), "The big five personality dimensions and job performance: a meta-analysis", *Personnel Psychology*, vol. 44

## THE MAIN PERSONALITY ASSESSMENTS

### MBTI © (Myers-Briggs Type Indicator)

- Developed in 1962 by Katherine Briggs and Isabel Myers
- Measures 16 personality types
- Takes 20-30 minutes
- For individuals and groups
- For self-evaluation

MBTI is based on a Jungian theory of four two-dimensional factors. Combining these factors results in 16 personality types.

### 16PF

- Developed in 1949 by Richard Cattell
- Measures 16 primary personality traits grouped under 5 Big-5-inspired “global”, or secondary, factors: extraversion, anxiety, tough-mindedness, independence, and self-control
- Takes 30-40 minutes
- For individuals and groups
- For self-evaluation

The normative data available for this assessment means it has only been calibrated for British test-takers.

## PROFESSIONAL PROFILE-R

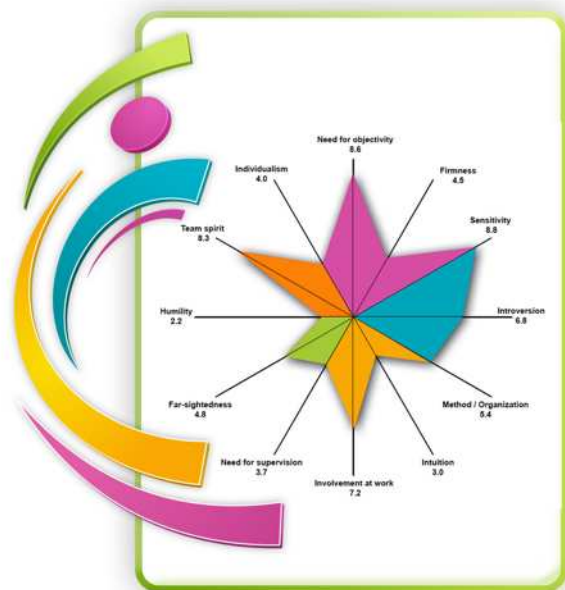
Developed by Central Test in 2002, the Professional Profile-R explores the nuanced and interconnected nature of an individual's personality. It assesses 12 opposed dimensions (e.g. introversion vs extraversion, improvisation vs structure) to provide a holistic understanding of the test-taker.

It contains 98 questions and takes under 15 minutes to complete.

### Key Strengths

- Analyses personality through 12 opposed dimensions
- Avoids item repetition
- Limits the potential for social desirability bias
- Matches the test-taker's profile with 58 occupational groups

Available in 11 languages: English, French, Spanish, German, Dutch, Romanian, Italian, Polish, Portuguese, Russian, and Arabic





## PERSONALITY AND PERFORMANCE AT WORK: A WINNING COMBINATION

Today, the use of personality assessments is commonplace. Yet few of them make a direct connection between personality and performance at work. Our personality traits influence the way we see the world and the way we react to different situations. And so, just like motivation, intelligence, and experience, personality can indicate success.

### Conscientiousness: A key indicator

In 1991, **Barrick and Mount** found a direct link between a person's conscientiousness and their performance at work, regardless of their role. Conscientiousness, measured by Five-Factor-based assessments, manifests itself in rigorous self-discipline.

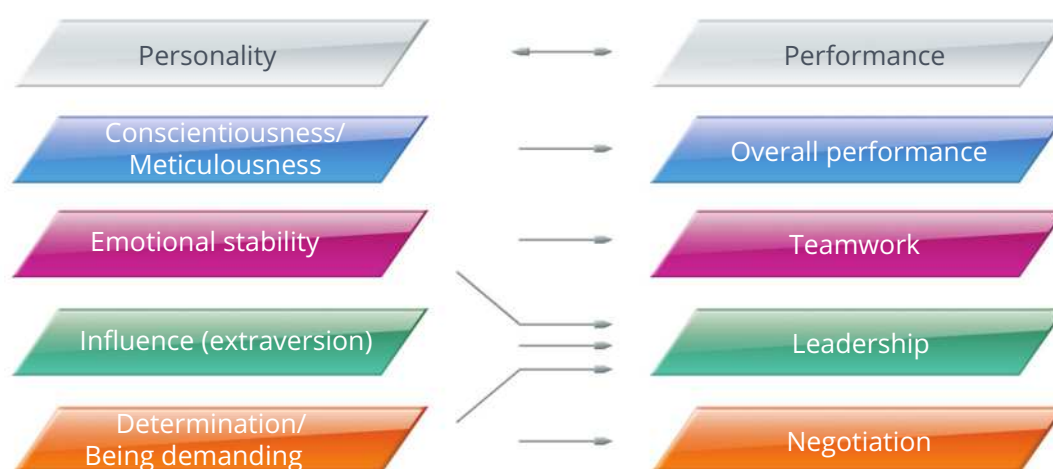
### Performance and personality: It's all about the role

Conscientiousness is not the only personality trait to affect work performance. In fact, numerous traits may affect work performance – but for these ones, you need to first have a thorough understanding of the role. Ask yourself what kind of performance you expect and what tasks what the other person will do. A manager may need more determination than a customer service rep, while a salesperson may need greater networking skills than an engineer.

### Performance is more than just personality

Personality is an important indicator of an individual's performance, but it is not a definitive guide. Motivations, interests, and professional experiences all have an effect.

Additionally, while personality indicates behaviour, it does not guarantee it. Employees can create strategies and attempt to modify their behaviour - especially if they are aware of their personality. For example, a highly agreeable employee may be uncomfortable disagreeing with others. However, recognising this trait can then enable them to take proactive steps towards expressing their opinion more frequently.



## IS LEADERSHIP A MATTER OF PERSONALITY?

### Do you need a good manager or a good team leader?

These are two very different things. Managers need technical know-how and skills. Yet for a leader, optimism, a desire to surpass expectations, and a visionary attitude are important personality traits.

### Combining assessments

Leadership and personality go hand-in-hand, yet you may want to do more than just a personality assessment – or even a leadership assessment – in order to gain a more well-rounded understanding of the test-taker. Both emotional intelligence and critical thinking are important skills for leaders.

### Beyond assessments

Psychometric assessments can give valuable insight into test-takers, but to gain the best understanding of how they behave, use one-to-one interviews and group tasks. If they can lead the whole group to a shared goal – without being domineering – you know they will be a strong leader.



#### POINTS TO REMEMBER

- Personality is a combination of traits that remain fairly stable over time
- The Big Five model demonstrates that personality can reliably indicate performance
- Personality should not be interpreted in isolation; remember to take the both role requirements and the candidate's behaviour into account



## BACKGROUND



The word intelligence has its roots in the Latin word “intellegere” (to understand). This deserves breaking down further: “inter” meant “between” while “ligare” meant “link”. From this, we can understand that our modern word “intelligence” implies an ability to understand the connections between elements – even if they seem disparate.

Intelligence is the ability to understand new things, to plan, to think critically, and to use logic. It enables us to adapt to changing environments and to learn quickly. And understanding how different elements affect others will help with all of these.

Intelligence assessment began at the start of the twentieth century, with Alfred Binet. Following the introduction of compulsory education, the French government charged Binet with finding ways to identify children with potential learning difficulties. Working with Théodore Simon, Binet developed the Binet-Simon scale; this was a predecessor of the IQ scale.

Some years later, the Binet-Simon scale was taken up in the US by Lewis M. Terman, and adapted to form the Stanford-Binet Intelligence Scale. This assessment provided people with their IQ score relative to their age and development.

In 1955, David Wechsler – dissatisfied with the limitations of a development-orientated IQ – published a new intelligence test: the Wechsler Adult Intelligence Score (WAIS). This assessment introduced a standard IQ score that can be compared to a reference population with a normal distribution.

The scales developed by Binet-Simon (with the current version being the New Metric Intelligence Scale-2) and David Wechsler (WAIS, WISC, and WPPSI) have become the standards for IQ test use. An entire industry of intelligence assessment is derived from them.

## 2.2 APTITUDE ASSESSMENTS

Aptitude tests assess knowledge and performance levels in any given field. They can measure attention to detail, precision, the ability to concentrate, understanding of a topic, critical thinking, reasoning, intelligence, and even emotional intelligence.

It is important to take multiple aptitudes into account, rather than measuring intelligence alone. To a certain degree, IQ scores can be correlated with achievements both at school and in the workplace. However, other factors – such as personality, emotional intelligence, and motivation – also play an important role in success. In 2010, Anita Woolley found that an individual’s intelligence has a small impact on group performance and cohesion but that their emotional intelligence and social sensitivity have a large effect.

As of such, a combination of assessments will give the best indication of an individual’s potential to succeed. Of the tests taken by Central Test’s 3,500 clients in 2012, 8% were emotional intelligence tests, 8.5% were reasoning tests, and 50% were personality tests.



## THE MAIN APTITUDE ASSESSEMENTS

### RAVEN'S MATRICES

- Developed in 1936 by Dr. John C. Raven
- Pen-and-paper test
- For individuals and groups
- Individuals should be given unlimited time. For groups, give them 20-45 minutes.

Raven's Matrices, also known as Raven's Professional Matrices (RPM), measures observation skills and thinking ability in a multiple choice format.

### GMAT (GRADUATE MANAGEMENT ADMISSION TEST)

- Takes 3 hours and 45 minutes
- For individuals applying to graduate management programmes
- Result is valid for 5 years

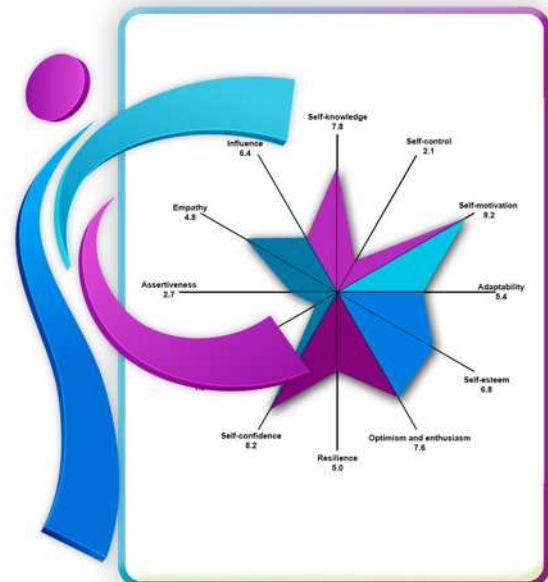
The GMAT assesses analytical, writing, quantitative, verbal, and reading skills in standard written English. The maximum score is 800 while the mean score is 533.

## EMOTIONAL INTELLIGENCE TEST

Developed by Central Test in 2010 [and due to be updated in 2016 ?], this test assesses an individual's ability to both control their own emotions and understand the emotions of others. It asks 79 questions to measure 12 essential factors of emotional intelligence in under 15 minutes.

### Key Strengths:

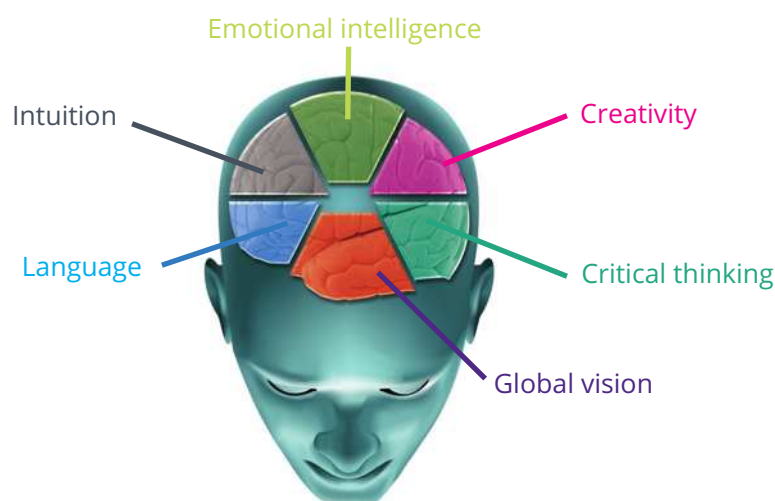
- Social desirability indicator allows you to judge how truthful the test-taker was
- Calibrated EQ score means it is relevant for multiple groups
- Scored analysis of 4 principal dimensions makes the results easier to understand at a glance
- Profile summary describing how key competencies, such as optimism and leadership, impact performance





## EXPLORING ABILITIES BEYOND IQ

IQ tests measure our ability to reason in a highly structured environment. The questions they ask have only one correct answer – unlike in the workplace, where complex problems may be approached from multiple perspectives. As of such, it makes sense to take other factors into account when predicting professional performance.



### **Emotional Intelligence (EQ):**

Less well-known than IQ but by no means less important, this measures our ability to identify and control the emotions of ourselves and others.

### **Creativity:**

This is about unconventional approaches and innovative solutions. It is about asking the right questions to find the right answer.

### **Language:**

The “verbal intelligence” factor of IQ tests measures only one part of our ability to communicate. Equally important to language ability is the quality of written expression, the art of improvisation, and confidence in public speaking.

### **Critical thinking:**

This may be linked to reasoning but it goes far beyond it. This is our ability to exercise good judgement in response to certain situations, new observations, and complex arguments.

### **Intuition:**

Information registered by our unconscious mind can alert us to important information, and this intuition is useful in a wide variety of roles. For instance, a salesperson or a journalist may intuitively understand which lead is worth pursuing, even without having all the information.

### **Global vision:**

A holistic understanding of a situation will enable decision-makers to make better choices. By considering long-term as well as short-term impact; all the aims and strategies of the company as well as the project; and the perspectives of various departments, be they marketing, finance, or R&D, they will make the best decision for the company as a whole.

## EMOTIONAL INTELLIGENCE: AN ASSET IN THE WORKPLACE

Emotional intelligence, or EQ, is gaining recognition in the HR world for its impact on productivity.

First put forward in the 1990s by Peter Salovey and John Mayer, the concept gained popularity when Daniel Goleman stated that it could be further developed. The term “emotional quotient” was introduced by Reuven Bar-On, who created one of the first tools to measure EQ. He argued that it was as important as IQ in indicating a potential for success.

Emotional intelligence under the microscope

There are two aspects to EQ.

### 1. Intrapersonal intelligence

This is about a person’s self-awareness and self-motivation. An individual with high intrapersonal intelligence knows their strengths and weaknesses, how they respond to their environment, and the reasons behind their emotions.

### 2. Interpersonal intelligence

This is about a person’s awareness of the emotions of others. An individual with high interpersonal intelligence can empathise, react appropriately to others, and create a good working environment.

#### Why is it useful?

Emotional intelligence is useful in any role requiring human interaction, although it is particularly helpful in sales and management. Salespeople with a high EQ will see higher sales, since they will adapt their pitch to match clients’ emotional responses. Managers will see it affecting team satisfaction and loyalty; a manager with a low EQ would attempt to impose change, while a more emotionally intelligent one would obtain their team’s acceptance beforehand.

#### Can emotional intelligence be developed?

EQ is partly innate and partly acquired – and anything that is acquired can be developed. There are numerous training programmes focussing on improving EQ.

However, people cannot improve unless they are aware of what needs improving. For this reason, life coaches and HR departments alike attempt to measure a person’s EQ.

#### How can it be measured?

EQ assessments will give accurate measurements of a person’s emotional intelligence. All assessments will measure various dimensions of EQ, such as self-knowledge, self-motivation, conflict resolution, or an ability to empathise. As of such, it is important to determine which qualities are necessary for the role before using this information in recruitment.

### POINTS TO REMEMBER

- Reasoning tests are the most well-known kind of aptitude tests
- Emotional intelligence assessments are another kind of aptitude tests
- Measuring EQ and IQ together will give a much stronger indication of a person’s potential



## BACKGROUND



The first person to create a tool to measure occupational interests was Edward K. Strong. In 1927, he released the Strong Interest Inventory (SII) which assesses a candidate's interest in any given profession. In doing so, he led the way in decades of research into career interests, choices, and satisfaction.

In 1939, Kuder defined 10 principal areas (or dimensions) of occupational interest. His inventory, the Kuder Preference Record, measured a person's interest in these dimensions based on their responses to everyday activities as opposed to workplace ones.

Then in the 1950s and '60s, American psychologist and researcher John L. Holland revolutionised the understanding of occupational interests. For him, an individual's choice of occupation was an expression of their personality; interests were "the personality expressing itself through work, through pastimes, through recreational activities and through preferences". He divided the population into six types, each of which aligned with certain professions.

## 2.3 OCCUPATIONAL INTEREST ASSESSMENTS

Interests are a dimension of personality. Specifically, they are a dimension that defines what motivates you, and according to Jacques and Jean-Blaise Dupont, they are "relatively stable and durable".

As of such, knowing a person's interests can be useful for understanding their long-term motivations. Additionally, their interests can be understood through their personality rather than through their experiences, which may be of a limited variety.

### THE THEORY OF VOCATIONAL INTERESTS

John L. Holland identified six personality-based types of interests which, between them, cover all occupations: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. They are often referred to with the acronym RIASEC.

Any person will be able to identify with these personality types to differing degrees. For a useful understanding of an individual, you should focus on their two dominant traits alone – for example, Realistic/Conventional or Investigative/Artistic.

You can also characterise a profession through the same approach, since all careers will combine multiple fields of interest. This will allow for a nuanced understanding of an individual's degree of suitability for any given role.

<sup>2</sup> P.DUPONT, "La psychologie des intérêts", PUF, 1979

## MOTIVATION IN THE WORKPLACE

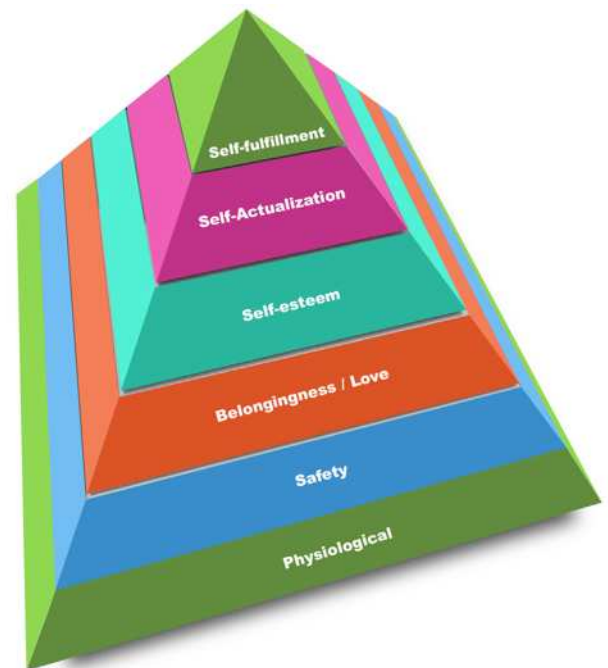
How do we choose one activity over another? Why do we act the way we do? What is it that gets us out of bed and into work every morning?

**Motivation.** This combination of conscious and unconscious mechanisms is at the root of every individual action.

In 1943, Abraham Maslow developed a hierarchy of needs. He theorised that every individual experiences needs in the workplace – and that these needs are a source of motivation for us.

For Maslow, it was important that the needs were hierarchical. He saw the needs as a pyramid and believed that only once the more fundamental needs had been met could the more complex ones be addressed. In other words, if a person's physiological needs (the bottom layer of the pyramid) were not met, they could not achieve self-esteem (the fourth layer).

1. At the top of the pyramid is **self-actualisation**, or the desire for personal accomplishment through creative acts or having commitments.
2. Below self-actualisation is **self-esteem**: the ability to regard yourself positively and with respect.
3. Before self-esteem could be achieved, Maslow believed a person had to experience **belongingness/love**. This is a social need to be part of a family or group.
4. This layer is a need for **safety**, such as the desire to have a home or a good insurance policy.
5. The most basic needs – and therefore motivations – are **physiological**, such as hunger and thirst.



There are several other theories about motivation, but most theoreticians agree that:

- **The existence of "needs":** An individual will feel needs and seek to satisfy them. As of such, these needs provoke action.
- **The existence of "objectives":** Every action is goal-orientated, since they are provoked by needs.
- **Motivation is personal:** Since individuals do not necessarily have the same problems, or experience the same problems in the same way, they also cannot have the same needs with the same intensity. And if needs are personal, motivation must be as well.

## THE IMPORTANCE OF OCCUPATIONAL INTEREST ASSESSMENTS IN INTERNAL MOBILITY

**Occupational interest assessments are highly prized by skills assessment centres, but that's not the only place they're helpful: they are also gaining ground in large companies. So how can an employer make use of them?**

The answer is simple: in today's world, careers rarely have a simple linear progression. For employees thinking of making a sideways move to another role, developing new skills, or simply taking on tasks that might not have existed fifteen years ago, occupational interest assessments can give valuable insight. Will this employee really be suited to this role? Will they truly enjoy it? Just because they liked designing adverts on InDesign does not mean they will feel satisfied creating website pages. Just because they enjoyed face-to-face sales does not mean they will excel at online sales.

Similarly, if an employee isn't satisfied in their current role, occupational interest assessments can shine a light on why – and what needs to change. As interests and motivations change over time, this can be particularly useful to know.

Occupational interest inventories don't just suggest careers; they also reveal career development opportunities.



## WORKPLACE DEVELOPMENT

If an employee isn't satisfied with their current role, career development is not the only option. Sometimes the problem is not so much the job as the work environment. Perhaps your employee is struggling with the office layout. Or perhaps it's the team size. Or perhaps it's how often they get to leave the office. Occupational interest assessments – particularly when combined with personality assessments – can make this apparent. After all, it's better to give someone a little more space at work than it is to lose your best salesperson.





## THE MAIN OCCUPATIONAL INTEREST ASSESSMENTS

### THE ROTHWELL-MILLER INTEREST BLANK (RMIB)

- Developed in the 1950s by Rothwell-Miller (3rd ed. published in 2011)
- Takes 15 minutes
- For individuals and groups

The RMIB is based on Holland's typology, and consists of listing occupations in order of preference. It is an easy-to-use, generalised indicator of professional interests.

### THE STRONG INTEREST INVENTORY (SII)

- Developed in 1927 by Strong
- Takes 30 minutes
- Contains 291 questions

This assesses an individual's interests in a range of roles and activities. It then compares similarities between the test-takers scores and those of people working in various professions.

## Occupational Interest Inventory

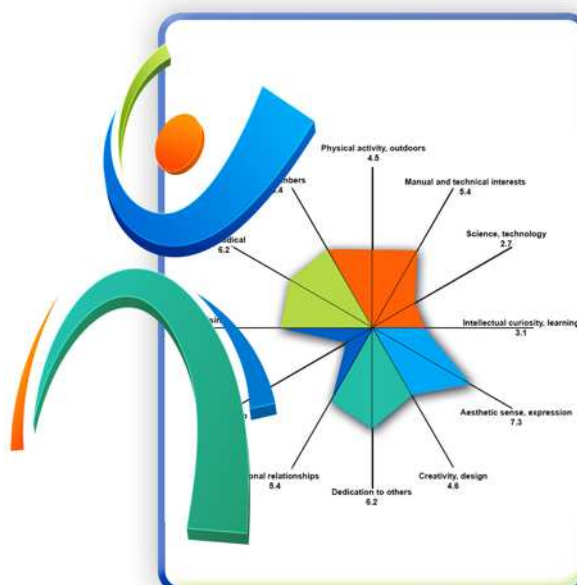
Developed by Central Test in 2006, and revised in 2010, the OII uses the RIASEC model to compare the test-taker to 12 personality-based fields of interest. It then compares the profile to 80 occupation groups.

The assessment has 84 questions, 60 of which are mini-scenarios. It can be taken in under 12 minutes.

### Key Strengths:

- Provides a general profile analysis in addition to 15 combined RIASEC profiles
- Comparison with 80 occupation groups, including new and modern occupations
- Ability to add existing company positions to the list of occupations

This assessment is useful for skills assessment centres, universities and specialised higher education institutions, and large companies.





## WHAT DO OUR CLIENTS SAY?

### OCCUPATIONAL INTEREST INVENTORY: THE ASSESSMENT OF CHOICE FOR UNIVERSITY STUDENTS

**ESIEE is an electrical engineering postgraduate school in Amiens, France. By choosing the Occupational Interest Inventory, they offer their students the chance to develop a professional and educational path that they will find fulfilling.**

**Michele Flipaux, career advisor at ESIEE, answered some questions for us.**

#### **How do you use the Occupational Interest Inventory at ESIEE?**

Central Test's Occupational Interest Inventory is an important part of the ESIEE's pedagogical strategy: we use it as a tool for support and self-knowledge. It is available to all of our students via our social sciences platform. I use it particularly with first year students in order to find out if they have any particular worries and so as to be able to better help them resolve issues. It also helps with decision-making: some students are not sure which course to take and some feel they have already made the wrong choice.

#### **How are the tests useful?**

They help me to get to know the students better. Going over results with them face-to-face is very important. It helps to establish a climate of trust and improves communication. The person generally opens up more, and this enables us to dig deeper and then initiate the appropriate plan of action. By doing this, the students are able to get an idea of their own potential and then develop it by taking the professional path that is right for them. I should add that we often combine this test with the Professional Profile questionnaire because this gives the students a good overall view of their interests and life skills, which means they can prepare for the future.

#### **What feedback have you had from students?**

They are often surprised at first. But in two years I have yet to receive negative feedback, even from those students who were initially the most sceptical! Indeed, they find that the results, once they have been explained and expanded upon during the interview, enable them to put into words things that they still don't understand, and to ask themselves questions that will enable them to go further.



#### POINTS TO REMEMBER

- Motivations and interests are connected to personality
- An analysis of personality, motivations, and interests is useful for career orientation and internal career development
- Interests and motivations can evolve over time, particularly in relation to circumstances and working environments

# **3 THE USE OF PSYCHOMETRIC TOOLS IN HR DEPARTMENTS**



## 3.1 RECRUITMENT AND INTERNAL MOBILITY

### WHAT ARE THE 5 COGNITIVE BIASES THAT RECRUITERS SHOULD AVOID?

Cognitive biases are certain ways of thinking that result in errors of judgement. They can be the result of social influence, prejudice, or motivational factors. And all of us, even recruiters, have them.

The bad news is that we can't free ourselves of them. The good news is that, by recognising them, we can reduce their effect on our decision-making.

There are numerous cognitive biases, but recruiters should pay attention to these five in particular:

#### The Naivety Bias



Emotions have a role to play in the decision-making process, but they shouldn't be allowed to take over the critical mind.

According to Patrick Leguide, Central Test's CEO, the naivety bias "is particularly commonplace in less experienced recruitment professionals, who are lulled into a false sense of security by some candidates' relaxed attitudes and so forget to confirm the truth of what they are told". He believes that knowing how to combine intuition with facts is an art acquired over time.

#### The Scientist's Bias



The opposite of the naivety bias, recruiters might succumb to this when trying to put their emotions to one side.

Patrick Leguide explains that "they look at their future collaborators' technical competencies, experiences, and qualifications, but forget to consider personality and life skills".



## The Confirmation Bias



This is the tendency to only notice the information that confirms our expectations. If a recruiter expects a candidate to be a good fit, they might overlook weak spots. Similarly, if the candidate's CV isn't promising, strong answers to interview questions might go uncounted.

Leguide says that *"in order to counter this tendency, recruiters can fix their priorities in advance so as not to lose sight of them during the recruitment process"*. It's important to ask questions centred around these priorities.

## The Projection Bias



Going hand-in-hand with the confirmation bias is the tendency to like people who share our values, thoughts, and psychological states. As of such, a recruiter may tend to only hire candidates similar to themselves.

According to Patrick Leguide, *"this is not necessarily a bad thing; the main thing is to know whether the post needs to be occupied by someone similar to you or not"*.

## The Stereotype Bias



Whether we are conscious of it or not, we all stereotype. According to Patrick Leguide, *"some recruiters might be inclined to suppose that a candidate who is a graduate from a commercial institution or who holds a prestigious qualification is bound to have all the necessary skills for the post"*.

However, stereotypes are not always correct. It is important to question them so as to ensure that the best candidate is selected.

*Many* other forms of cognitive bias exist, and attempting to control them all would be futile. Yet recognition of their existence can help to limit their impact. Using objective data, such as personality or aptitude assessments, can help. They make it possible to examine the subjective side of things with greater objectivity.

## HOW SHOULD PSYCHOMETRIC ASSESSMENTS BE USED IN RECRUITMENT?

The use of psychometric assessments in recruitment has become commonplace. In Europe, India, and Australia, nearly all big businesses and 70% of SMEs use them. They are even more widely used in the US, largely thanks to a government-led accreditation scheme.

### **A real difference in recruitment**

With CVs looking increasingly more similar, thanks to the rampant use of “buzzwords”, psychometric assessments are a valuable tool for recruiters. By providing objective information on aspects that would otherwise be difficult to assess, they reduce the risk of errors – thereby saving both time and money for employers.

However, it's important to understand that they are not crystal balls. They are complementary tools that should never be used as the sole basis of a recruiter's decision. Instead, take into account every piece of information available, whether it's the CV, the references, the interview, or the test results.

### **When should assessments be used?**

Assessments are most effective when used after the initial CV selection and telephone interview, but before face-to-face interviews.

Interviews should develop on the results on the assessments, confirming and fine-tuning results. If a candidate's results indicate a high capacity for innovation, for example, you could ask them about how they have been innovative over the course of their career. Similarly, if a candidate's results show that they have a below average level of firmness, you could find out the whether they have any strategies for countering it.

### **What assessments should you choose?**

Ideally, a combination of aptitude and personality assessments should be used. This will provide a well-rounded view of a candidate's abilities and preferences.

However, the role applied for should affect what assessments are chosen. For a graduate position, a reasoning test would be useful. For a sales position, use an assessment designed specifically for sales. And for managers, emotional intelligence (EQ) assessments will reveal their ability to manage both themselves and others.

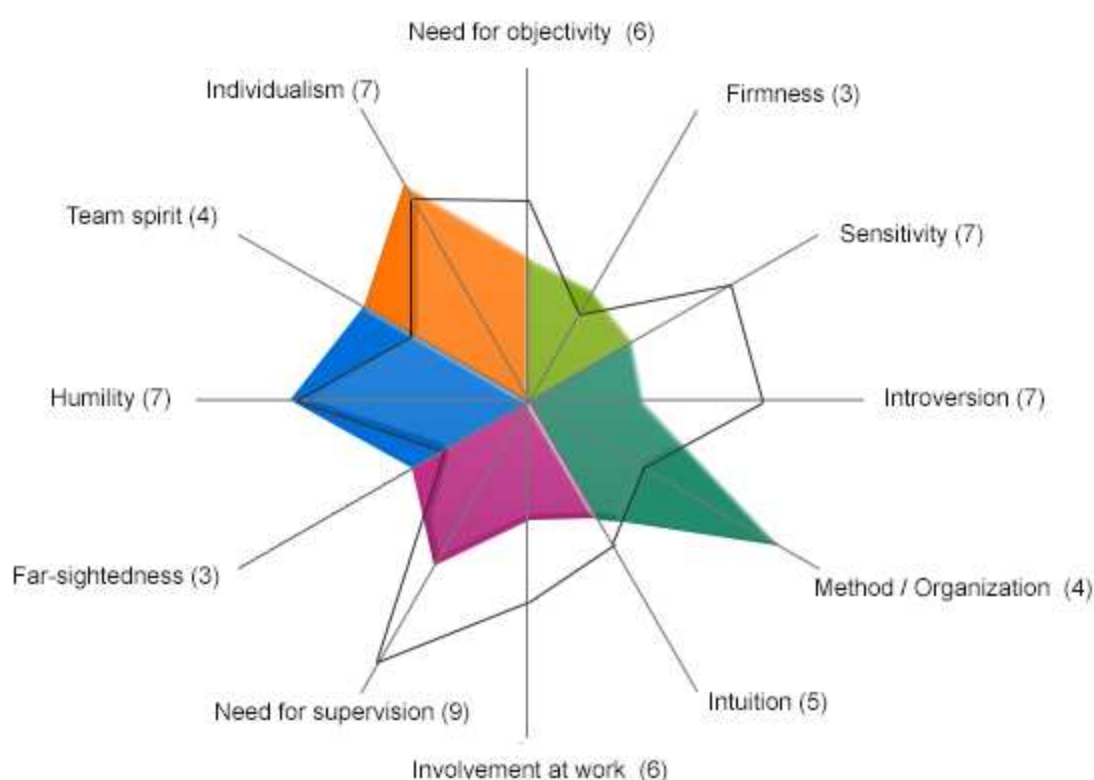


## How do you interpret the assessment results?

First of all, the criteria of the role to be filled need to be precisely defined before candidates take the psychometric tests, because the criteria will determine which tests are taken and the way the results are interpreted. With personality tests in particular, the results can only be interpreted in relation to a specific role. There is no such thing as a bad or a good personality. For example, if a personality test reveals that the candidate needs strong supervision, this could be positive for a role within a strict hierarchy, but negative for a manager who is expected to work autonomously.

In order to interpret results correctly, one needs to be familiar with several aspects. For example, scores should be looked at from a particular perspective: if Candidate A's score is twice that of Candidate B for the discretion dimension, this does not mean that A will be twice as discreet as B when faced with the same situation. It means that A will be discreet in *twice as many* situations as B. So a score of 90% for discretion means that the candidate will be discreet in 90% of situations. Another point to bear in mind when analyzing psychometric test results is that small differences between scores should be ignored.

We recommend taking a training session in the form of a practical workshop in order to master the various aspects. This will help to have the right attitude when choosing and administering tests and interpreting results.



## INTERNAL MOBILITY: 5 HR SYNDROMES TO AVOID

**Employee development and promotion can be as challenging as recruitment – if not more so. Knowing your employees only makes the situation more subjective.**

**Central Test’s founder and CEO explores the HR syndromes causing issues for internal mobility:**

“Internal mobility is not only a matter of hierarchical promotion, but also sideways moves and skills development. It is about enabling employees to specialise in a certain area or to move into a different field.

In today’s business world, with its constantly evolving needs and channels, organisations need to consider the development of their employees to remain competitive – and to increase employee loyalty.

Yet just as cognitive biases can cause recruiters to make mistakes, certain syndromes can make decisions about internal mobility more difficult.

### **Peter’s Syndrome**

Peter’s principle states that all employees will rise to what is called their “level of incompetence”. Simply put, this means that when an employee is exceeding expectations, they will be promoted. However, eventually they will reach a level at which they are unsuccessful. An excellent technician does not necessarily make a good technical director, after all. And at this stage, they will stop receiving promotions – meaning that eventually everyone will stay in a position in which they will not succeed.

This is only made worse by the fact that, when people feel incompetent, they have an unconscious tendency to recruit even less competent people for fear of being replaced. Company performance will dramatically decrease.

To combat this syndrome, organisations need to have a thorough understanding of their employees’ potential and to provide targeted training.

### **The Stereotype Syndrome**

This is the tendency to give a position of responsibility to man rather than a woman, or to choose a manager based on their qualifications rather than their interpersonal skills. We may not realise we’re being influenced by these stereotypes, but we are.

The problems with the Stereotype Syndrome are not only ethical; it also has a financial impact. A cloning effect at management level can reduce global vision and innovation.

### **The Stagecoach and the Fly Syndrome**

In Jean de La Fontaine’s fable *The Stagecoach and the Fly*, a fly takes all the credit for the hard work of the horses pulling a coach. The story ends: “Thus certain people, with important air,/Meddle with business they know naught about;/Seem to be wanted everywhere,/And everywhere they ought to be turned out.”

Some people stick their nose into every project and, after it’s been completed, claim the credit – regardless of how useful their contributions are. As with the naivety bias that affects recruitment, those who are good at self-promotion will find it easiest to influence decision-makers in this way.



## The Octopus Syndrome

Spiderman's Dr. Octopus may have many arms, but the rest of us only have two.

Directors and managers, especially of small businesses, often make the mistake of thinking that *everyone* should know how to do everything. Early on in my career, I did exactly the same thing. However, this is counterproductive. A salesperson should be focused on making sales, not on marketing and communications tasks.

Giving existing employees too many roles is not just bad for productivity; it also creates confusion with regards to a person's position and role progression.

## Caesar's Syndrome

The Roman Senate loved Julius Caesar's ambition, right until he seized power in Rome.

Expertise does not guarantee loyalty. When promoting employees to key positions, take care: they should be able to ensure corporate success, but they should also share the organisation's values. Otherwise, you might find you've put the cat among the pigeons.

You should take as much care over your internal mobility processes as you do over recruitment. Establish protocols from the start, and make sure to have – and use – job descriptions. This will leave less room for subjectivity.

Use assessment tools to uncover potential, discover motivations, and locate professional interests in your existing employees in an objective manner. Today's psychometric assessments cater for professional advancement as well as recruitment; as of such, they measure dimensions such as ambition and adaptability. Built these assessments into your yearly appraisals and internal mobility processes in order to put the right people in the right roles – and to offer each employee an optimised career path."

~ Patrick Leguide  
Founder and CEO, Central Test

### POINTS TO REMEMBER

- There is no such thing as a good or bad personality; there is only a good or bad fit for the job. As of such, assessments should be chosen according to the needs of the position in question.
- Internal career progression is as challenging as recruitment.
- Using assessment tools is recommended in order to avoid biases in both recruitment and internal mobility; it brings an element of objectivity to the subjective areas of personality, motivation, and professional interests.



## 3.2 TALENT MANAGEMENT

### HOW DO YOU IDENTIFY AND RETAIN TALENTED EMPLOYEES?

We are in an era of talent warfare. There are increasing levels of turnover, candidates are increasingly more demanding, and a rising number of senior staff are retiring. In this pressured environment, organisations must know how to identify and retain their best staff in order to survive. Yet for every organisation, the best strategy will be different.

#### Defining talent

The dictionary definition of the word "talent" is: *"a given disposition, aptitude, or particular capacity; an ability, either natural or acquired, to do something"*

While this definition does justice to the intangible nature of the word, it is far too vague for use in recruitment and development.

The problem is that talent can assume as many different guises as there are positions and organisations. Artistic ability might be a precious quality in the world of advertising, but it won't be of much use in sales. Therefore, before labelling employees as "talent", an organisation must determine what its definition of "talent" is.

#### Finding talented employees through psychometric assessments

There are a multitude of ways by which to find talented employees, from observations to references and monthly targets. Yet talent is, by nature, intangible. As of such, the most efficient and objective way to detect it is through psychometric assessments.

One assessment is rarely enough. One of the most useful combination of assessments is personality and reasoning. Take, for example, the task of finding a manager capable of putting imaginative new solutions into practice. Personality assessments will uncover the potential for imagination while reasoning assessments will reveal cognitive thinking, such as the ability to plan and be logical. Candidates with strong reasoning abilities but limited imagination will not be able to create imaginative new ideas. Imaginative candidates who lack strong reasoning abilities may be able to imagine new solutions, but they won't be able to put them into practice. It is only through using both assessments will a suitable manager be found.

#### Talent Management Requires Changes

People with a lot of promise have two things in common: they lose interest quickly and they are not afraid to look elsewhere to see if the grass is greener. So in order not to lose these people, organisations need to provide them with a fulfilling and challenging career.

This can be done through the use of individual career plans that allow talented employees to understand how their career can progress. Don't forget to include skills development in this; allocate tasks that will be challenging but that also play to their strengths. For example, try tasking a creative manager to adapt an existing product to a new market. This management and development style will encourage talented employees to identify with both the organisation and their role within in.

Don't forget, though, that there is no point in retaining and developing talent in a way that does not conform to the company's global strategy. It is important to align individuals' aspirations with the organisation's objectives.





## HOW CAN YOU RECOGNISE SALES POTENTIAL?

**Regardless of the sector they work in and their sales channels, salespeople share one common denominator: the ability to sell. This ability isn't always easy to define, but it can be identified through psychometric assessments.**

A salesperson might have only one objective – to make sales – but as part of that, they fulfil a range of different roles. They pitch, they negotiate, they provide customer service and follow-up care. So rather than defining a one-in-a-million employee as one that can sell and manage and market and has experience, why not simply look for one with excellent sales potential?

### **Analyse motivations**

“The most important rule in sales is to believe in your product.” *Wrong!*

Although this is a common phrase to hear, if your candidates tell you this then chances are that they're less suited to sales than they claim. Research has shown that an appetite for selling is one of the most common attribute of talented salespeople. Satisfaction doesn't come from selling a *useful* product; it comes from selling *any* product at the highest possible price. It's less an act of service and more a game.

You may be able to perceive this trait in interviews. It will also be revealed by sales assessments and occupational interest assessments.

### **Study personalities**

At the same time as studying a candidates' motivations, it is important to look at their personalities. Salespeople are generally extraverted, dynamic people who like action. They are often autonomous and tend to be less inclined to compromise than the average person. Without indulging in stereotyping, these personality traits can be good indicators of an individual's sales potential.

### **Focus on ability**

Assuming that an individual has both the motivation and personality to be a good salesperson, the question becomes: do they have the sales *ability*? Good salespeople are typically combative and resourceful. They have strong interpersonal skills and feel comfortable taking centre-stage.

Role-plays are an excellent way to highlight these skills, as are sales assessments. As always, though, recruiters should examine all of the information available to them from the candidate's CV and cover letter, interviews, and assessment reports.



## Nurturing creativity

Increasing innovation means creating an environment in which employees can be creative. According to CEO Patrick Leguide, *"this means not belittling any idea, no matter how crazy it might seem."*

Proactive changes can also be made to further encourage creativity. Patrick Leguide suggests tying assessment criteria to creativity levels and even *"putting in place a creativity bonus for key positions in which innovation is essential"*.

Another way to generate original ideas is to structure tasks differently. When it comes to innovation, avoid saying "we must". Instead, ask "how can": "How can we create more website traffic?", "How can we increase the number of our distribution channels?", "How can we make our services more user-friendly?"

Adding variety to the workday can also inspire creatively. Break up the routine with group mind-mapping sessions; team days out; or "role swap" days, in which employees leave their desk for a day to take on a different role within the company.

Yet don't forget that it is the team that must be creative. Ensuring there is diversity; making use of group tools designed for idea sharing, such as idea boards, social networks, and community groups; and giving them the option of communicating with external consultants for an outside perspective can all trigger innovative ideas.



### POINTS TO REMEMBER

- Identifying, managing, and retaining talent is important for every organisation
- The definition of talent varies from role to role and organisation to organisation
- Adopting personalised management strategies, encouraging diversity, and using challenges to simulate creativity can be used side-by-side with psychometric assessments to both maximise the potential of your talent and encourage loyalty

## THE 3 BEST REASONS FOR USING PSYCHOMETRIC ASSESSMENTS

**Data has become a vital part of a decision-making process, and those who work in the field of Human Resources know this well. Obtaining relevant and unbiased information about potential employees, putting coherent schemes in place for tracking employee performance, and having clear policies about talent mobility are crucial for maximising talent.**

Psychometric assessments provide the complete and objective information needed to make good recruitment and talent management decisions. There are numerous reasons for using them, but the top three are:

### **1. Assessment results are easily quantifiable**

The cost of a poor recruitment or promotion is high. If a new employee's lack of suitability is discovered during their trial period, the cost to the company will be, on average, over 50% of their yearly salary. The cost of replacing someone after their trial period, however, is estimated to be 150% of their yearly salary.

Yet the use of psychometric assessments, with their clear, numerical results, can make avoiding a poor hire or promotion much easier. The data they provide makes it easy to compare candidates to the role and team in question, ensuring that whoever you hire, they will be a good fit.

### **2. Assessments reduce the effect of cognitive biases**

When recruiters rely on the interview and CV alone, there is a high chance that the decision-making will be based on subjective assumptions or attitudes. These attitudes are hard to change yet highly detrimental. In fact, studies have shown that there is only a 14% correlation between a candidate's ability to present themselves well in an interview and their performance in the role.

Unlike traditional selection methods, psychometric assessments can facilitate objective and non-discriminatory decision making. These standardised measuring tools take a statistical approach and calibrate the results to different cultures, making it possible to accurately study the differences between individuals. According to Schmidt and Hunter, using these tools in combination with interviews reduces selection error by 24%.

Central Test's assessments enable you to identify talented individuals who not only have the necessary expertise for the role, but are suitable for your positions and workplace culture.



### **3. Modern assessments are easier to understand than ever before**

Gone are the days when employers had to rely on clinical questionnaires and convoluted reports, the interpretation of which necessitated a psychologist's intervention.

Today, there are psychometric assessments that have been developed with the workplace in mind. They are straightforward and convenient to use, while remaining faithful to the rigorous norms for scientific validation.

Central Test's reports are instantly accessible online and, thanks to easy-to-understand graphs and charts, allow you to quickly understand test-takers' distinctive traits. Personalised comments further remove the risk of misinterpretation.

Despite this, assessment administrators should receive training. This will guarantee a thorough understanding of the traits measured and an accurate analysis of the results. Central Test's training sessions will enable administrators to become autonomous within a short space of time.

Psychometric assessments are objective, accurate, and easy to interpret. Today, they are centred around the needs of the workplace, ensuring that the results are relevant for. By providing the data needed to make the right hiring and development decisions, they have become invaluable resources for organisations.

# CONCLUSION

Whether it is for recruiting the right candidate, retaining high achievers, or increasing company productivity, psychometric assessments have become indispensable to effective talent management programmes.

Using multiple assessments, alongside simulated work situations and personal debriefing sessions, considerably reduces the risk of error. And the world of psychometrics is still evolving. More advanced statistics, the improved control of social desirability, the integration of assessment platforms with HR software, and increasingly realistic scenarios are making assessments more and more effective as decision-support tools.

This is borne out by their ever-increasing presence in the business world. Today, they are relied on by large and small companies alike for their ability to bring objectivity to otherwise subjective decision-making.