

THE PREDICTIVE MODEL

Reference Guide

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INTRODUCTION

This document aims to provide you, our clients and partners with the necessary conceptual and methodological information relating to Central Test's predictive model, which will be launched in the second quarter of 2022.

Built on several years of research, Central Test's predictive model responds to new paradigms, thus making it possible to establish from multiple assessments, predictions of an individual's matching centred around targeted positions and projects.

In contrast to the prior working method, the main shift lies in the fact that positions or projects, known as "predictive models", are now associated with skills-based models, replacing the former trait-based models..

The premise of the predictive model is to combine a pragmatic HR approach, based on a set of success criteria, with a scientific outlook that focuses on the full scope of the assessments. This leads to more reliable and easy-to-interpret predictions, and enhanced candidate experience when the results are fed back.

The predictive model is, therefore, based on a system of multiple criteria (what we wish to evaluate) and multiple methods (how we evaluate it), with scope for future development via the possible expansion of the criteria and methods.

While this document covers the main principles of the predictive model to better understand and harness its uses, there is also an FAQ section along with video tutorials available on our platform to help in quickly assimilating this new information (client area > resources menu).



I. THE BASIS OF A PREDICTIVE MODEL

MAKING EVALUATIONS MORE OBJECTIVE

This section presents the main features of Central Test's predictive model, in comparison with our former operating method.

Our decisions are a combination of intuition and analyses based on objective data. However, in many cases, our intuition alone reigns supreme, generating many cognitive biases that lead to poor decision-making.

Therefore, the use of reliable evaluation tools becomes fundamental across the selection and support processes like:

- **Talent acquisition**, by improving the quality of predictions as well as efficiency in time, thereby allowing for a more extensive candidate selection base.
- **The development and retention of talent**, through an ongoing analysis of the individual's potential, thus enabling the facilitation of personalised support.
- **Team building**, by ensuring a good blend of talents and diverse profiles to succeed in the tasks entrusted.
- **Career guidance and mobility**, by matching individuals to the areas of activity, professions and training programmes that suit them best, while accounting for the trends in the job market.

In this way, evaluations based on scientific methodology maximise the objectivity of talent selection, integration, and development processes.

In terms of evaluation methods, while psychometric assessments, meeting international validation standards, is the most scientifically recognised approach, other additional methods are also gaining ground. For example, artificial intelligence can help in interpreting unstructured content (i.e., CVs, cover letters, video interviews, open-text questions) as well as serious games. Moreover, feedback techniques are also used either during recruitment (recruiter's rating system, candidate's self-evaluation) or more frequently during the development process (360 Feedback).

WHY OPT FOR A PREDICTIVE MODEL?

While there is a consensus on the need for objectivity in our evaluations, one of the challenges we face is, defining the requirements for jobs and setting up a matching process that is both predictive and easily interpretable, and which thereby facilitates meaningful discussions between HR, managers or coaches and the individuals being assessed. Hence, this is the ultimate goal of any predictive model.

Assessing potential must therefore meet a specific purpose i.e. to ensure a good match between the “target profile” for a position and the characteristics of the candidate or the employee being assessed, by identifying any mismatches or areas for improvement. Not only does this address recruitment and development needs for a given role, but it can also be useful for career guidance and mobility, where job specifications are also required to identify suitable projects with more accuracy.

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II.

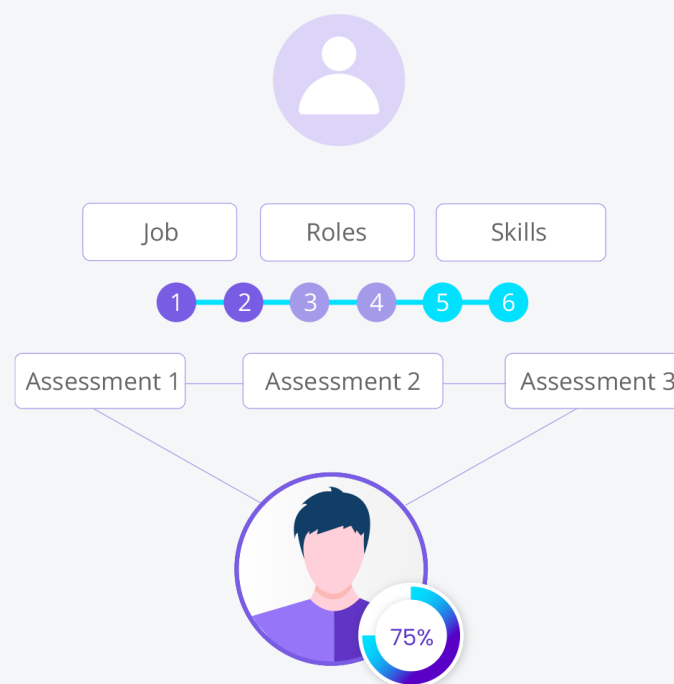
CENTRAL TEST'S PREDICTIVE MODEL

From the second quarter of 2022, all the assessment and talent management solutions developed by Central Test will be based on a predictive model.

This predictive model combines the (potential) success criteria associated with jobs, roles or projects, with the evaluation of these criteria via multiple and converging methods to generate reliable predictions.

It can, therefore, predict the future success of candidates or employees by identifying those who are best suited for the targeted positions or roles, while also highlighting their strengths and areas for improvement.

In the current version, the predictive model involves defining a **skills model** based on a set of **psychometric assessments**. The job profile corresponds to a list of main skills required for the role, with levels of importance ranging from 0 to 5 (0 being completely unrelated or optional). The individual's profiles are then assessed with various assessments for each skill to obtain a matching index for the targeted position based on their skills score.



Progressive development of our predictive model is planned in terms of:

- the success criteria, with the introduction of new categories.
- the evaluation methods used to measure these success criteria.

This is one of the characteristics that makes this model so powerful.

TRAITS-BASED VS SKILLS-BASED MODELS

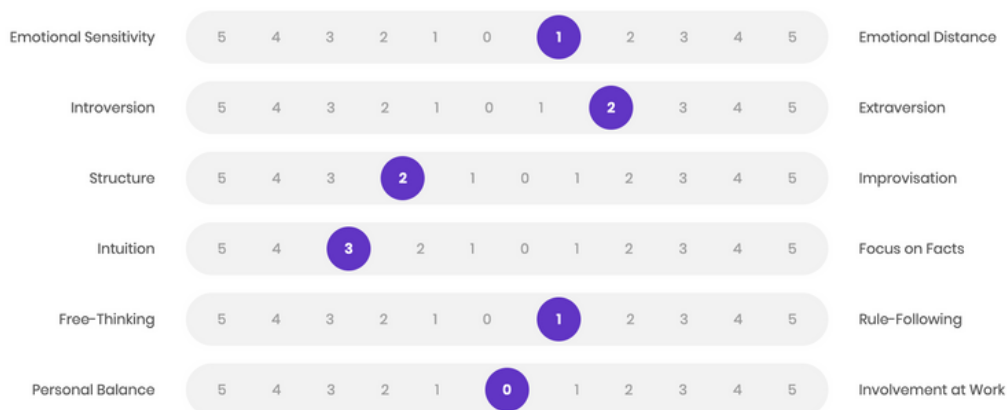
This section will outline the origin and philosophy of Central Test's predictive model to further demonstrate its relevance within your HR practices.

Generally, we can distinguish two different approaches to prediction among the leading providers of psychometric assessment solutions: a traits-based approach, where one or more psychometric assessments are used to associate an ideal candidate or employee's profile with a given role, and a skills-based approach, where a skills model is associated with each role and these skills are assessed by various tools.

Traits-based model

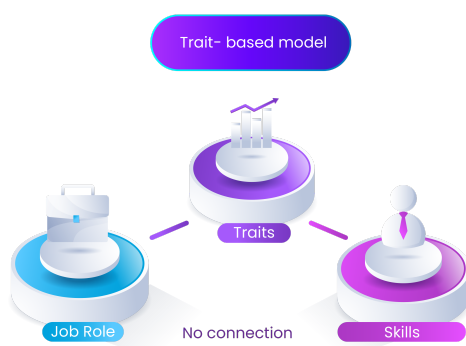
The trait-based approach has long been used by a great number of psychometric tool developers including Central Test, until recently. This approach consists of directly comparing the individual's profile with the traits assessed in the psychometric assessments.

For example, for a given role, an ideal profile is defined between the extremes of Introversion and Extraversion, with results falling in between as well. An algorithm then calculates a match based on the proximity between the individual's profile and the job specification based on one or more assessments.



Example. Configuration of an ideal candidate for a given position.

In parallel, certain assessment tools can be used to measure an individual's compatibility with generic behavioural frameworks. This is the case at Central Test, for instance, where an individual's skills and values, as well as their suitability for a particular job, can be viewed via the Talent Map.



Prediction of a job and skills match via a trait-based model.

This approach, though objective in nature with many advantages, also comes with several drawbacks:

- Since job roles are defined by traits, no direct link is made between competencies and jobs, therefore, a job match cannot be interpreted based on the competencies associated with that particular role.
- Customisation of job specifications based on the traits found within the assessments requires specific expertise, which is not only limiting but also leaves room for subjectivity, which is precisely what needs to be avoided.

Skills-based approach

To combat the drawbacks mentioned above, Central Test's predictive model is now based on a new paradigm, which consists of defining a position, role or project based on success criteria, with levels of importance that can be modified over time.

These success criteria are now built around a transversal and dynamic skills framework, with the possibility of integrating your company's (or your client's) own corporate repository of skills framework.

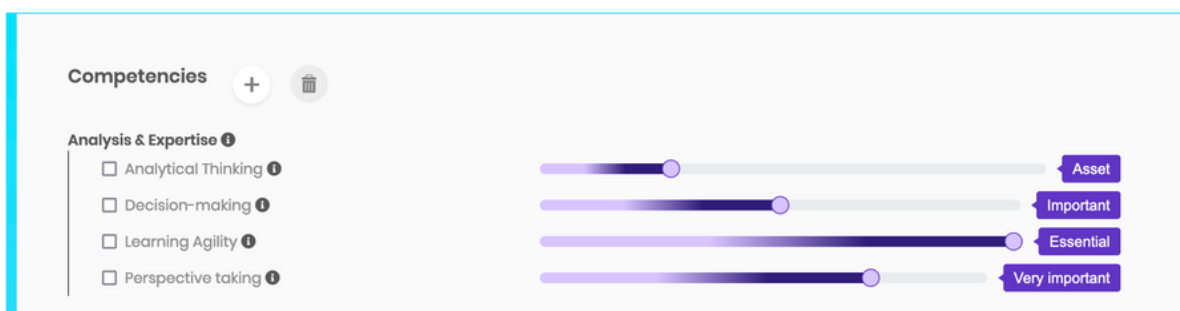
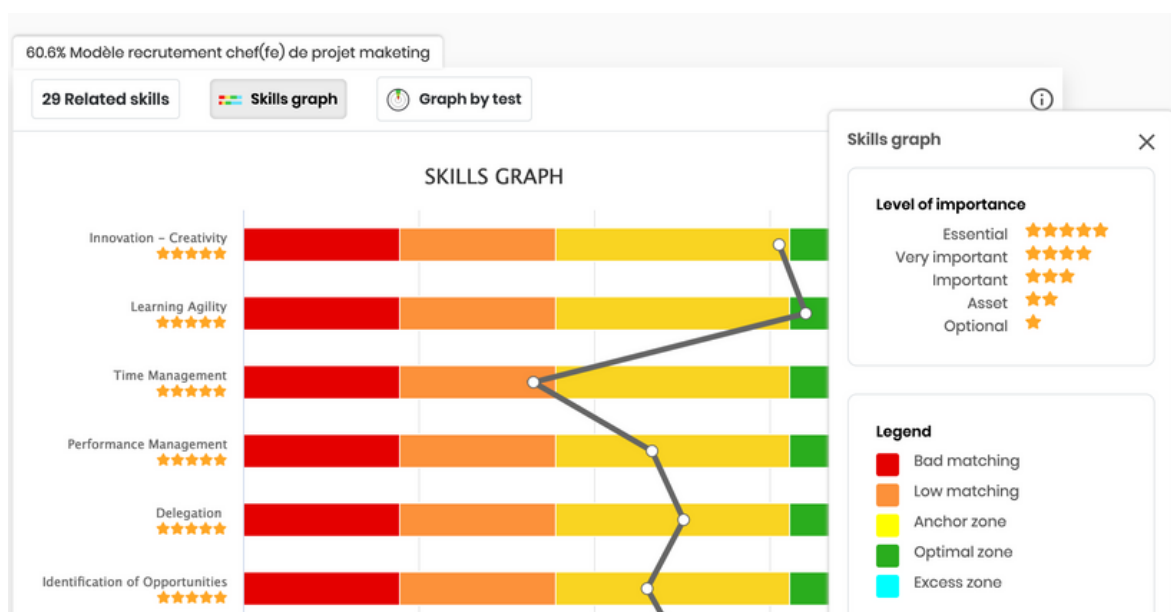


Illustration to add (extracts) of a skills model for a given role.

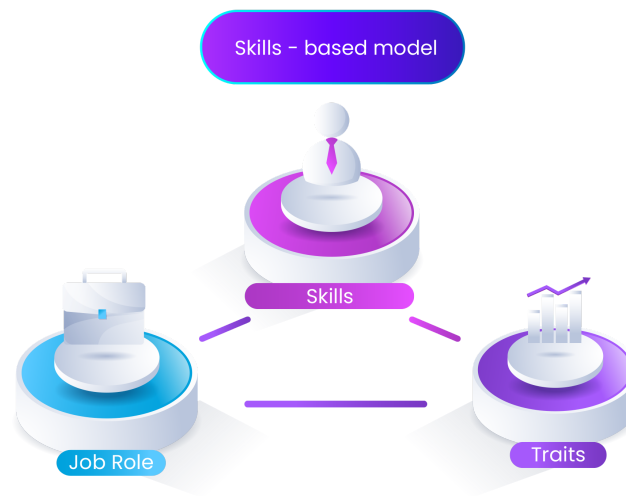
The assessment methods used, in this case, psychometric assessments, measure all the skills found within the reference framework, which are then aligned with the targeted jobs, as illustrated in the skills graph below, for a given role.



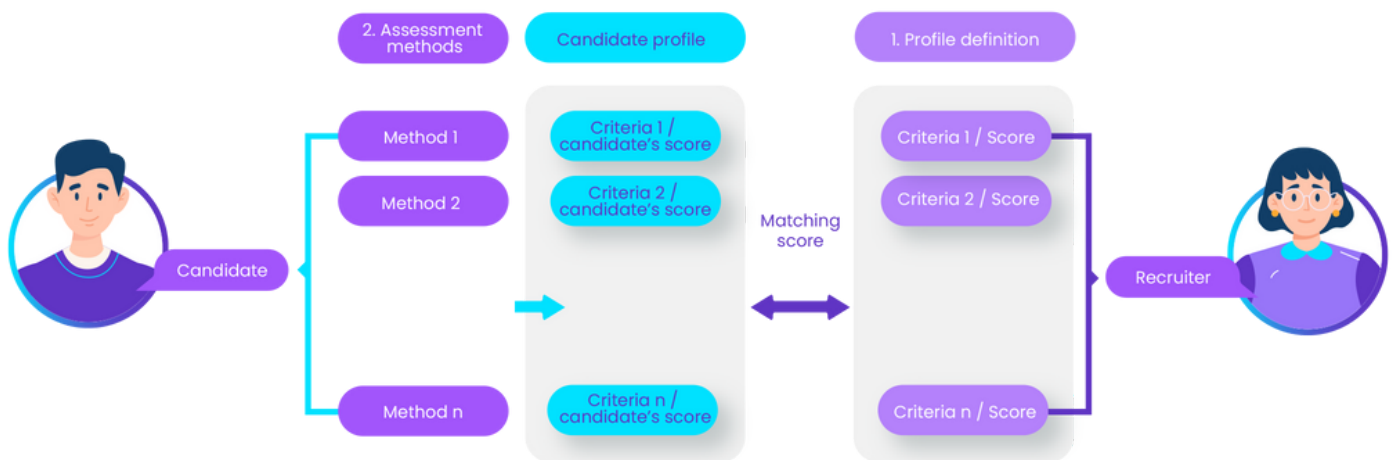
In this new model, **a job is viewed as a cluster of skills, evaluated using traits**. Therefore these traits cannot be modified for a given role.

Sample traits-based model

If we define a skills-based model, the predictive model will also display the traits-based model which is derived from the average of the traits-based profiles for the skills found. This is the case for every psychometric assessment used in each campaign.



This is intended to serve as an illustrative model of a 'job profile' for individuals during debriefing sessions, to be used alongside the skills model.



Example of an illustrative traits-based model for a role.

To gain a better understanding of the traits-based model, take the following example: if a predictive model were only to combine competencies of Leadership and Negotiation, the traits-based profile would be the average of each trait associated with these two competencies (e.g., from **PROFESSIONAL PROFILE 2**, "Persuasiveness" for Negotiation and "Desire to lead" for Leadership), weighted according to the level of importance for each competency within the model.

In the predictive model, this traits-based model reflecting the set of competencies will not be adjustable.

If you would like to assess concepts that can be measured specifically via traits, you can create customised skills based on these traits and link them back to your predictive models.

Advantages of the skills-based approach

Our new predictive model offers many benefits. It is based on a comprehensive skills framework, making it more universal and resilient compared to the ever-changing nature of job roles.

Here is a comparative table outlining the benefits of skills-based modelling.

1 Skills, unlike traits, can be improved

In the predictive model, the traits assessed can predict, but not determine, the natural aptitude or ease with which an individual performs a given skill. The ideal job profile is built around a skills model which includes different levels of importance. Further steps can then be taken to assess these skills, which have the scope for improvement.

Conversely, in a traits-based model, the traits found within psychometric assessments like personality or interests assessments, are inherently stable over time. In some cases, these traits may be mistaken for skills (e.g. sociability in the place of extroversion) and perceived as an area for improvement by individuals or even consultants. This interpretation would be misleading as it would contradict the principle of stability in such assessments. Thus, there is no point in attempting to develop extraversion, even if it's referred to as sociability.

2 More intuitive customisation

Unlike traits-based customisation, skills-based customisation of a position, with the help of models, is more organic and intuitive, as it is directly linked to the criteria and tasks required for the position. This approach can be used by all practitioners in diverse fields.

3 Better candidate/employee experience

Interview questions and feedback can centre around the individual's traits and/or skills, though, for the latter, it is easier to align the results with the chosen role. We can also emphasise the fact that while traits can be either helpful or inhibiting for individuals, there is always room for improvement when it comes to their skills. In contrast, in a traits-based model, even if there is a focus on the notion of potential, results may be seen as deterministic and arbitrary by individuals.

4 Development of frameworks

The skills framework can always be enhanced by updating and adding new skills to reflect transformations in the workplace and to meet new challenges. It is also possible to use a corporate framework and incorporate it into your predictive models.

5 Updating existing models

With the rise of hybrid jobs, another advantage of the skills-based model is that it can separate a job from the skills involved in it, which are evolving by nature, as well as from the prediction of these same skills, which remain unaffected by any changes. For example, if a position in your company undergoes changes and new responsibilities are added, the level of importance for certain skills can be adjusted. The derived skills- and traits-based model will be automatically updated without the need for any further statistical adjustments.

CHARACTERISTICS OF CENTRAL TEST'S PREDICTIVE MODEL

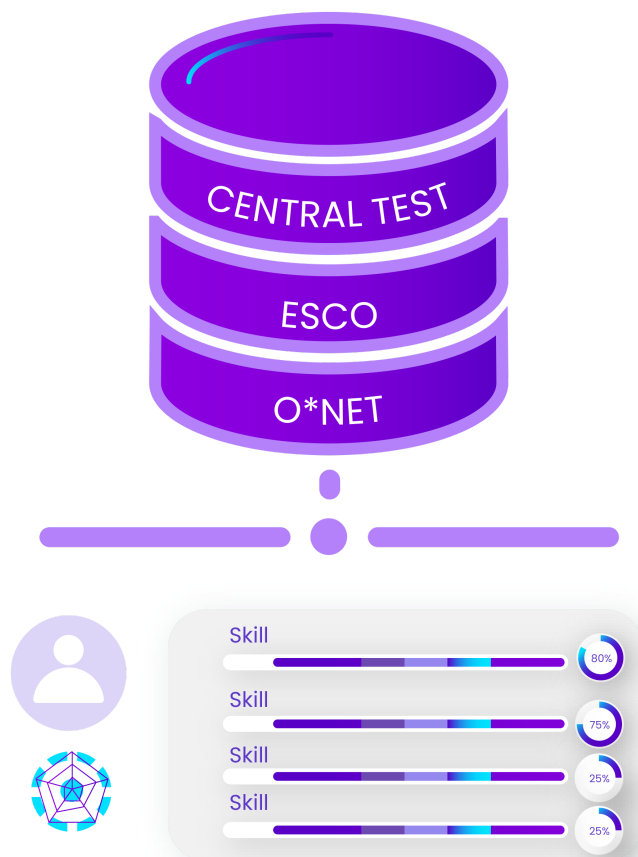
This section aims to set forth how the predictive model works by defining the criteria involved and how they are measured, and by exploring the different models and resulting HR applications.

Defining your customised model

It is always easier to find something when you know what you are looking for. Before commencing a recruitment campaign, or an internal assessment (career development, job transfer, etc.), it is useful to have a vision of the ideal candidate/employee for the role in question. Pinpointing the technical and interpersonal capabilities required for the position or role lays the groundwork for successful evaluations.

Including international benchmarks

The incorporation of international benchmarks (O*net, Esco), and regrouping millions of data entries, has turned the creation of a unique skills model into an easy task.



In most cases, when targeting a specific job, you can simply select the most similar role from a list of 800 international job clusters, together with Central Test's standard job model which provides simplified job groupings.

Once you have selected the desired position, you can directly view the associated skills model, which you can adjust by using your expertise in the position and by getting feedback from others.

You can also select a function or a combination of functions, e.g., the "Management" function for an audit of a management team.

A job is a set of responsibilities and tasks associated with a type of activity. It includes all the technical and instrumental knowledge specific to that field.

A function refers to a set of roles found within an organisation. It is the common denominator for a group of similar jobs. For example, the "project management" function consists of organising tasks, setting out different parameters (time, activities, resources) and coordinating those involved.

Ability to combine jobs and functions

The predictive model also allows you to select one or two jobs as well as one or more primary and/or secondary functions to complete the job specification. Jobs and functions can be combined or used in isolation.

By combining jobs and functions, we can generate a predictive model using algorithms that adhere to certain criteria.

Additional information:

- Skills that are present for individual jobs will be applied to the group as a whole. For example, let's imagine that job 1 contains skills A and B, and that Job 2 contains skill C. As a result, the new combined job will contain skills A, B and C. The algorithm will however recalibrate the model and the levels of importance for each skill to ensure that the requirements for the new job are well-balanced.
- It is possible to have up to 2 primary jobs, but not any secondary job.
- It is possible to have up to 2 primary and 2 secondary functions, which allows for more flexibility.
- When combining jobs with functions, the software calculates an average score between the job-based model and the function-based one. It is recommended that you include a primary function which also forms part of the targeted positions (e.g., sales function for a sales representative), to ensure the results are consistent with the actual nature of the role.

As economic and technological growth races ahead, it brings with it many changes to the workplace – an ever-growing number of hybrid jobs requiring both specialised and transversal skills.

Hybrid jobs call for a diverse set of abilities, allowing for a variety of tasks to be performed as part of the same role. This progressive overlap between several roles and/or areas of expertise reflects the emergence of a new set of needs within companies, so much so that hybrid jobs and functions have now become the norm in certain fields of activity (e.g., digital marketing project management, UX design, business development, etc.). Our predictive model makes it possible to address this shift in the working world by combining different jobs and functions.

A customised model

There is scope to modify and enhance the designed model in line with feedback from managers and how it performs when put into application.

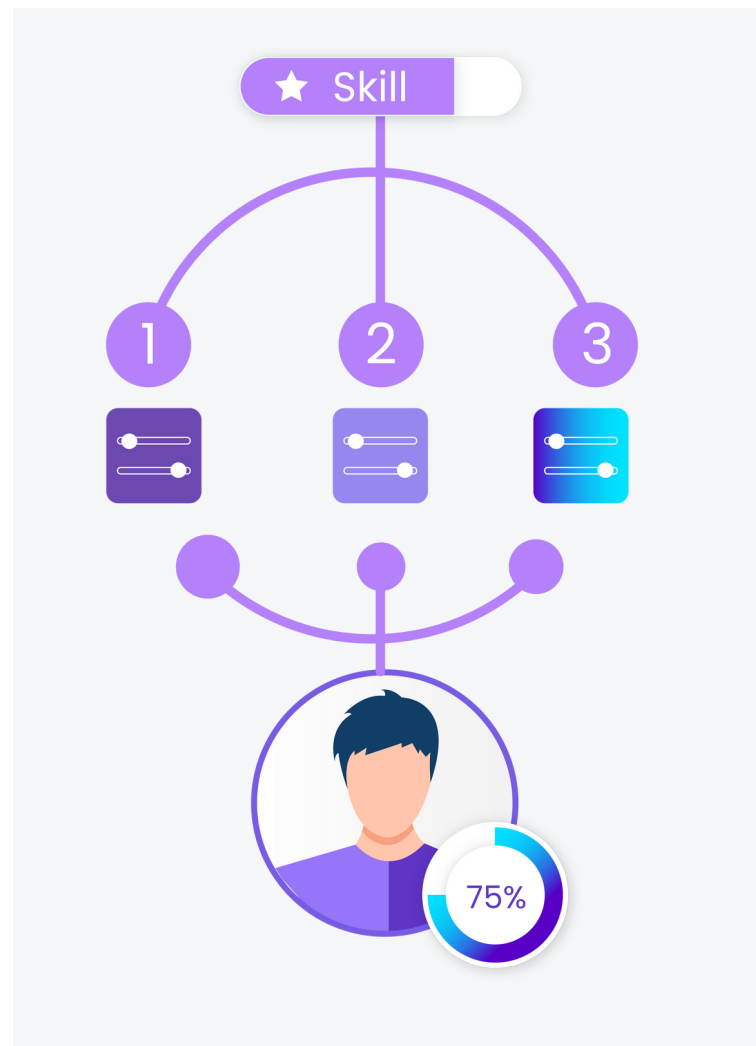
You can also build a skills model without using jobs or functions, by selecting the relevant skills directly and assigning them levels of importance.

1. Multi-method evaluation

Humility is a must when it comes to assessing potential. No method, regardless of its scientific backing, can claim to make predictions with absolute success. For example, a 100% match for a skill via an assessment must be put into perspective in terms of the predictive accuracy of the assessment for that given skill.

That is why we have always urged the use of a combination of assessment tools to bolster the reliability of predictions, even though it is always possible to base results on a stand-alone psychometric assessment.

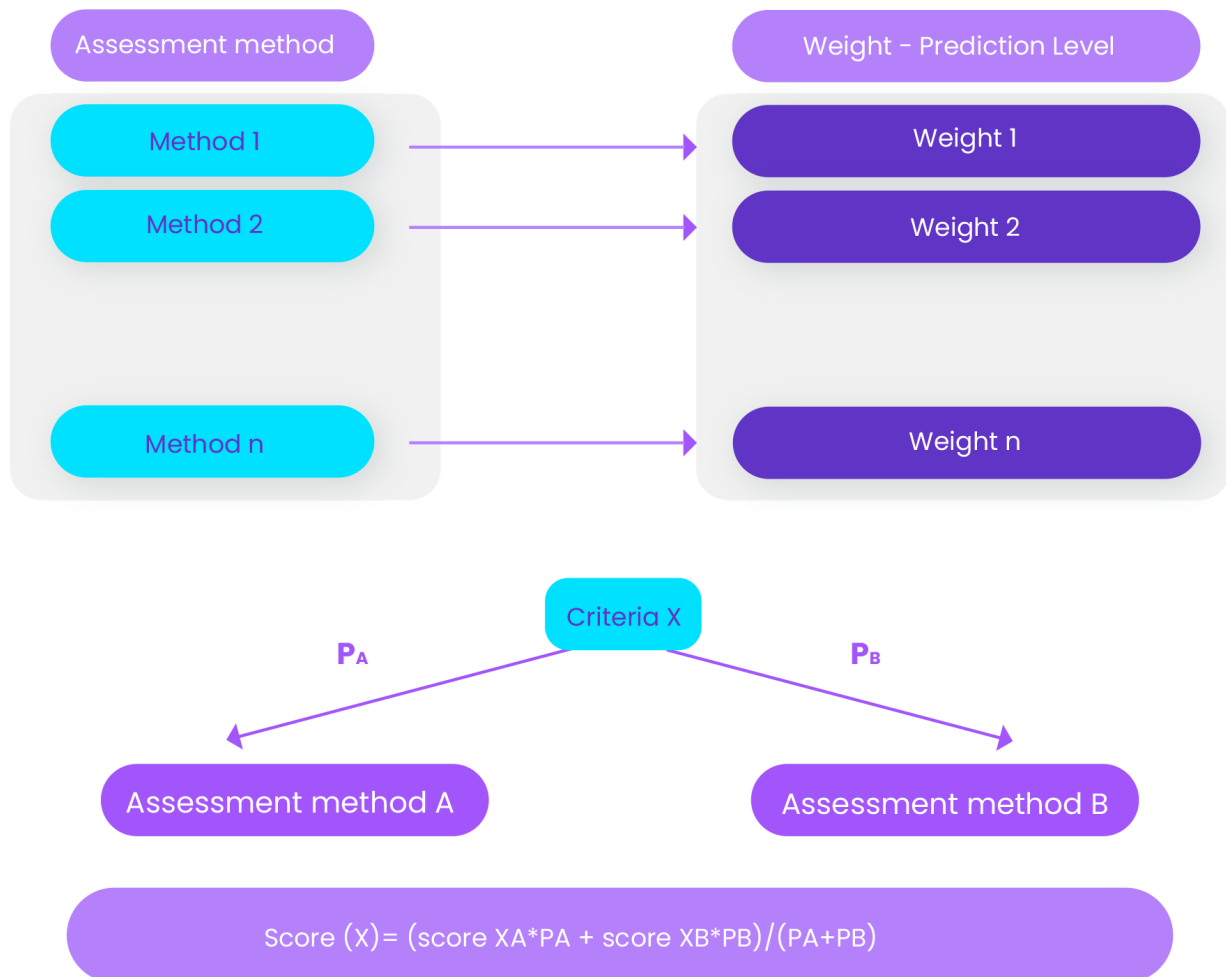
To this end, once the ideal individual profile for the position has been set out, you must then select the most suitable assessment methods to evaluate participants.



Central Test offers a comprehensive range of professional assessment tools, catering to a majority of your needs (assessments for personality, motivations, interests, emotional intelligence, reasoning, counterproductive work behaviour, etc.).

Thanks to this diverse array of assessment methods, you are better placed to assess participants objectively and fairly via a multi-method approach.

In our predictive model, we consistently cross-reference the evaluation methods used by accounting for the accuracy of prediction for each targeted criterion, thereby improving reliability.



Discovering different frameworks

You can use our online platform to fully harness the advantages of predictive models, as described in more detail in our video demos.

You can either use a predictive model for a Talent Matcher assessment campaign to compare multiple participants, or you can instead view multiple predictive models through the Talent Map, which is accessible via the participant's profile.

In addition to customisable predictive models, you can also make use of standardised job frameworks, representing pre-defined skills models, which can be viewed as standalone predictive models.

Central Test's database contains 138+ business clusters which are classified into three groups: Management, Generic, and Commercial. Each cluster has been calculated and calibrated using a combination of O*net clusters.

HR Applications

Central Test's predictive model, in conjunction with its online platform, has been designed to offer multiple applications, encompassing a broad spectrum of talent management needs, from recruitment to career management, as well as career guidance and competency reviews. You can find practical advice for each of the uses below.

Recruitment:

The predictive model aims to identify the success criteria accurately for a given position, and to evaluate the said criteria using various methods that can be staggered throughout the selection process. For each recruitment drive, we recommend that you create an assessment campaign, a predictive model corresponding to the job opening in question, to compare candidates systematically. You can view a detailed breakdown of matches in terms of the skills and traits for each assessment.

You can also take your investigation a step further by using a candidate's Talent Map to view their generic job matches, and other available predictive models, as well as the skills or values that stand out the most in their profile.

Career guidance & competency reviews:

As a first step, we recommend that you take the time to explore the generic frameworks found within the Talent Map (standard jobs, skills, values). You can then investigate any specific pathways set out during the assessment administration, through customised predictive models identified beforehand for targeted jobs or more generic functions.

Development:

The advantage of using a predictive model is that you can identify strengths and areas of improvement for a given position, based on the individual's skills, and view how well a specific skill aligns with different assessments. You can use a predictive model in several ways, either via a Talent Matcher campaign, by comparing multiple employees, or on an individual basis, by accessing a predictive model of your choice via the Talent Map.

For a more generic approach (management, sales, project management, etc.), you can also approach the development programme using a predictive model linked to a function or combination of functions, on an individual or collective basis within teams.

Assessment-based tools can also be supplemented by a 360-degree evaluation.

Career mobility:

A Talent Matcher campaign can now compare candidates or employees using a single predictive model. To see where an employee sits in relation to several targeted positions, we encourage you to configure your predictive models and to view matches on the Talent Map.

Advantages of the predictive model

Below are the key benefits of Central Test's predictive model:

Versatility:

Our predictive model works independently from the methods used to evaluate it. As a result, any method can be used for evaluation, provided that the method used can predict a certain number of the model's criteria*.

Interpretability

Our predictive model is unlike a black box. You have a clear and consistent view of the success criteria and their measurement, which you can monitor. You also have access to a traits-based interpretation centred around the psychometric assessments used, both in terms of skills and in terms of predictive models.

Simplicity

Models are generated automatically in just a few clicks. There is no need to spend time finding profiles according to traits, as it is very simple to grasp how our skills framework operates.

Flexibility

Skills frameworks evolve, and therefore you can also set up your personalised frameworks, and apply them to your predictive models.

Fairness:

Evaluations are based on an objective and open set of criteria, which are easily understood by all. This minimises cognitive bias as well as discrimination.

Precision:

The predictive model allows you to fine-tune your job specifications, with the option to cross-reference jobs and/or functions. Levels of importance ranging from 0 to 5 are additionally used to establish a skills model.

Customisation

You can add new skills that will be assessed, using a traits-based assessment method, via a 5-point scale.

Scalability:

The predictive model has been designed to support the incorporation of new methods and/or new types of success criteria.

**For example, if method 'A' can predict at least one of the required skills, it can be included in the model.*

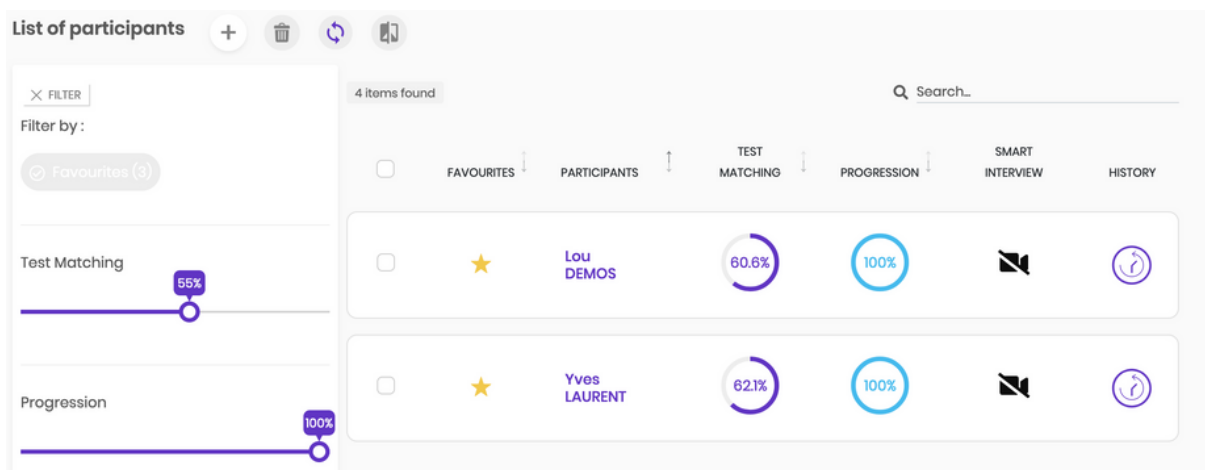


III. RESULTING DEVELOPMENTS IN OUR ONLINE PLATFORM

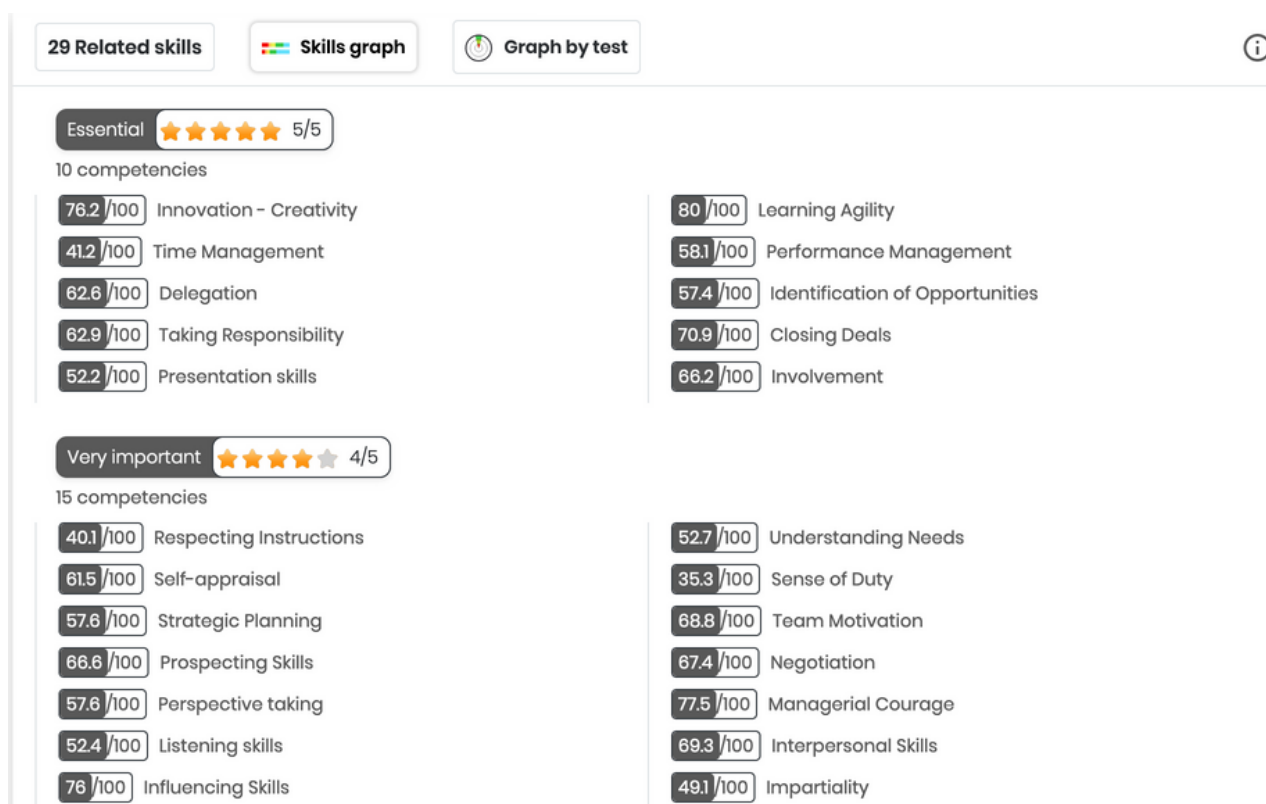
Interpreting matches

The information provided in this section will allow you to fully understand and interpret the matching process for predictive models, be they customised or standardised (Organisation-specific Talent Map).

A global job match ("Test Matching") from a comparison made between a profile against that of a predictive model is achieved by calculating an average of the skills-match scores, weighted according to the level of importance found within the chosen predictive model.

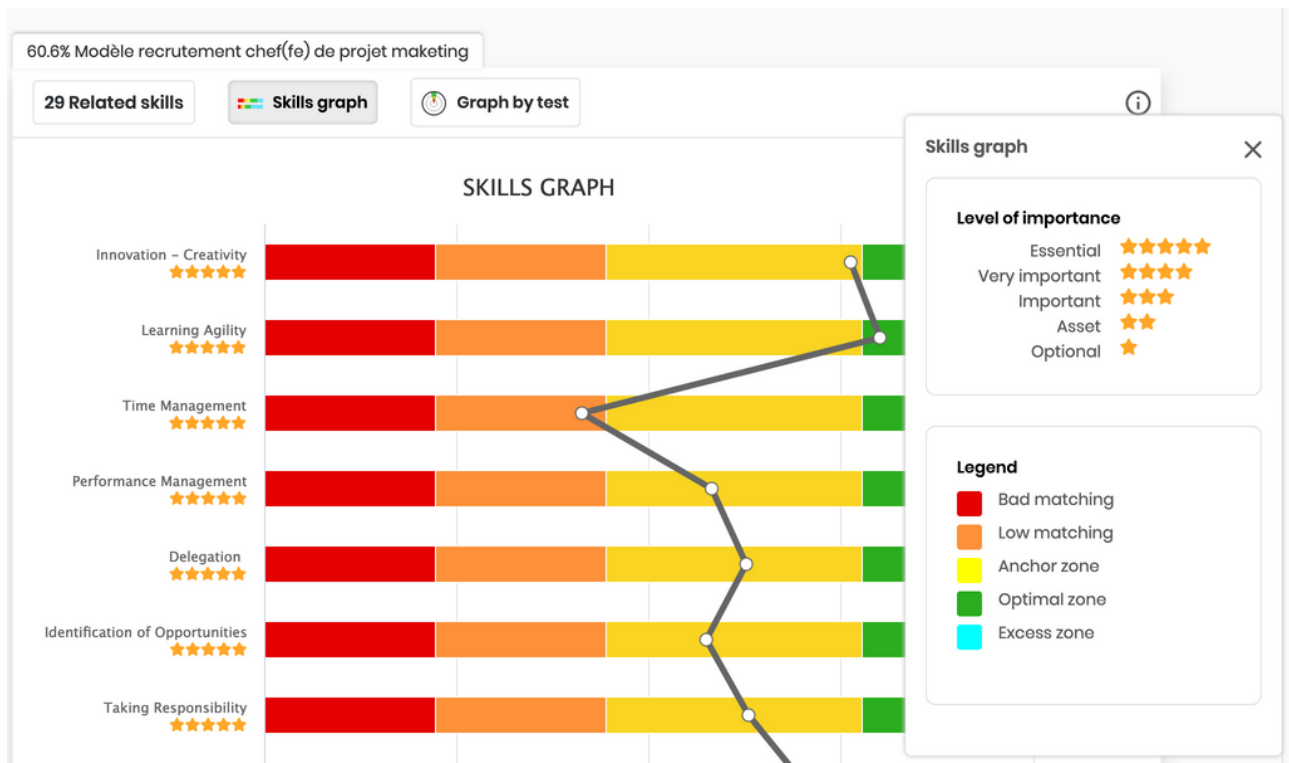


For a targeted predictive model, you can analyse the scores for each of the skills present in the model alongside the targeted job.



List of skills found in the model along with their score out of 100, ranked by level of importance (Essential to Optional)

For further details, you can view the skills graph by clicking on the "Skills graph" button.

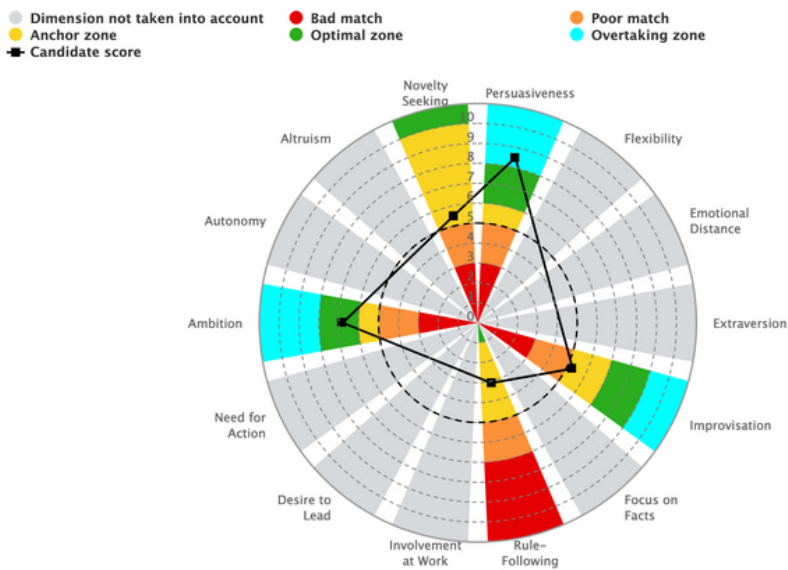


The colour scheme can serve as a guide when interpreting the results (see key above). For example, the more advanced the skill level is (e.g., "essential" level), the more difficult it is to reach the optimal zone for that skill (shown in green) compared to a skill with an "optional" level of importance.

And for further details, you can view the graph of the tests by clicking on "Tests graph" on the top right. This will allow you to generate comparisons based on the illustrative traits-based profile for a given position (see Part 1, section d: skills-based model vs. traits-based model).

You will be asked to select an assessment to display the radar chart and view the scores for each trait.

INNOVATION - CREATIVITY PROFESSIONAL PROFILE 2



STRENGTHS		
Dimension	Optimal	Candidate
Persuasiveness	6 - 8	8.5
Ambition	6 - 8	6.8

ANCHOR ZONE		
Dimension	Optimal	Candidate
Improvisation	7 - 9	5.3
Rule-Following	0 - 1	3.1
Novelty Seeking	10 - 10	5.5

POINTS TO DEVELOP		
Dimension	Optimal	Candidate

Here we can distinguish between the zones:

- In blue - exceeds expectations; trait score for the position surpasses the optimal zone
- In green - optimal zone for trait score
- In yellow - anchorage zone (trait score falls below the optimal zone but is above average)
- In orange - unsatisfactory trait match
- In red - poor trait match

A new way of calculating skills

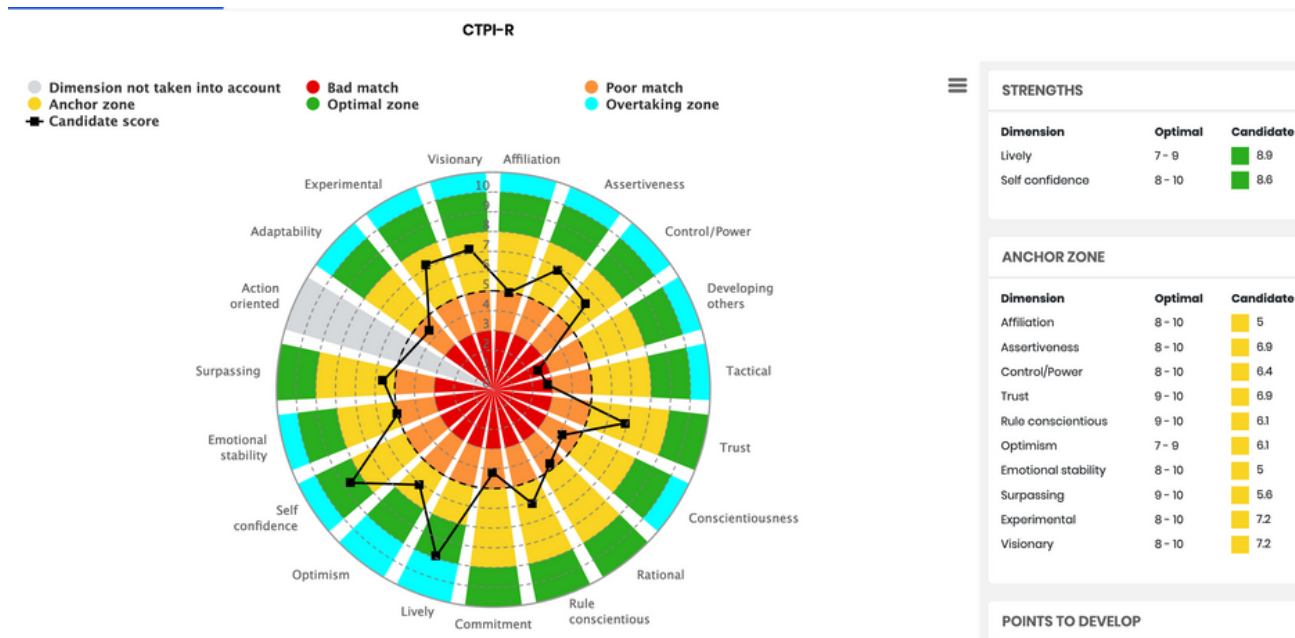
The implementation of this new predictive model has brought about a shift in our method of calculating predictions for the behavioural framework (skills, values) derived from psychometric assessments (see box below). Similarly, the configuration of traits based on skills, in addition to Central Test's skills framework, has been revised in line with this development.

These traits-based configuration adjustments required us to conduct investigative studies drawing upon various sources:

- Correlative studies between 360 feedback (feedback on skills) and assessments
- Advice from a panel of experts
- Extrapolations on criteria from O*net's database
- Scientific studies

However, concerning your individual's initial skills, the differences in scores between the former system and the new predictive model remain limited and do not tend to have an impact on the ranking order.

For each skill assessed, you can view a detailed breakdown of the matches for each assessment.



The different colours can act as a guide when interpreting the results, in the same way as for a traits-based job profile graph. For a given skill, the higher the level of importance for the trait, the higher the level of difficulty to reach the optimal zone for that trait (green colour) compared to a trait with a lower level of importance.

Here we can distinguish between the scores:

- In blue - exceeds expectations; trait score for the position surpasses the optimal zone
- In green - optimal zone for trait score
- In yellow - anchorage zone (trait score falls below the optimal zone but is above average)
- In orange - unsatisfactory trait match
- In red - poor trait match

How are skills scores calculated?

Below are some insights into the logic underpinning behavioural framework predictions, based on psychometric assessments.

For each assessment:

- A trait's level of importance is considered using a 5-level ranking system. For assessments structured around opposing dimensions (such as PROFESSIONAL PROFILE 2 or BIG FIVE PROFILE), as well as for other assessments where a low score on one dimension may prove to be undesirable (EMOTION 2, SALES PROFILE-R, etc.), a distinction is made between the main and the opposing trait - each of which may be associated with a level of importance out of 5.
- The more important the trait is, the more impact the trait score will have at the skill matching stage, in line with the principle of a weighted average.
- The matching score is calibrated to compare individuals against a normal distribution.
- The visual interpretation of the matches between the individual and the profile associated with the targeted framework is then reviewed.

For a combination of assessments, a weighted average of the matches per assessment is calculated according to the level of predictivity of the assessment (i.e. its weight) for the targeted skill, in line with the multi-method approach of the predictive model. Note that if you have configured your customised skills based on several assessments, we will carry out a basic average of a skill's score per assessment.

In comparison with the former matching method:

- We no longer refer to the notion of an ideal score but instead to a trait's level of importance.
- An optimal zone is no longer applied for personality assessments. The higher the level of importance, the higher the impact the score will have on the match.
- For a combination of multiple assessments, traits are no longer grouped across multiple assessments to be compared against the profile but are instead considered for each assessment independently.

Converting a customised job into a predictive model

If you have configured your jobs according to traits (i.e. the former system), we encourage you to convert your customised jobs into a predictive model. If you would like to use your customised job specifications in your evaluation campaigns, you will need to convert them into a predictive model. It will no longer be possible to set up new jobs using traits. Job matches are currently being maintained (based on the same calculation as for a skills-based calculation) but will be slightly impacted by the shift to a predictive model.

To save you time from having to reconfigure your entire system, an interface is available that will allow you to convert your customised jobs into a predictive model with just a few clicks. This programme calculates, for a given traits-based model, over one or more assessments, the most relevant skills model available. You have the option to adjust the skills to fit your preferences. The corresponding illustrative model per trait and per assessment may vary slightly from your initial configuration, especially if you have set up multiple assessments for a single job.

Our consultants are on-hand to support you throughout this process and to assist you in displaying new predictive models in the Talent Map and your reports.

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