Cognitive Process Profile (CPP)

Developmental Report for Cognadev

STRICTLY CONFIDENTIAL

NAME:
Antonio Sample

CPP NUMBER:
CPP513373 (Z693816)

ASSESSMENT DATE:
2018-12-05

cognadev

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SECTION 1

Introduction

The CPP

The Cognitive Process Profile (CPP) is a computerised exercise that has been designed to externalise and dynamically track a person's cognitive processes to give an indication of thinking preferences, capabilities and potential for growth. The thinking processes are interpreted using algorithms.The aim of the CPP report is to provide an understanding of a person's thinking skills and learning potential to inform decisions regarding selection, placement, team compilation, succession and development. The results are described narratively and graphically.

Please note that the scores in **this CPP report** reflects the use of the latest **2016 Norm Group** based on the results of a highly diverse, international sample. Do not compare CPP results based on different norm groups.

Biographical information

Full name:	Antonio Sample
Gender:	Male
Date assessed:	2018-12-05
Report date:	2025-09-25
Unique test number:	CPP513373 (Z693816)
Date of birth:	1989-05-29
Nationality:	British
Ethnicity:	Caucasian/White
Highest education:	Graduate
Discipline:	Civil Engineering / Construction
Functional area:	Administration / Operations
Current position:	Other
Colour blind:	No
Previous CPP:	No

Self-evaluation

This section was filled out by the candidate after completing the CPP.

How well did you understand the test?	Quite well
How difficult did you find it?	Fairly hard
How well do you think you did?	Quite well
Were you anxious or afraid?	Fairly relaxed
How well could you concentrate?	Fairly well
How much did you enjoy the test?	Quite a lot

SECTION 2

Suitable SST work environment

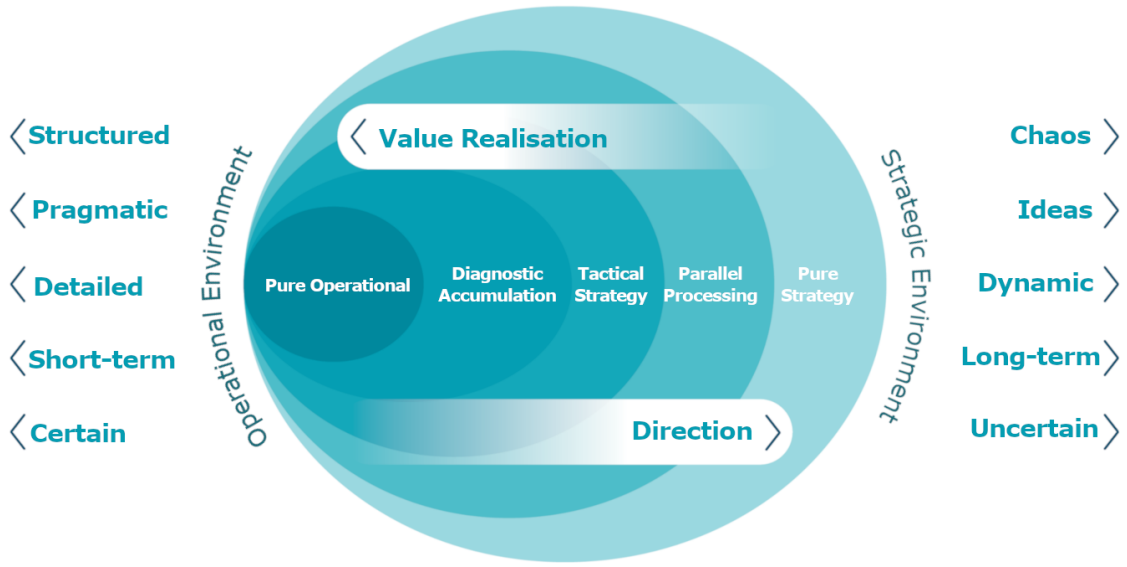
The CPP links a person's cognitive profile to the cognitive requirements of specific operational and strategic work environments.

Algorithms are used to compare the qualitative and quantitative characteristics of a person's profile to the requirements of five work environments. The profile qualities considered include a person's: (a) stylistic preferences, (b) the units of information used in processing, (c) judgement and decision making tendencies, as well as (d) eight job-related processing dimensions.

The work environments specified reflect the Stratified Systems Model (SST) of E Jaques, the Viable Systems Model (VSM) of S Beer and M Prinsloo's work on cognitive complexity.

Both 'current' and 'potential' work environments are indicated but no time frames are given to predict the person's readiness to progress from the current to the potential environment as this depends on many different factors including opportunity and motivation.

Levels of Work Complexity

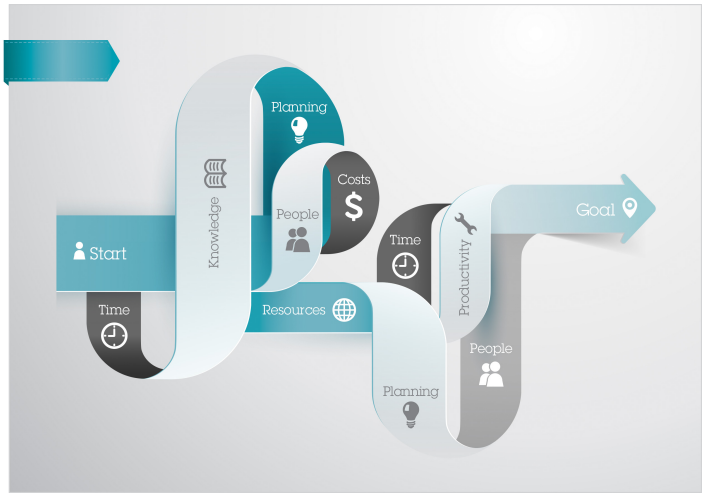


SECTION 3

Antonio's current work environment

Antonio's cognitive profile currently seems best suited to the following work environment:

Tactical strategy



- Optimising systems efficiencies
- Formulate functional strategy
- Benchmarking
- Goal achievement of a functional unit
- Create alternative strategic paths
- Evaluate and implement systems
- Planning and resource allocation
- Follow theoretical guidelines
- Project management
- Professional work

A Tactical Strategy work environment can be described as follows:

Type of work

- Works with a whole operating system or functional unit

Ways of working

- Optimises the goal achievement of the functional unit using various tactics
- Uses specialised knowledge of operational work and incorporates theory and experience
- Finds best practice solutions to problems
- Makes the best use of all available resources (human, material and financial)
- Evaluates systems and practices and implements new systems
- Professional practice

Information used

- Complex, concrete and abstract
- Meaningful wholes, systems, plans, budgets and networks
- Ambiguous goals and outcomes
- Relatively stable contexts

Outputs / achievements

- Ambiguous and are judged in terms of operating efficiencies
- Cannot be predicted linearly but must be extrapolated from the principles of systems functioning

Judgement

- Relates to planning and implementation to optimise resources

Language used

- Focuses on the symbolic (consumables, equipment and resources)

Learning

- Hypothesising, implementation and continuous evaluation of theoretical and practical knowledge

Time frame

- Ranges from one year to three years for the most complex tasks

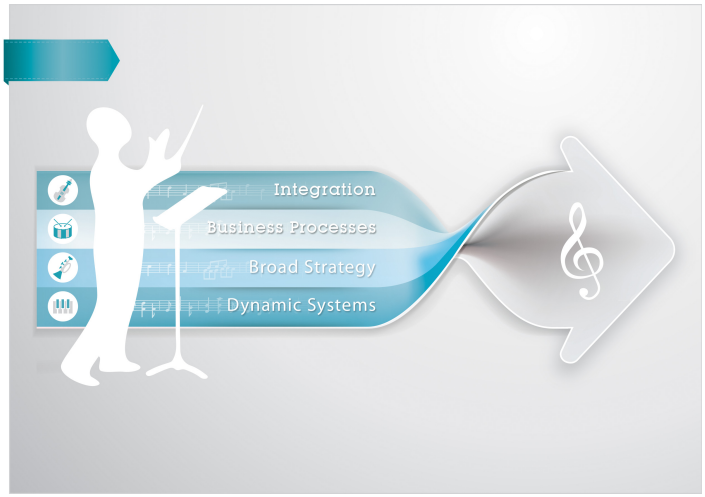
Examples

- First level of organisational improvement
- Management of operating systems (divisional, middle, senior or general manager)
- Professionals and specialists operating independently

Potential work environment

Antonio shows the potential to develop the necessary cognitive competencies to effectively function in the following work environment:

Parallel Processing



- Integrate dynamic systems (value chains, supply-demand factors)
- Synchronise parallel pathways
- Use trade-offs to maintain progress
- Coordinate functional units
- Formulate business processes and broad business strategy
- Ensure organisational viability
- Systems focused
- Maintain the pace of and monitor interacting projects

A Parallel Processing work environment can be described as follows:

Type of work

- Focuses on business processes and business strategy
- Involves co-ordinating the work of various functional or business units
- Ensures that the organisation remains viable

Ways of working

- Plans and implements long-term business solutions
- Translates abstract ideas and decisions into strategies and tactics
- Plans how the organisation is to be managed to achieve its mission statement
- Manages and co-ordinates several interacting projects, or programmes simultaneously in order to achieve an overall objective
- Manoeuvres resources between interacting projects to capitalise on economies of scale
- Builds models
- Has true accountability

Information used

- Primarily complex, unfamiliar and ambiguous
- Often abstract, theoretical and generalised, such as long-term policies, broad strategies, values, business processes and solutions
- Ambiguous realities and goals
- Unstable and unpredictable contexts

Outputs / achievements

- Often abstract and theoretical
- Organisational change and transformation
- Development of new functionalities and models

Judgement

- Profit and loss accountability, directing the implementation of strategies to ensure organisational viability

Language used

- A conceptual focus (talent pool, culture, values, capital accumulation, assets, labour)

Learning

- Hypothesising and testing abstract conceptual models and strategies

Time frame

- Ranges from three years to five years for the most complex task

Examples

- General management, executive and CEO levels
- Chief specialist roles in the organisation
- Developers of new functionalities

SECTION 4

Cognitive styles

Cognitive styles refer to broad response tendencies or patterns in thinking and problem-solving behaviour. These are measured by tracking a person's responses to unfamiliar information. A person's stylistic preferences when dealing with unfamiliar information, however, also tend to be used when working with familiar information. Some personality factors are indicated here, as these are sometimes evident in the way a person thinks.

A person may develop specific stylistic preferences due to personality and emotional factors, cultural values, educational exposure, learning opportunities, work experience and fields of interest. In interpreting this report, the specific combination of preferred styles provides a useful indication of certain factors in the person's developmental history.

Various descriptive categories are reported on as indications of stylistic preference, namely: Explorative, Analytical, Logical, Structured, Reflective, Reactive, Trial-and-error, Integrative, Holistic, Intuitive, Quick Insight, Learning, Metaphoric and Memory approaches. A Trial-and-error or Reactive style may be an indication of performance anxiety, emotional or developmental factors. It may also be a valid reflection of the person's approach to unfamiliar problem-solving. Insight can be gained from interpreting the person's particular combination of stylistic preferences. The construct "Style" also informs the identification of a suitable work environment.

Compared to a norm group which largely consists of relatively well-qualified people in Science and Business, Antonio shows a tendency to apply the following cognitive styles in unfamiliar problem solving contexts and is likely to do so in familiar environments as well.

REFLECTIVE

Reflective style:

- Tends to explore and consider information very carefully
- May be guided by existing knowledge and information structures
- Shows a careful approach and revisits previous conclusions
- May work relatively slowly
- Tries to avoid making mistakes
- Indicates a preference for working with tangible information in structured contexts
- Shows a need for certainty

HOLISTIC

Holistic style:

- Tends to see the big picture without losing sight of detail
- Emphasises wholeness and unity
- Identifies critical factors in calibrating the big picture
- Views elements in relation to the whole
- Wants to contextualise information and tends to ask why?
- Synthesises and integrates separate information structures
- Usually deals with abstract and complex concepts
- May be aware of detail but may not focus on it or analyse it to any great extent

ANALYTICAL

Analytical style:

- Has a precise, detailed approach
- Works systematically and pays attention to rules
- Enjoys pulling information apart and subdividing issues
- Analyses, compares and categorises various elements
- Identifies relationships between different elements

INTEGRATIVE

Integrative style:

- Tends to make sense of information as they go along
- Likes the challenge of reconciling discrepant, ambiguous and fragmented elements to create a coherent whole
- Tends to formulate, verify and falsify hypotheses to eliminate unnecessary information
- Has a need to understand and usually learns in the process
- Often uses abstract concepts to express ideas
- Tends to focus on complex information and intellectual challenges

The order that Antonio applied all the styles is:

1. Reflective
2. Holistic
3. Analytical
4. Integrative
5. Logical
6. Quick insight
7. Explorative
8. Structured
9. Learning
10. Intuitive
11. Metaphoric
12. Memory
13. Trial-and-error
14. Reactive

SECTION 5

Rank order of cognitive styles

Metacognition refers to awareness of one's own thinking processes. Each of the cognitive styles is guided by certain internalised metacognitive criteria. This means that a person's thinking processes reflect specific rules that are applied automatically or via self-talk. For example: a person who values accuracy and has internalised it as a metacognitive criterion, is likely to apply an analytical approach to problem-solving. The following styles reflect the application of the specified metacognitive criteria. First the preferred styles will be discussed, then the styles that are applied the least (if any were underutilised). This will provide an indication of broad cognitive development areas.

Antonio's most prominent stylistic preferences:

Rank	Preference	Description	Implications
1	**Reflective**	A tendency to take time in carefully checking and considering own conclusions and interpretations. **Metacognitive criteria: "certainty", "correctness"**	It is associated with a need to be certain, not to make mistakes and to think things through. It may be useful in high risk environments, but not where quick responses are required. It may also indicate an avoidance of error and risk as well as a somewhat tangible approach.
2	**Holistic**	A tendency towards big picture thinking without losing sight of the relevant detail. **Metacognitive criteria: "context", "implications"**	Represents a general and relatively integrated perspective within which detailed elements are contextualised, and by which relevant detail can be leveraged to impact the bigger context. It contributes towards strategic thinking.
3	**Analytical**	A tendency to work with detail in a systematic and precise manner, pulling issues apart, identifying subcomponents and linking these according to specific rules. **Metacognitive criteria: "accuracy", "necessity", "rules", "precision", "systematic", "relationship", "similarity", "difference"**	It is associated with a need for precision in understanding the building blocks of an issue and the interrelationships between these building blocks. It is required for performance in technical-specialist contexts.
4	**Integrative**	A tendency to synthesise discrepant, fragmented and ambiguous information into a coherent / meaningful whole. **Metacognitive criteria: "meaning", "coherence", "context", "depth", "parsimony", "inclusiveness"**	Required for conceptualisation, definition, formulation and model building. Can be developed by trying to understand and represent vague or problematic issues.
5	**Logical**	A tendency to work with rigour, to look for logical evidence, to apply a process approach and to follow own thinking processes through. **Metacognitive criteria: "purpose", "change", "transfer", "application", "contextualisation", "alternatives", "appropriateness"**	It is associated with a disciplined and rule-based approach driven by a need for cognitive challenge. It involves critical thinking and may result in convergent conclusions as well as the divergent generation of possibilities. It is involved in the transfer of knowledge across contexts.

SECTION 6

Cognitive strengths and development areas

The following table reveals those processing dimensions that the person scored significantly higher or lower on as compared to his average processing scores on the left, as well as his current work environment. This is a very detailed part of the report and is provided to inform cognitive development initiatives. This section should be managed holistically – and not by focusing on the complex detail.

Antonio's processing strengths and development areas:

Table of Cognitive Strengths and Development Areas	STRENGTHS		DEVELOPMENT AREAS	
	Own profile	Current work environ-ment	Own profile	Current work environ-ment
Memory				
Use of memory: The tendency to retain and recall information that is a prerequisite for learning, intuition and integration functions			2	
Exploration				
Discrimination: Deciding what is important in a relatively structured, familiar environment	2	1		
Exploration: Depth of investigation of a problem or situation	1	1		
Analytical				
Checking: Repeatedly revisiting detailed issues - often to "make sure"				1
Metacognitive monitoring of linking: Being aware of the way one identifies relationships between objects or concepts		1		
Need for precision: An emotional need to be accurate and correct		1		
Structuring and Integration				
Abstract conceptualisation: Expressing conceptual thinking by using creative, abstract language			1	
Categorisation: Classifying, grouping and representing information by using techniques such as categorisation, filing, listing, mapping, architecturing, note-taking and diarising			1	
Metacognition				
Memory strategies: The use of techniques and aids to assist memory functioning. (Checking to ensure accuracy may lower this score)			2	1
Clarification: Interpreting, judging, weighting and prioritising unclear information	1			

Note: the strength of the finding is indicated numerically in the table above. Higher numbers indicate a more significant finding. Treat scores two and above as significant.

SECTION 7

Learning potential

It is difficult to predict a person's future and potential cognitive functioning on the basis of current performance, given the long term impact of variables such as emotionality, motivation, educational and work exposure. Cognitive performance is evaluated in depth to identify indicators of cognitive modifiability. The slopes of learning curves and the effectiveness of information processes are interpreted. This gives an indication of the person's potential to increase current cognitive functioning as well as the capacity to master new knowledge or content areas. This information can inform decisions regarding the utilisation and development of talent.

Antonio shows an above average to high level of learning potential.

Antonio's current strengths that can be capitalised on in actualising his learning potential are:

Strength of finding	Indications of existing skill	Description
2	Current level of functioning	Antonio's already well-developed repertoire of cognitive skills will contribute to the acquisition of further knowledge and cognitive processing skills. In cognitive functioning, a broad frame of reference and existing competence enhances learning and cognitive growth via processes of assimilation and accommodation (Piaget).

Note: the strength of the finding is indicated numerically in the table above. Higher numbers indicate a more significant finding. Treat scores two and above as significant.

Antonio's developmental areas that indicate learning potential:

Strength of finding	Indication of learning potential	Description
2	Tendency to become bored	Antonio seems to become bored with having to deal with easy, highly structured and unchallenging tasks. He would be more motivated and thrive in stimulating and fast changing work environments.

Note: the strength of the finding is indicated numerically in the table above. Higher numbers indicate a more significant finding. Treat scores two and above as significant.

SECTION 8

CPP summary report

This is a brief summary of Antonio's information processing results. His recommended current and potential work environments, stylistic preferences as well as a number of additional observations and special insights into Antonio's processing tendencies are provided.

Current work environment

Antonio's cognitive profiles best matches the requirements of **Tactical Strategy** work environments. These contexts involve management and / or professional work. Within a business milieu it may entail planning, budgeting, project management and resource allocation. Operational systems are evaluated, improved and new systems are implemented to optimise operational efficiencies. Alternative tactical strategies are formulated to maximise the goal achievement of a functional unit in the organisation. The focus is on tangible systems and the time frame involved may be one to three years from decision making to when feedback becomes available.

Potential work environment

Antonio's profile indicates that he may have the potential to work with the complexity requirements of the **Parallel Processing** environments. This means that he shows the necessary cognitive capability and skill to deal with complex, vague, interactive and dynamic systems within a five year time frame. Parallel processing work may involve the formulation of broad strategy; the integration of broad with operational strategy; the conceptualisation and modelling of business processes; the integration of value chains as well as internal and external factors; organisational transformation initiatives and the development of new functionalities – all of which are aimed at ensuring organisational viability. Executive roles involving the coordination of various functional units in the organisation as well as chief specialist roles may be involved

Stylistic preferences

The way a person approaches problems gives insight into how they think, what problems they are best suited to solve and the complexity they can work with. Antonio applied a Reflective approach. This is a tendency to take time in carefully checking and considering own conclusions and interpretations. This approach was mixed with a Holistic style - an inclination towards big picture thinking without losing sight of the relevant detail. He also showed a tendency to use an Analytical style, which involves a tendency to work with detail in a systematic and precise manner, pulling issues apart, identifying subcomponents and linking these according to specific rules. Lastly, Antonio can also process information using an Integrative style, which involves the preference to synthesise discrepant, fragmented and ambiguous information into a coherent and meaningful whole.

Additional observations and special insights

- Antonio shows a high level of intellectual functioning.
- He obtained relatively equal scores for discriminating between relevant and irrelevant information in a structured and an unstructured environment. This is an indication that Antonio should be able to adapt to working in both structured and unstructured contexts.
- Considering the degree of detail he prefers to work with, Antonio seems to make insufficient use of his memory capacity. This may be due to a tendency to check information and a need for precision rather than to work with boldness. This careful approach is required in some work environments but may be unsuitable in more generalised or more strategic environments.
- He appears to have a need for precision that may cause stress in certain contexts where this approach is not required. To handle complexity more effectively, Antonio can emphasise the formulation of generalisations, use of memory techniques, a focus on core elements, following through and convergence of arguments, formulation of hypotheses as well as adopting an integrative approach to problem-solving.

SECTION 9

Developmental guidelines

The following section is included for the benefit of the CPP accredited practitioner who will be providing feedback to the candidate. Statements in this section are based on an automated interpretation of the differences between this candidate's CPP processing scores. Not all comments necessarily apply, and it is up to the practitioner to select those guidelines that may be useful to the candidate in developing additional cognitive skills given the cognitive competency requirements of his particular work environment.

Notes: Interpreting the Development Guidelines

These competency indications are relative to your own overall functioning. In other words, if your scores are relatively low on analysis compared to the rest of your profile, it will be mentioned here - even if your analytical skills are better developed than most other people.

How we apply ourselves intellectually is largely determined by overall physical, psychological, emotional and spiritual awareness, our external context (exposure and opportunities) as well as the interaction amongst internal and external factors. The individual does, however, have a significant degree of choice when it comes to applying and developing themselves.

The extent of the finding is indicated in numbers in blue.

Less effective memory strategies 3

Antonio did not effectively apply memory strategies. The most important factors in remembering information are: (a) meaningfulness, (b) interest in the subject material, (c) subjective emotional factors, (d) one's value system, and (e) the context.

By using certain techniques (anchoring, visualisation, associations, word bridges), most people can, with relative ease, achieve a significant improvement in their memory functioning. However, none of these techniques necessarily have long-term boosting effects on memory, unless the material is interesting and has emotional value for the person.

Cognitively, there are also techniques that can be practiced to simplify information and create links, associations and meaning. For example:

- *continuous integration (responding with both assimilation and accommodation of cognitive structures to new information)*
- *creating a rich network of associations*
- *frequent practice of knowledge or skills*
- *effective representation of information using maps, summaries, metaphors or pictures*
- *identifying the core element and extracting it as the basis for creating a new information structure*
- *attaching motivational / emotional value – such as using humour, or linking information to familiar people*

Less effective structuring 2

During the assessment, Antonio tended to keep the information in mind rather than externally ordering and representing it. This may overload his short-term memory and cause stress in complex environments.

This may indicate that Antonio does not like diarising, filing, ordering, mapping information or carefully representing information in the work environment. Developing a structured approach can lessen confusion, decrease stress and assist Antonio to effectively deal with higher levels of complexity.

Although Antonio did not structure information during the CPP assessment, he may already have acquired the habit of diarising, making lists, creating reminders, and representing information as pictures or graphs, in everyday life.

Possible memory problems or low memory use 1

A relatively low score on memory on the CPP does not necessarily indicate a memory problem, as this aspect measures the degree to which a person relies on their memory.

Many psychological and physical factors can affect memory functioning including: disinterest, certain values, emotional overload, preoccupation, fear, stress, boredom, medication, nutrition and vitamin B intake, hormonal changes, aging, metabolic disturbances, and physical trauma. Those who develop exceptional levels of concentration and focus on certain aspects, also indirectly practice “forgetting” skills.

Self-exploration and therapy aimed at restoring interest and energy as well as tackling previously repressed issues can facilitate memory functioning.

Transactional management: technical, management and professional work

This orientation is associated with transactional managers who deal with tangible issues within a functional unit of an organisation. They often have to solve problems by identifying causes and implementing solutions.

Their work therefore involves a combination of technical and theoretically-based operational and managerial issues. Although the contexts in which they work are relatively structured, many alternatives are available. The application of diagnostic and tactical approaches often involves the prevention of problems, optimising systems and supervision or management. The specific tasks entail:

- investigation via observation, measurement and monitoring
- analysis of the results in terms of a technical knowledge-base
- planning and structuring tangible issues
- the implementation and control of solutions / systems

Transactional managers may want to optimise operational outputs, implement systems, practical solutions and operational strategies. The most important skills to have within this orientation are logical-analytical skills and a learning orientation. Non-cognitive skills that aid effective functioning in this environment are self-confidence, a results orientation, interpersonal skills, effective communication, motivation and experience.

Parallel processing environments: transformational management

This orientation is required in the case of transformational managers who focus on organisational integration and long-term organisational viability. They are responsible for the alignment of processes across different operational systems, internal and external value-chains and the translation of the broad organisational strategy into operational goals.

The cognitive skills that are useful at this level of work are big picture thinking, an integrative and holistic approach, effective judgement, a learning orientation and logical rigour. An effective transformational approach also requires non-cognitive skills such as interest, energy, self-confidence, intra- and interpersonal understanding, leadership awareness and persuasion.

The cognitive capability to deal with complexity at Parallel processing level is however, not sufficient to ensure effective functioning at this level. Leadership skills, knowledge and experience are also critical prerequisites for performance in Parallel processing environments. In the case of inexperienced candidates that show this level of cognitive potential, a career path should ideally be considered to ensure varied and relevant experience.

Technical expertise in complex environments

Antonio's results indicated that he can work with both detail and complexity. This suggests that he is able to work with complex detail, but integrate it into a broader project.

These individuals may be passionate and highly intelligent, but usually show a marked interest and talent in a particular area. They may have the tendency to study one body of knowledge to gain depth of knowledge rather than breadth of knowledge. Their long-term exploration and motivation may lead to them having a significant impact within their field.

Their work normally takes place at both operational and strategic levels. The expert usually determines the level of complexity that the technical work takes place. This can involve the application of previous knowledge to make new discoveries (Diagnostic Accumulation), managing a body of knowledge or experts towards a goal (Tactical Strategy) or the development of new functionalities (Parallel Processing). In determining how the person will apply themselves in practice, the unit of information is the core consideration.

High pragmatic orientation 1

This person seems particularly capable of discriminating between relevant and irrelevant informationin factual, practical and structured environments. This is normally indicative of a definite pragmatic orientation which reflects metacognitive awareness of the issue of functionality, or "will this work inpractice".

These individuals can therefore capitalize on clarity and focus in practical environments.They often have practical interests as well.

SECTION 10

Final Comments

The Cognitive Process Profile (CPP) is a psychological assessment developed and distributed by Cognadev, If you would like to use the CPP or any of the other assessments offered by Cognadev, please visit our website: www.cognadev.com

Consultants who wish to provide CPP feedback to test candidates must be CPP accredited.

A brief description of the concepts measured by the CPP can also be found here: web.cognadev.com/publications/cpp-guide.pdf

Disclaimer:

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Assessment results should ideally be integrated with additional sources of information such as interviews or performance appraisals and should be contextualised in terms of the competency requirements of the position /role.

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