COMPASS

IAP Selection Services

Information

Technical specifications of COMPASS and the IAP Selection Process:

The selection system COMPASS consists of three Parts which can run as a series of modules but we suggest that they are run as three parts in order to provide the candidate with a break between the Parts.

The COMPASS tests are all done on a PC and the results are instantly available after the test has been completed and the data has been submitted to the IAP Selection Server for analysis.

Our COMPASS system is developed to select ab-initio candidate pilots. This version is mainly used by FTO's. We also have Advanced-COMPASS which is to select already trained pilots. This version is used by Airlines and TRTO's.

The COMPASS tests measures the following competence's:

COMPASS Part 1	Advanced-COMPASS Part 1
Eye-hand-foot coordination	Complex Control Task (fly F/D etc)
Technical comprehension (physics questions)	ATPL theoretical questions on jet aircraft and operation
Short memory	Short memory
Mental arithmetic	Mental arithmetic
Spatial Orientation	Spatial Orientation
Multi Tasking	Multi Tasking

COMPASS or Advanced-COMPASS Part 2

- English for aviation
- Verbal Reasoning

COMPASS and Advanced-COMPASS Part 3 (CPP)

- Personality Profile (CPP). This looks at the following competences:
    o Resilience
    o Stress tolerance
    o Impulse control
    o Ambition
    o Accuracy
    o Perseverance
    o Autonomy
    o Persuasiveness
    o Dominance
    o Assertiveness
    o Openness
    o Need for variation
    o Teamwork
    o Altruism
    o Empathy

    This Checklist Personal Profile tool has been developed by the Institute of Aviation psychology

CPP (Checklist Profession Profile):

CPP is a personality questionnaire designed to measure a broad range of personality traits, that are important in the function of airline pilot. The questionnaire also comes with an automatically generated report, in which these traits are combined to form relevant competencies, such as stability, flexibility, self discipline, team orientation, independence, leadership, assertiveness and more. Several norm-groups already exist, ranging from ages 16 to 30 years and from different nationalities. The questionnaire is now offered in three languages, Dutch, English and Czech.

Availability of test results.

The results of the above tests are **<u>instantly</u>** available after the candidate has completed the tests and the data has been uploaded to the Selection Server. Only those people issued with a special access code to see the results can look at the summary results and print the detailed reports.

All tests are in English.

The systems used to perform the tests can be installed and administered anywhere in the world, provided there is internet access. The management/administration of running the tests does not require any special training and is minimal in terms of time involvement.

The duration of the tests, including some breaks, is 4 hours maximum. This means that on one PC you can normally do two (2) persons per day.

Selection efficiency

In order to minimize the manpower and time involved in the selection, it is our recommendation to do COMPASS Part 1, which will take 1 ½ hour. Based on the result the candidate will be allowed to advance to Part 2 and 3. If the aptitude results of COMPASS Part 1 are below a certain threshold it has no value to continue with the selection.

Re-take of tests

In IAP, we allow candidates failing our threshold for Part 1 to re-take the test after 3 months. They can only do this one (1) time. The re-take of Part 3 (CPP) can only be done after one (1) year.

Training and evaluation

IAP can provide initial training for the following functions of client:

1. Train the "test coach" on how to administer the tests and various operational functions of the system. This training can be done in IAP's headquarters in The Netherlands, or at the client's location (if the potential business volume supports such action) after the PC's and the systems are installed.
2. Train the management responsible for the interpretation of the reports.

The above mentioned training will be free of charge, but on-site training will be a function of the potential business agreed between client and IAP.

In addition IAP will be constantly available for assistance and guidance in the area of interpretation and can, if required, perform a quality control function on the system.

Equipment and tools

The PC's, joystick and pedals for these tests are to be obtained by client and in accordance to the IAP specifications.

The software will be made available at no additional fee as we charge per test.

COMPASS SCORE REPORT EXAMPLE

Personal Details:

Candidate ID: 45670   **Test date**: 04-12-2002

Forename   : A

Surname   : Pilot

Date of birth : 11-03-1981

Test results:

CONTROL   6

SLALOM   7

MEMORY   7

MATHEMATICS   6

ORIENTATION   7

TASKMANAGER   6

Total Score: 39

(Score 1 = low and 7 = high score)

Advanced-COMPASS SCORE REPORT

Personal Details:

Candidate ID: 45670   **Test date**: 04-12-2002

Forename   : A

Surname   : Pilot

Date of birth : 11-03-1981

Test results:

CCT	6
PR. KNOW TEST	7
MEMORY	7
MATHEMATICS	6
ORIENTATION	7
TASKMANAGER	6
Total Score:	39

(Score 1 = low and 7 = high score)

CPP (Checklist Professional Profile)

Sure name	Mister E. Pilot
First name	Edward
Date of birth	01-01-1985
Age	23
Address	Runway 6
City	Amsterdam
Country	The Netherlands

Date of assessment	10-10-2008

Purpose	Personality assessment in relation to pilot selection

Content	A. Personality profile B. Overview C. Conclusion and advice D. Core competency E. Primary Competencies F. Personal competences G. Relational competencies

This report is based on the results of the **IAP Checklist Professional Profile** © and describes a number of personality traits and competencies, which can be considered as relevant for the aviation industry, especially for the selection and coaching of pilots. The development of the personality is a dynamic process. Therefore, this report **will be valid for the period of one year**. It can only be used for selection and coaching of applicants and employees in the aviation industry and cannot be seen as a replacement of a complete assessment centre.

A. Personality profile

The Personality profile shows the candidate's results on the 15 personality traits, which are measured by the CPP. The scores are obtained by comparing the candidate's outcomes to a norm group consisting of other applicants. Thus, these results are not absolute and only indicative in relation to the relevant norm. The following indications can be used for the interpretation of the test outcomes.

low			average			high		
1	2	3	4	5	6	7	8	9
very low	low	below average	low average	average	high average	above average	high	very high

The highlighted areas indicate an unacceptable (orange) and an undesirable (green) range for the personality traits regarding one's suitability for the function of pilot. In case of disparity between the advice and tendencies on this personality profile, it is advisable to contact a psychologist for counsel.

Personality profile

	1	2	3	4	5	6	7	8	9
Resilience	■	■	■	■	■	■	■	■	■
Stress tolerance	■	■	■	■	■	■			
Impulse control	■	■	■	■	■	■	■		
Ambition	■	■	■	■	■	■	■		
Accuracy	■	■	■	■	■				
Perseverance	■	■	■	■	■	■			
Dominance	■	■	■						
Persuasiveness	■	■	■	■	■	■	■		
Assertiveness	■	■							
Teamwork	■								
Helpfulness	■	■	■	■					
Empathy	■	■	■	■					
Autonomy	■	■	■	■	■	■	■	■	
Openness	■	■	■						
Need for variation	■								

B. Overview

Core competency		1	2	3	4	5	6	7	8	9
1	**Personal stability**	🟩	🟩	🟩	🟩	🟩	🟩	🟩		

Primary competencies		1	2	3	4	5	6	7	8	9
2	**Conscientiousness**	🟩	🟩	🟩	🟩	🟩	🟩			
3	**Leadership**	🟩	🟩	🟩	🟩					

Personal competencies		Potential misbalance
4	**Executive orientation**	None
5	**Team orientation**	**Tendency to operate too independently**
6	**Decision making process**	None
7	**Communication**	**Insensitivity**

Relational competencies		1	2	3	4	5	6	7	8	9
8	**Service orientation**	🟧	🟧	🟧						
9	**Sociability**	🟥	🟥							

C. Conclusion and advice

The Checklist Professional Profile and this automated report are designed to assist in regard to selection and coaching of flight training candidates. The aim of this report and the automatically formulated advice is to minimize the risk of early dropout, based on findings in the personality profile.

The departure point of the conclusions is the idea, that certain competencies, which are required in the function of pilot, will only be able to develop if certain relevant aspects of the personality are found present. Meaning that if certain personality traits are not present, the possibility of fully developing the relevant competency will proof very difficult.

Another assumption is the fact that, in regard to adequate pilot training and functioning, some competencies are essential (these are the core- and primary competencies), while other competencies are important but may not be crucial (this is the case with the personal- and relational competencies). Therefore, the automatically generated advice concerning a candidates suitability is only based on findings regarding the outcomes of the core competencies, which are indispensable.

Conclusion

Comparison of the test responses to the relevant norm group and analysis and interpretation of the outcomes of the Checklist Professional Profile lead to the following ascertainment:

- *Lack of concern for task in regard to the personal competency Executive orientation*

- *Lack of openness and need for variation in regard to the relational competency Sociability*

Advice

In the matter of the candidateship of Edward Pilot for the function of pilot and based on the outcomes regarding the core- and primary competencies, the personality profile gives proof of no serious concerns.

D. Core competency

1. Personal stability

The core competence Personal stability can be considered as the single most crucial factor in the function of pilots for several reasons. First of all, pilots have to be able to make complex decisions based on a broad spectrum of aspects (e.g. safety, efficiency, cost, customer satisfaction) without hesitation or doubt. Second, the notion that each incorrect decision may have catastrophic outcomes creates a large amount of pressure, aside from the stress that a pilot is already under during flight. Third, pilots usually operate under a great deal of mental and physical strain because of their irregular schedule and ever changing circumstances. Personal stability makes it possible for pilots to cope with these aspects in a calm, stable and confident way.

Personal Stability

Personal stability refers to a calm, stable and confident state of mind. A stable person is self-secure, does not become upset easily and copes well with pressure.

low			average			high		
1	2	3	4	5	6	7	8	9

The ability to overcome set backs (resilience), the capacity to function in an effective way when under pressure (stress tolerance) and the predisposition to operate in a calm and composed manner (impulse control) all characterize a stable person. On the other hand, a combination of low resilience, low stress tolerance and impulsiveness points to a vulnerable and less stable type of personality that is more prone to emotional and inconsistent reaction patterns in times of stress. The competency Personal stability is consequently obtained by calculating the mean score for the personality traits resilience, stress tolerance and impulse control.

1a. Resilience

Resilience indicates the emotional stability and the ability to overcome setbacks. A high score on resilience characterizes a level-headed and optimistic personality.

low			average			high		
1	2	3	4	5	6	7	8	9

1b. Stress tolerance

Stress tolerance measures mental stability, especially the ability to adequately cope with stressful situations in order to maintain a constant and effective performance.

low			average			high		
1	2	3	4	5	6	7	8	9

1c. Impulse control

Impulse control indicates the will and the power to inhibit one's direct impulses, allowing them time and space to reflect and come to well thought out and logical conclusions and behaviour.

low			average			high		
1	2	3	4	5	6	7	8	9

E. Primary competencies

2. Conscientiousness

The first primary competency Conscientiousness is applicable to a person who shows the will, planning and persistence to perform up to a high standard. A conscientious person is regarded by others as being well-organised, reliable and self-disciplined. In opposite, unmotivated, disorganised and negligent individuals are regarded as being unreliable. In the case of a pilot, conscientiousness is a very crucial factor. They are regarded to be one the most motivated and driven groups of individuals, since their ambition to be a pilot is usually deeply rooted and long persisting. In addition, the tasks that a pilot has to perform require a great deal of precision and accuracy, since there is very little room for error. Checklists and manuals have to be followed very specifically and operations need to be fulfilled very precisely, demanding a thorough and meticulous approach. Even after many hours of exhausting flight, they have to maintain focused and alert on every occasion.

Conscientiousness

The willingness and persistency to be accurate and reliable in the course of action; driven by the need to achieve high results through carefulness, organization and hard work.

low			average			high		
1	2	3	4	5	6	7	8	9

In regard to personality traits, Conscientiousness includes such aspects as the need for achievement (ambition), the ability to organize one's tasks and perform them in a precise way (accuracy) and the power to stay focused and persistent in the course of action. Hence, the score on the competency Conscientiousness is obtained by calculating the mean score for the personality traits ambition, accuracy and perseverance.

2a. Ambition

The inner need to perform well and achieve high results, as well as a competitive approach; the willingness to develop capacities to the maximum and the mentality of a 'winner'.

low			average			high		
1	2	3	4	5	6	7	8	9

2b. Accuracy

This personality trait refers to the tendency to effectively organize and plan one's duties and to work in a precise and accurate fashion.

low			average			high		
1	2	3	4	5	6	7	8	9

2c. Perseverance

Perseverance refers to determination and consistency in the course of action. One has a strong motivation to reach stated goals, is willing to work hard and will not easily give up or surrender.

low			average			high		
1	2	3	4	5	6	7	8	9

3. Leadership

The outcome on the second primary competency Leadership indicates to which extent the personality traits, underlying effective leadership, are present. Effective leadership entails the ambition and drive to step forward and take initiative and the ability to influence others in a convincing and encouraging way. By doing so, a leader will be able to coordinate everyone's efforts effectively to the task at hand. Leadership is regarded to be a very important competency for pilots, especially because they are considered the manager of the flight and they should be able to fill an executive role.

N.B. The factor age is of crucial importance in a sense that a low score on some of the personality traits regarding leadership can to a certain extent be explained by youthfulness and lack of working experience.

Leadership

The competency leadership indicates the need, as well as the ability to show initiative, take charge and fill a directing role in a team.

low			average			high		
1	2	3	4	5	6	7	8	9

The primary competency Leadership indicates to which extent an individual is motivated to fulfil a managerial position (dominance) and whether someone perceives themselves to have the traits that are necessary to do so in a convincing (persuasiveness) and assertive way. Hence the score for the competency leadership is obtained by calculating the mean results of the personality traits dominance, persuasiveness and assertiveness.

3a. Dominance

Dominance measures the extent to which one has the ambition to take charge or fill an executive role.

low			average			high		
1	2	3	4	5	6	7	8	9

3b. Persuasiveness

Persuasiveness indicates one's belief in their own power to influence others in a convincing way, by means of discussion and persuasive arguments.

low			average			high		
1	2	3	4	5	6	7	8	9

3c. Assertiveness

This competence refers to the ability to set boundaries, hold on to convictions in the face of resistance and to speak up for oneself.

low			average			high		
1	2	3	4	5	6	7	8	9

The results on the personal competencies are based on the scores of two more or less opposite traits. If both traits are present to a fairly equal extent, they can balance out each other, resulting in equilibrium. Within this equilibrium lies the possibility of developing the relevant competency to the desired level. On the other hand, if the two traits appear disproportionately, they can negatively reinforce each other and result in misbalance. The possibility of developing the relevant competency to the desired extent is far more difficult in such a case. Hence, if a candidate's scores lie on the opposite extremes of a pair of traits, this may pose a threat in regard to the relevant competency.

4. Executive orientation

In general, two styles of leadership, that is to say task-oriented and people-oriented leadership can be distinguished. The manager with a task-oriented approach finds it important that rules and procedures are taken seriously. This type of manager is mainly focused on the content and the organization of the job. Usually he/she succeeds in creating an orderly and disciplined atmosphere. A people-oriented leadership style on the other hand, revolves around understanding of the employees; managers with an empathic approach are able to place themselves in the position of other people. They listen to their employees carefully and detect the dynamics in personal and group interaction. Thanks to this empathic attitude they succeed in motivating others and they perform well in the role of an advisor. In general, a combination of both these styles is required to be effective as a leader, as one should be able to alternate between these two styles when needed. The personality traits accuracy and empathy measure to which extent the dimensions, on which these Executive orientations are based, are found present.

4a. Accuracy

This personality trait refers to the tendency to effectively organize and plan one's duties and to work in a precise and accurate fashion.

low			average			high		
1	2	3	4	5	6	7	8	9

4b. Empathy

Empathy is the capacity to understand another person's state of mind and emotions by placing oneself in their position and trying to see things from their perspective.

low			average			high		
1	2	3	4	5	6	7	8	9

5. Team orientation

Team orientation indicates to what extent a candidate is willing to adapt to and participate in a team in a constructive way, by being proactive as well as cooperative. This competency is indicated by the traits teamwork and independence. The combination of a low score on the teamwork scale and a high score on the autonomy scale indicates that one is strongly focused on reaching his/her own goals and not willing to compromise or regard the needs of the team. This will present problems when constructive cooperation is required in a group. On the other hand, a high score on the teamwork scale, combined with a low score on the autonomy scale might lead to dependency and a lack of self-reliance. This may result in a passive and dependent behaviour pattern when operating in a team.

5a. Teamwork

The willingness and preference to operate as a constructive member of a group.

low			average			high		
1	2	3	4	5	6	7	8	9

5b. Autonomy

The preference to make one's own decisions and plans and be held accountable for one's own achievements, operating independently form others.

low			average			high		
1	2	3	4	5	6	7	**8**	9

6. Decision making process

Effective decisions are made, when there is a balance between judgement of situational factors and vision on the bigger picture. One who tends to aim for details too much will find it difficult to judge a certain situation entirely or to anticipate the consequences of his decision. Alternatively, individuals who consider a too broad range of factors will not be capable of accurately understanding the situation and not make deliberate decisions. The competency Decision making process therefore revolves around a person's focus when making a decision. The focus on detail is indicated by the personality trait accuracy while having an eye for more relevant factors and the bigger picture - in the context of decision making - can be approximated by the personality trait need for variation. If someone tends be too focused on details without considering alternative aspects, the risk of a narrow minded judgement is present. On the other hand, if someone has very little attention for details and tends to be too scattered when analysing, there is the danger of lack of focus, resulting in less effective decisions.

6a. Accuracy

This personality trait refers to the tendency to effectively organize and plan one's duties and to work in a precise and accurate fashion.

low			average			high		
1	2	3	4	**5**	6	7	8	9

6b. Need for variation

This personality trait refers to the amount of distinction and stimulation one needs to remain focused and motivated in his tasks or profession.

low			average			high		
1	2	3	4	5	6	7	8	9

7. Communication

In order to bring one's point across and communicate effectively when operating in a team of goal oriented professionals, a certain amount of diplomacy is needed. Especially in view of the fact that pilots usually operate in changing teams and most of the times don't know their colleagues very well. Consideration of another person's point of view (measured by the personality trait empathy) is thus important. Then again, someone who tends to be too diplomatic may be in risk of keeping silent when a voice should be raised. For example, when crucial information is overlooked, one has to speak up, even if self-assertion (measured by assertiveness) means overruling a colleague. Therefore, a pilot needs to be diplomatic as well as assertive depending on the specific situation. In respect to personality, someone who tends to be over-assertive, without taking other people's opinion into consideration might come across as less diplomatic and insensitive. On the other hand, if a person is too preoccupied with other people's feelings and is not self-asserting, he or she might fail to speak up when necessary and be considered non-assertive.

7a. Assertiveness

This competence refers to the ability to set boundaries, hold on to convictions in the face of resistance and to speak up for oneself.

low			average			high		
1	2	3	4	5	6	**7**	8	9

7b. Empathy

Empathy is the capacity to understand another person's state of mind and emotions by placing oneself in their position and trying to see things from their perspective.

low			average			high		
1	2	**3**	4	5	6	7	8	9

G. Relational competencies

8. Service Orientation

The competency Service orientation indicates to what extent an individual can be characterized as customer oriented. Though their main task is to fly the airplane, pilots are always also expected to contribute to customer satisfaction as well if possible.

Service Orientation

Service orientation can be defined as the ability to take into account the needs and wishes of other people and the willingness to respond to those needs.

low			average			high		
1	**2**	**3**	4	5	6	7	8	9

The score on this competency is indicated by the mean score on the two personality traits empathy and helpfulness.

8a. Empathy

Empathy is the capacity to understand another person's state of mind and emotions by placing oneself in their position and trying to see things from their perspective.

low			average			high		
1	**2**	**3**	4	5	6	7	8	9

8b. Helpfulness

Helpfulness indicates whether one is willing to help others when in need and identifies with a service-oriented job description.

low			average			high		
1	2	3	4	5	6	7	8	9

9. Sociability

When operating as part of a team, fellowship, sociability and open communication are important factors, for they can be of benefit to the group process. In regard to group interaction, the competency Sociability indicates to what extent someone can be defined as open and outgoing. Individuals with a low score at this competency may act somewhat reserved and less communicative, especially in new formed groups. They are more sensitive to social barriers. Alternatively, candidates with a high score at this competency can be characterized as extrovert and communicative. They will find it easy to engage in social interaction, even when they do not know their counterpart or colleague very well.

Sociability

The competency Sociability thus revolves around dynamism and openness in regard to different people in different situations.

low			average			high		
1	2	3	4	5	6	7	8	9

The score on this competency is estimated by calculating the mean score of the two personality traits openness and need for variation.

9a. Openness

Openness refers to a sociable extravert way of interacting. Within a group of strangers one feels comfortable and is willing to mix and mingle. Spontaneity and charisma are often well developed.

low			average			high		
1	2	3	4	5	6	7	8	9

9b. Need for variation

This personality trait refers to the amount of distinction and stimulation one needs to remain focused and motivated in his tasks or profession.

low			average			high		
1	2	3	4	5	6	7	8	9