

# CAREER INTERESTS INVENTORY

## USER'S GUIDE 2.1



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## **Acknowledgements**

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## Section One - General introduction

The Profiling for Success (PfS) Career Interests Inventory (CII) is a user friendly assessment of career interests. It is available in 3 versions each of which not only generates a range of reports but also provides links to the world of work so that jobs can be explored with realistic descriptions and, where available, short videos. In summary the CII offers:

- Three different ways to allow a person to explore/describe their interests using attractive designs (a combination of pictures and words) that engage respondents and enhance the assessment experience
- Additional questions that allow an exploration not only of interests but also of personal competencies and values based on a unifying model of vocational preferences;
- A combination of both normative and ipsative interpretation of interests;
- Online administration and reporting which is fully controllable by PfS users;
- Short completion times without compromising reliability;
- A range of reports that encourage a person to organise their thoughts and reflect on the kinds of work they might enjoy – that are e-mailed immediately to the agreed parties;
- job suggestions in the reports with links to appropriate web-based resources thus encouraging more detailed and informed exploration of possible jobs and careers.

The questionnaires are engaging self-report instruments combining pictures and words allowing people to start exploring their career preferences. CII version 1 uses cartoons and is aimed at younger people or others with minimal work experience. CII version 2 uses realistic photos to obtain the same information as version 1 and it produces the same reports. CII version 3 (CII-Dodec) also uses realistic photographs but provides a more comprehensive assessment of career interests and therefore produces a more extensive report.

Any of the versions of the CII can be used as a catalyst at key decision points, guiding choices through enhancing self-understanding and encouraging exploration of the world of work. Versions 1 and 2 use Holland's hexagon model of vocational preferences which classifies the world of work into 6 career themes. Each of these themes is examined from three perspectives as follows:

- interests – a normative and ipsative assessment of interests, giving alternative benchmarks for interpretation;
- Skills and abilities – self-report of strengths and capabilities using the same themes
- Values – self-report about which themes are personally important

The CII acts as a focus for career exploration. Respondents are encouraged to widen their personal exploration by looking at how their competencies and work styles relate to their interests, so setting an agenda for potential development. Aided by the reports, this provides material for a rich and stimulating exploration of potential career areas with specific job suggestions accessible directly via hyperlinks to online career resources.

The CII comes with three report options. The Administrator's report presents the results graphically and includes careers representing the top two themes. The Explorer report provides a process of reflection together with the ipsative results. The Investigator report is shorter and aimed at a younger audience (14-18). All contain job suggestions together with links to web-based resources.

## Section Two – Measurement of interests

The scientific assessment of interests dates back to the 1920s with a significant milestone being the publication of the Strong Vocational Interest Blank for Men (SVIB) - see Strong, 1935. This was a questionnaire which asked about a person's likes and dislikes and compared these to the pattern produced by people employed in a range of different occupations. This was followed in the 1930s by a questionnaire based on the work of Kuder (see Kuder, 1977), which not only used a more elaborate design, but also introduced 10 scales that helped to define the world of work, e.g. outdoor, mechanical, scientific, artistic and so on.

The approach of Strong and Kuder was based on systematic, empirical observations, rather than any theory. Indeed, arguably it was not until the work of Holland in the 1950s that there was a clear theory underpinning occupational interests (Holland 1996, 1997).

Holland argued that behaviour is driven by a mixture of individual attributes, including personality and interests, and that occupational choice (a form of directed behaviour) is a product of these factors. It was through gathering data on personality *and* interests that he developed his now well known hexagonal model of occupational interests. This incorporates six scales, or themes – Realistic, Investigative, Artistic, Social, Enterprising and Conventional – that provide a way of classifying the occupational domain. This model is the most used and quoted in the careers literature. Because of the pre-dominance of its use and usefulness (Nauta 2010) it has been used as the basis for developing the CII.

The model developed by Holland is at the core of a number of commercial interest questionnaires. For example, the current version of the SVIB – the Strong Interest Inventory - incorporates his six general occupational themes, as does Holland's own Self-Directed Search (Holland 1994). It is also worth noting that the model shows relationships with the Big Five personality dimensions. Thus people with Social and Enterprising theme preferences are more likely to report as Extravert and people with Artistic and Investigative preferences are more likely to report higher on the Openness scale (Costa, McRae & Holland, 1984; Blake & Sackett, 1999).

An additional and important observation is that Holland does not suggest that a person's occupational interests can be simply described using a single theme, or equally that there are only six types of people in the world! Rather he suggests that occupational interests can be defined in terms of someone's interests with regard to all six career themes, *in descending order of interest*. Some combinations of interests, especially those next to each other in the hexagonal model (e.g. Realistic and Investigative) are more likely to occur than others (e.g. Realistic and Social).

Hypothetically the use of all six themes, which can of course appear in any order, would result in 720 different permutations. More usually we consider the top 2 (giving 30 permutations) or the top 3 (giving 120 permutations) and these can be used to identify the 'main' occupational interests.



## Section Three - Questionnaire development

The initial development of the CII took place between 2001 and 2003 and was a result of a cooperative venture between Team Focus and the Sussex Careers Service. To ensure adequate coverage of Holland's six occupational themes and the world of work in general, the items for the Career Interests Inventory were developed through a number of distinct stages.

1. This involved a review of Holland's Career Themes together with an examination of existing questionnaires (including one previously developed by staff at Sussex Careers Service).
2. This involved generating lists of activities and main job areas under each of the six themes. This was done by psychologists in collaboration with experienced careers advisors at Sussex Careers and another careers organisation.
3. This involved identifying sets of job titles from the DfEE's Odyssey database that represented each of the 6 themes. 111 trial items were then written in both standard and ipsative format.

The trial questionnaire was administered to several samples of career guidance clients in schools and colleges. The students' thoughts and reactions were noted and the items were then subject to an item analysis which guided the modification of some of the item content. This was followed by a second round of trialling which resulted in further adjustment of items and the selection of the final set of 51 items for Parts A and B of the questionnaire (see the next section for a description of Parts A and B).

At this stage, items were developed and refined for Parts C and D of the questionnaire. The purpose of these latter sections of the questionnaire was to provide respondents with a simple self-report mechanism which would help them relate the results from the main questionnaire to their perceived strengths, and to the work values which were important to them personally. The resulting standardisation version of the test was then administered to 394 subjects in a careers guidance setting in order to obtain normative data and this version was published in 2003.

In 2012 the items were reviewed, updated and extended by adding more items to the ipsative section in order to produce a more graduated scale. After initial trialling on 418 people seeking career guidance the final items were selected and it is now published with a standardisation sample of 3540 who were also seeking career guidance. A much enhanced report was also developed.

In 2016 work began on CII version 3 - known as CII-Dodec. Whilst the hexagon model provides a useful way to classify the world of work, the themes are extremely broad and there are very obvious differences in the jobs that are classified under each theme. By careful examination of these differences a 12-theme model has been developed which maintains the over-arching 6-theme framework but subdivides each of them into 2 which allows a more refined and accurate identification of specific jobs.

## Section Four – Questionnaire structure & interest scales

### CII Versions 1 (Cartoon) and CII Version 2 (Photo)

As discussed, the Career Interests Inventory (CII) versions 1 and 2 are self-report questionnaires based on John Holland’s widely used model of vocational preferences. They explore interests, competencies and work styles to provide a multi-faceted tool for supporting career exploration. Practically the questionnaire is divided into four sections as follows:

**Part A:** 36 pictorially-illustrated items (6 items per scale - Version 1 uses a cartoon style and Version 2 uses photographs). The normative section uses a 3-point Likert scale, e.g.

How interested are you in . . . Working in customer services?

Not really	A bit	Very
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These generate **normative** scores for each of the 6 scales.

**Part B:** 15 pictorially-illustrated items in ipsative format, presenting pairs of occupational tasks related to different scales, e.g.

Would you prefer . . . ?

Making or repairing furniture	Selling advertising space
-------------------------------	---------------------------

These generate **ipsative** scores for each of the 6 scales.

**Part C:** Self-report skills inventory. 24 items (4 items per scale) rated on a 5-point Likert scale, e.g.

How good are you at . . . working with your hands to make and construct things?

Needs developing		Moderate		Very good
1	2	3	4	5

These generate mean raw scores for each scale.

**Part D:** Self report values / motivation questionnaire. 18 items (3 items per scale) rated on a 5-point Likert scale, e.g.

How important is it for you to be in a work environment where you . . .  
can use your hands to do something practical?

Not important		Moderately important		Very important
1	2	3	4	5

These generate mean raw scores for each scale.

## Description of the 6 Interest scales

The interest scales (themes) covered by the questionnaire are described below. The sections on skills and style (values/motivation) are based on the same six scales. Please note that the original theme names are used throughout this User Guide but that a more descriptive name is used in the reports that people receive (for example Realistic is called Doing and Implementing). Both names are in the table below for cross referencing:

<b>Realistic (Doing and Implementing)</b>	<p>Jobs which fall into this area are practical occupations that usually require physical or manual activity. They include skilled and technical trades, and some of the service occupations. They generally have a 'hands on' element and may involve working outdoors. Realistic work activities may involve using tools, equipment and machinery; building and repairing things and/or work related to nature, agriculture and animals.</p>
<b>Investigative (Thinking and Investigating)</b>	<p>Jobs which fall into this area are concerned with finding out about things. They centre on science, medicine, social concerns, theories, ideas and data, with the aim of understanding, predicting or controlling these things. Investigative work activities have a strong 'analytical' element and include researching, exploring, observing, evaluating, analysing, learning and solving abstract problems. This may be in a laboratory, medical or academic establishment, or in the computer industry.</p>
<b>Artistic (Creating and Expressing)</b>	<p>Jobs which fall into this area have a strong 'expressive' element and are concerned with creating or appreciating art, drama, music or writing. Artistic work activities include composing, writing, creating, designing, cooking, performing and entertaining. This theme is not necessarily about having an interest in painting or drawing personally, because it includes occupations where people appreciate some kind of creative expression.</p>
<b>Social (Communicating and Helping)</b>	<p>Jobs which fall into this area involve working with people in a helpful or facilitating way. They are concerned with human welfare and community services. Work activities include caring, teaching and educating, treating, helping, listening, counselling and discussing.</p> <p><i><b>NOTE:</b> 'Teaching' occurs across most of the themes but each one tends to attract people with an interest in that theme. So 'realistic' teaching incorporates hands-on or technical type activities; whereas 'social' teaching is more concerned with the interpersonal and pastoral elements.</i></p>
<b>Enterprising (Persuading and Influencing)</b>	<p>Jobs which fall into this area are concerned with business and leadership. They seek to attain personal or organisational goals, or economic gain. Work activities include selling, marketing, managing, influencing, persuading, directing and manipulating others. Being self-employed (running your own business) falls into this category, as does work in politics.</p>
<b>Conventional (Planning and Organising)</b>	<p>Jobs which fall into this area are concerned with organisation, data and finance. They involve working with information, numbers or machines, to meet organisational demands and standards. Work activities include setting up procedures, maintaining orderly routines, organising, operating, accounting and processing.</p>

## CII Dodec

Holland's career theme model remains the most known and referenced model for career guidance. However, in the search for a career there are thousands of jobs and classifying them under 6 broad themes means that the field is only slightly narrowed. The issue for practitioners is to balance the need for a model that is simple enough to use and communicate with one that narrows the field significantly to help people explore their career direction without closing off potential opportunities. CII version 3 was developed to help this dilemma by keeping the basic model but increasing the number of themes in order to provide greater specificity in terms of ideas for career direction.

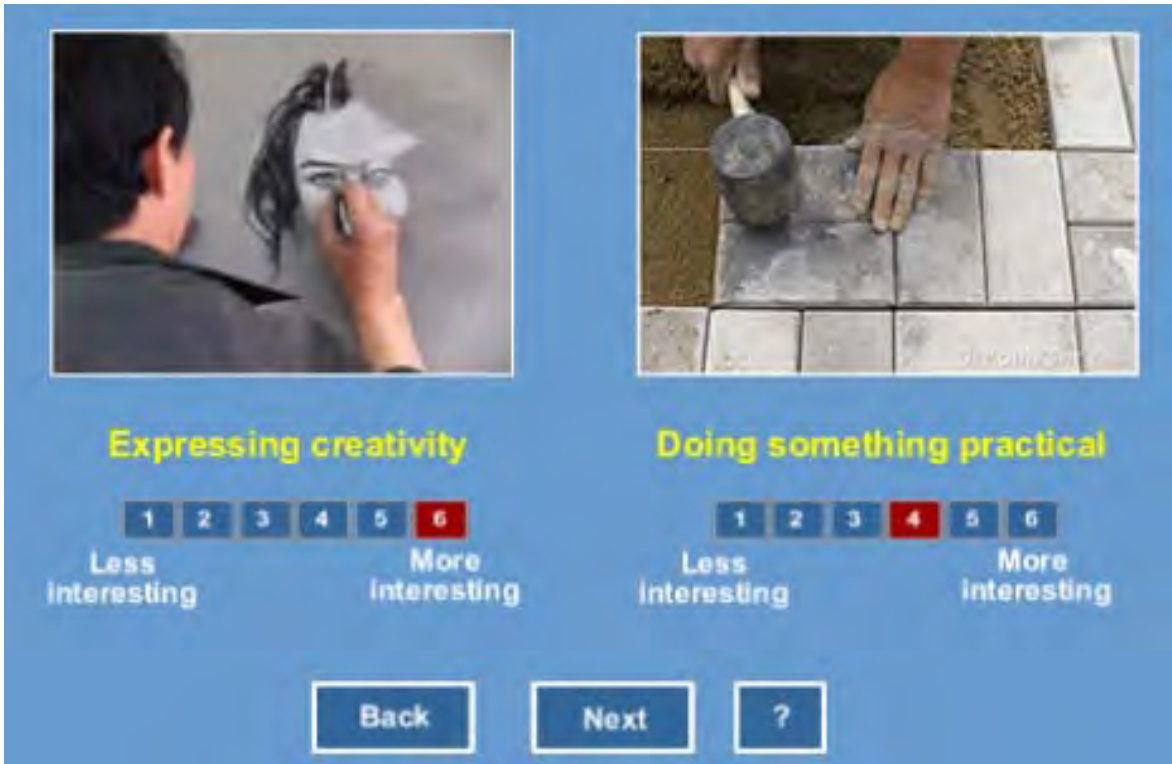
Holland's original premise was that people 'seek environments that are aligned with their personality and engage in activities that utilize their abilities'. The 6 themes were therefore developed as a model of personality types which link to career interests. There has been extensive work on classifying occupations under the 6 themes and this does provide a useful starting point for career guidance but the range of occupations under each theme remains wide. Since Holland began with the notion of personality, the author took each of the Big Five personality dimensions to see if they would provide a framework for further sub-division of the themes. Lists of jobs under each theme were separated according to the poles of the Big Five. This process revealed that there were significant clusters of jobs under each theme that could be separated using the Extraversion versus Introversion scales. More specifically, they were separated by the degree to which they required a practical, active and/or expressive orientation versus a theoretical, thoughtful and/or detailed orientation. This sub-division was then checked by a Chartered Psychologist with extensive experience of Career Guidance plus an active career guidance practitioner.

The result is a model that maintains the integrity of the original Holland Model whilst increasing the differentiation as follows:

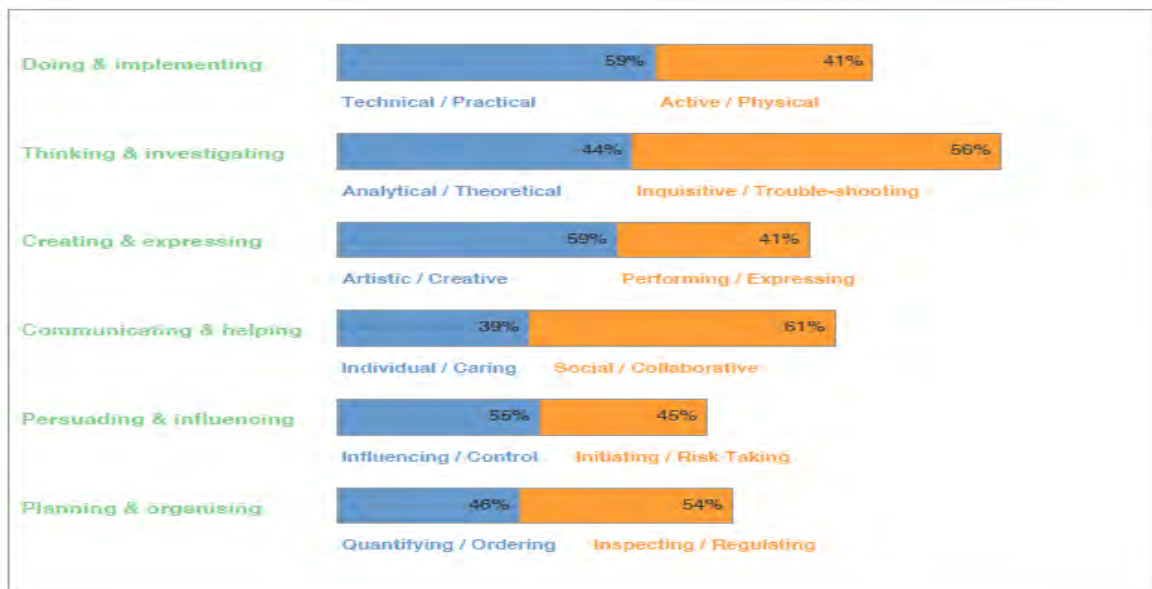
Holland's Career Themes	Orientation	CII Dodec themes
<b>Realistic</b> (Doing and Implementing)	<b>I</b>	<b>Technical/Practical</b>
	<b>E</b>	<b>Active/Physical</b>
<b>Investigative</b> (Thinking and Investigating)	<b>I</b>	<b>Analytical/Theoretical</b>
	<b>E</b>	<b>Inquisitive/Trouble Shooting</b>
<b>Artistic</b> (Creating and Expressing)	<b>I</b>	<b>Aesthetic/Creative</b>
	<b>E</b>	<b>Performing/Expressing</b>
<b>Social</b> (Communicating and Helping)	<b>I</b>	<b>Individual/Caring</b>
	<b>E</b>	<b>Social/Collaborative</b>
<b>Enterprising</b> (Persuading and Influencing)	<b>I</b>	<b>Influence/Control</b>
	<b>E</b>	<b>Risk/Initiating</b>
<b>Conventional</b> (Planning and Organising)	<b>I</b>	<b>Quantifying/Structure</b>
	<b>E</b>	<b>Inspecting/Regulating</b>

### **CII Dodec**

Career Interests Inventory Dodec is a self-report questionnaire but the item format has been adapted to provide more detailed information. It has 120 items presented in pairs in order to help the respondent differentiate between themes. The first version of Dodec was trialled using a traditional presentation (i.e. using a 6-point Likert scale). This provided evidence of the social desirability of individual items. Subsequent trial versions of the CII-Dodec presented the items in pairs with a balance of social desirability as follows:



This format allows both normative and ipsative scores to be calculated. Of the 120 items, there are 20 items per main theme which are used to calculate the degree of interest across the original 6 career themes. This is then represented by the length of the bar in the graph below.



Of these 120 items, 60 are specifically designed to identify a person's relative interests between the underlying sub-themes. This is then presented as a percentage preference as shown in the graph above. This shows a person whose greatest interest is in the 'Thinking and Investigating' theme.



However, we can see that she tends towards the more extraverted 'Inquisitive/Trouble shooting' style (56%) than towards the more introverted 'Analytical/Theoretical' style (44%). This extra information allows the report to provide a more targeted range of job suggestions.

### Description of the 12 Interest scales

6 Career Themes	The 12 CII Dodec Themes
<b>Realistic</b> <b>(Doing and Implementing)</b>	<p style="text-align: center;"><b>Technical/Practical</b></p> <p>This is a preference for getting things done and seeing results. This can involve planning, designing and constructing things on a large scale (such as buildings, bridges or other complex structures) or applying skills in a precise and hands-on manner on a much smaller scale (such as arts and crafts, constructing circuit boards or cordon bleu cookery). In these activities there is often the need to apply technical expertise and knowledge (such as in specialist exploration-type activities or when operating machinery, delivering and maintaining digital and IT services or taking responsibility for the safe and professional transportation of people and goods). Many of these activities can involve interacting with a range of different people and professions.</p>
	<p style="text-align: center;"><b>Active/Physical</b></p> <p>This preference is for more physical activity. This often requires a good knowledge of the physical world together with the ability to take the initiative and respond to emergency or potentially risky situations. There is also a strong element of seeking stimulation and excitement, either from the challenge of competition or the challenge of dealing with fast changing situations. Such elements are found in work which involves the natural world such as in agriculture or conservation where people can work outdoors and be 'at one' with natural processes. Another area would involve helping others to achieve their potential in such areas as sport or in the promotion of physical well-being.</p>
<b>Investigative</b> <b>(Thinking and Investigating)</b>	<p style="text-align: center;"><b>Analytical/Theoretical</b></p> <p>This preference involves observing, collecting, analysing and interpreting information from a range of contexts such as setting up experiment-like processes to test theories and ideas or challenging and refining accepted ideas and practices. The overall emphasis is on trying to understand issues by using analysis, objectivity and independence and doing this across a wide range of contexts and circumstances. It could involve thought experiments or more traditional experimentation (such as in the laboratory). It could involve investigating and analysing the physical and natural world (such as in archaeology). Or it could involve exploring new technologies (such as in the emerging sciences of computers, mobiles, biotechnology or social media).</p>
	<p style="text-align: center;"><b>Inquisitive/Trouble Shooting</b></p> <p>This preference involves activities focused on fault-finding or diagnosis across a wide range of contexts. This could involve understanding and helping people (through diagnosis, treatment and providing direct health-related services) or fault-finding in complex engineering systems (such as on aircraft or power plants). It could involve designing, managing and fixing bugs in computers or in network-based IT systems (such as computer servicing and repairing or games testing). The emphasis is on understanding, doing and fixing rather than simply theorising.</p>

<b>Artistic</b> <b>(Creating and Expressing)</b>	<p style="text-align: center;"><b>Aesthetic/Creative</b></p> <p>This preference involves the stimulation of the aesthetic sense and 'thinking outside the box' or seeking different or unusual ways to express one's thoughts and ideas about the world or the human condition. Work of this kind involves not only traditional 'artistic' activities (such as writing, painting, photography or music) but also many other activities that allow creative freedom (such as gardening, landscaping, cooking, architecture). It is also highly relevant to many technological fields such as computer-aided design, software development or website design. Although the principal aim of such activities is to produce a useful product, the artistic /creative person will want to focus particularly on the aesthetic aspect of the work in order to produce something which is aesthetically pleasing and different. For work of an artistic or creative nature, the ideal work environment would be one that is not too strictly regulated and which allows the freedom for creativity to emerge rather than being dictated by timelines and goals.</p>
	<p style="text-align: center;"><b>Performing/Expressing</b></p> <p>This preference involves public performance and display where there can be an impact on an audience - whether live (as with concerts, gigs, dance, theatre, comedy, political rallies) or with a delay before the audience receives the performance (for example, in film, broadcasting, journalism and other forms of entertainment). All of these activities are fuelled by a desire to communicate and are characterised by a sense of urgency or high energy. The communication can be immediate or, sometimes, it may be less direct such as when writing the reporting of events and news and or writing fiction. It can also take the form of more critical analysis and interpretation. Ultimately however, the emphasis and focus will always be upon communication with an audience, either in the immediate present or at some time in the future.</p>
<b>Social</b> <b>(Communicating and Helping)</b>	<p style="text-align: center;"><b>Individual/Caring</b></p> <p>This preference is for dealing with other people on a one-to-one basis, often in a caring or supportive environment. This can involve situations where talking and understanding is needed or situations where there is a need for direct help with people's physical needs. In both cases, the focus is on the well-being of the other person. This requires firstly the ability to identify patterns with regard to issues or problems, and then an understanding of how to help resolve the problems or issues in an empathetic manner while demonstrating both patience and compassion. Such qualities are required across the spectrum from advisory services, through counselling and therapy, to direct health care activities like nursing.</p>
	<p style="text-align: center;"><b>Social/Collaborative</b></p> <p>This preference is for working in groups and building multiple relationships. This can show itself in an interest in a wide range of activities where team working is essential as well as in instructional, educational and training contexts. There is often a desire to interact and to facilitate growth and learning of both individuals and group. The key activities involve communication, discussion and co-operation with a focus on people helping each other to achieve a goal or to realise their potential - which is why teaching, training and helping others to gain tangible 'educational' or skill-based outcomes can be very satisfying to people of this type. Sometimes the focus will be less on helping others and more on the individual's need to achieve (such as in some business or sports teams). And sometimes the motive can be simply to enjoy the buzz of social interaction. In all these cases, the main focus is on being with other people, either in order to fulfil one's own needs and objectives or to help others to fulfil theirs.</p>

<b>Enterprising</b> <b>(Persuading and Influencing)</b>	<p style="text-align: center;"><b>Influence/Control</b></p> <p>This preference is for influencing and controlling their work and / or the people they work with. Typically, this involves providing advice, making recommendations and being concerned with the governance of businesses or organisations. The focus is more on getting things right and managing outcomes rather than on the impact on colleagues and staff. At times, this may involve the use of charm and persuasion, though it is likely to be backed up with the use of objective measures, facts and logic. This approach may be applied to running a business or in roles where there is the opportunity to exercise influence, power or control.</p>
	<p style="text-align: center;"><b>Risk/Initiating</b></p> <p>This preference is for getting things going and working and for having considerable autonomy whilst doing so. This can take the form of taking responsibility for existing projects or starting entirely new projects. It involves injecting considerable energy at the start of a process with a focus on immediate gains - something which often involves taking calculated risks. For example, it can involve entrepreneurial activities like starting a new venture, or taking actions that are essentially speculative or competitive in nature (such as trading commodities or selling new gadgets). Such activities involve at their core a desire to make things happen and a belief about being able to cope with change and volatility. As a consequence, this focus on the future can prioritise eventual outcomes rather than possible impacts on people.</p>
<b>Conventional</b> <b>(Planning and Organising)</b>	<p style="text-align: center;"><b>Quantifying/Structure</b></p> <p>This preference is for creating systems that lead to more efficient operations and better understanding. This entails devising processes where things can be quantified and monitored, along with the development of procedures to collect, record and categorise information in such a manner that it can be readily accessed in a form that will makes it easy to use by others. It involves taking responsibility for administering things - either at the level of the project or at the level of the organisation. It means using information to make predictions and to enable decisions to be taken in a calm and rational way with due consideration of the likely outcome of one action or another. The focus is on efficiency and the process involves creating the systems that enable projects and organisations to be managed effectively.</p>
	<p style="text-align: center;"><b>Inspecting/Regulating</b></p> <p>This preference is for gathering data and ensuring things are correct. The focus is upon the use of guidelines, standards, regulations and documentation and the inspection of actual operations and processes to ensure that they meet the established requirements. Whether the processes involved are highly specific or at a more generalised level, work of this kind will always require considerable attention to detail. For example, at the more specific level, one might have responsibility for ensuring that fire regulations are followed correctly. At a higher or more general level, the responsibility might be for creating legislation for the government of an organisation or even an entire country. People with this preference are likely to be interested in making sure that rules and regulations are in place and being followed.</p>

On the next page is a summary of the stages through which the CII Dodec was developed:

## Summary of stages in developing CII Dodec

1. An analysis of the range of jobs usually classified under Holland's 6 career themes - informed by feedback from individuals who had completed both the CII Version 1 or 2 (and who explained which of the job suggestions fitted them most closely from those identified by their strongest interests) and the Type Dynamics Indicator (TDI) which identified their preferences for either Extraversion or Introversion
2. Separating the jobs within each of the 6 themes into those that required, on balance, a greater degree of extravert activity than introverted activity
3. Checking the job allocations with career guidance specialists and writing the descriptions of the 12 sub-themes
4. Writing items and selecting pictures to represent the 12 themes
5. Trialling - initially 172 items presented one at a time using a 6-point Likert scale
6. Analysing items for social desirability and re-trialling with new pictures where necessary
7. Retrialling items one at a time using a 6-point Likert scale
8. Write the CII-Dodec report for distribution during trialling
9. Selecting the final 120 items and arranging them into 60 pairs (matched for social desirability) and re-trialling as a new version of the CII-Dodec.
10. Improvements to the reports and minor revisions to some of the items (8 items had the pictures changed to better represent the concepts).
11. Retrialling the 60 pairs as a new version of the CII-Dodec.
12. Publication of CII Dodec
13. Continuation of data collection and analysis.
14. Publishing the CII-Dodec with new norms based on a sample 7227 respondents.

## Section Five – Questionnaire administration

The CII is part of the Profiling for Success (PfS) online assessment system developed by Team Focus. To use the questionnaire, clients have to obtain a licence or open a PfS account which allows clients to manage all aspects of the assessment and reporting process. For information on opening and using a PfS account, please contact Team Focus (contact details are given at the front of this User's Guide).

Effective administration is important if the CII is to provide valid information. With the PfS online assessment system, assessments may be completed after a personal introduction from the administrator or after the respondent has been informed about the assessment by other means such as email or a letter. Whichever administration process is used, it is essential that respondents understand why they are being asked to complete the questionnaire and how the information they provide will be used for their benefit. This ensures 'buy in' to the assessment and encourages honesty and openness from respondents.

In this section, options for administration are described along with guidance on how to conduct effective administration, whether in person or remotely. Details on the actual process of administration are also included along with the technical requirements of the PfS system.

### Administration process

There are three options for administering the CII:

- completion with an administrator present who gives the introduction;
- independent completion after a prior face-to-face or telephone introduction by an administrator;
- independent completion after receiving an introduction via email or letter from an administrator.

**The questionnaire does not necessarily require an administrator to be present, and has been developed and trialled accordingly.** Full instructions are given at the beginning of the questionnaire, along with examples to ensure that the respondent understands how to indicate their responses and use the response scale. Whilst completing the questionnaire, respondents can also see a summary of the instructions at any time they wish.

Although an administrator does not need to be present at the time of completion, it is essential that the personal aspect of administration is not underestimated. Nor should it be assumed that the instructions given with the questionnaire are sufficient in themselves. Good administration, whether in person, by phone or via letter or email, is key to getting the 'buy in' of the respondent to the assessment process. This, in turn, will enhance the validity of the assessment profile through putting respondents in the appropriate mindset, and encouraging open and honest responding.

An introduction to the CII should include the following points, whether delivered in person by the administrator or otherwise:

- the reason the respondent is being asked to complete the questionnaire;
- a broad description of what the questionnaire assesses, *possibly* including an overview of the CII model, though there is no need to include a detailed description of each scale;
- the importance of being as honest as possible when completing the questionnaire;
- guidance that the CII is untimed but typically takes up to 25 minutes to complete. Respondents should work through at their own pace but be advised that sometimes, spending a long time pondering the questions can make it more difficult. Whilst first answers are not necessarily the best (since they may reflect some habitual response rather than a carefully considered one) they can provide a useful starting point for exploring a person's value system;
- an explanation of how the respondent will receive their CII report and how this will be used;
- a description of how the profile will be stored and who will have access to it.

When an administrator will not be present whilst the respondent completes the questionnaire, the following instructions and information should also be given:

- the URL to which the respondents go for address for access to the PfS website: <https://www.profilingforsuccess.com/take-an-assessment.php>
- Click 'Take an assessment at the top of the screen and click on 'English'

- Click on either 'Client code + Access code + Password' or 'Licence Number + Password' (depending on how the assessment has been set up) and enter these details
- advice that the questionnaire normally takes up to 25 minutes to complete and that it should be completed in a quiet environment free from distractions;
- the contact details for the administrator in case of any questions or issues in accessing the PfS system.

### **Requirements of the PfS system**

As the CII is delivered via the PfS online assessment system, administrators need to ensure that respondents have the necessary hardware and software to access the assessments. In practice, this is very rarely an issue as the PfS system has been developed to run on standard internet technology to make it as widely accessible as possible.

The requirements for users of the PfS system (clients/administrators and respondents) are:

- a PC, Mac, tablet or iPad, with an internet connection;
- The latest version of your chosen internet browser;

Virtually all modern computers will meet the requirements. When a respondent selects a PfS assessment for completion, the whole assessment is downloaded before it begins. With a broadband connection, this should only take a few seconds at most.

It is not necessary for the internet connection to be maintained once an assessment has been downloaded. However, the internet connection does have to be active when the answers are submitted. Information about the need for respondents to be actively connected to the internet for their results to be recorded is displayed at the end of the assessment.

## **Section Six – Conducting a review session**

A range of reports is available to support the review session and samples are provided at the end of this guide. However, whichever respondent report is used to supplement the administrator's report, best practice suggests that the results of the questionnaire should be considered in a formal face-to-face session.

### **Conducting a review session**

The results from the CII should always be reviewed with the respondent. As with the output from any psychometric assessment, the profile should be treated as a starting point for further exploration and clarification. Without adequate review, the respondent may over-interpret the results and place greater emphasis on their validity than is warranted. The review session therefore allows the respondent an opportunity to challenge the results in the report and find a balance between their results and personal perceptions that allows them to move forward in their development. Further, although the questionnaire is generally positively worded, the review also allows clarification of any issues, ensuring that misunderstandings on the part of the respondent do not occur.

The exact format of the review will depend on the purpose of assessment and how the results are to be used. It is recommended that the review is conducted face-to-face, though a telephone or Skype review may be acceptable in some circumstances.

The reviewer will need to decide whether a report is sent directly to the respondent when setting up the access code for the CII. Receiving the report ahead of the review session will give the respondent time to read and start to work through it to identify issues that are particularly pertinent to them. This process will give more time for discussion during the review session and is likely to be particularly beneficial to respondents who need time to reflect on their report before discussing it. Providing that the administration has been conducted thoroughly and respondents understand the purpose of the assessment and how it will be used, there should be no issues in reports being sent directly to respondents. If respondents do, however, seem particularly sensitive to feedback, careful consideration needs to be given to whether reports should be sent directly to the respondent or introduced by the reviewer as part of the review session.



The purpose of a review session, whether conducted face-to-face or via the telephone or Skype, is to ensure that the respondent clearly understands the meaning of their results and is satisfied with the assessment experience, and to explore possible implications of the results. To reach this goal it is important that the review session is seen as a chance for information to be shared between the respondent and the reviewer, not simply for the reviewer to provide the questionnaire scores. For this process to be successful, it is vital that all reviewers have received appropriate training and are themselves familiar with the CII model and the nature of its reports.

General guidelines for conducting review sessions are given below. These guidelines should be seen as identifying the main points that need to be covered and giving suggestions about the structure of the review session and appropriate questioning strategies. They do not set out to provide a set formula that must be followed.

- As with administration, good preparation is essential for review sessions. A suitable room, free from disturbances, should be used. Reviewers should familiarise themselves with the respondent's results, the CII scales and how they may want to introduce the CII model as a way of supporting the interpretation. Reports should be sent out to respondents in good time before the review session, if they have not received them directly from the Profiling for Success assessment system.
- The review session should begin with the reviewer introducing themselves and providing a brief overview of the review session (ideally there will have been prior contact but it can be useful to go over these points again). Useful information to offer includes clarifying the overall purpose of the session and how the questionnaire will assist in achieving that purpose. It is also useful to clarify the approximate length of the session, issues around confidentiality and what will happen to the questionnaire results.
- Both parties need to agree on what they want to get out of the review session and be clear on how the profile will be used before working through the report. Such agreement will ensure a common purpose to the review, encourage rapport and reduce the chance for misunderstandings.

- To encourage a balanced discussion from the outset, the respondent should be brought into the review session as early as possible. This can be done through asking them about their experiences of the questionnaire immediately after the brief introduction (e.g. “How did you find completing the questionnaire?” or “Tell me about your experience of completing the questionnaire.”). Throughout the review session open questions should be used wherever possible, as this will encourage the respondent to provide more information and make the review more balanced. In a balanced review session the respondent should contribute at least as much as the reviewer to the discussion, if not more.
- The next stage will usually involve discussion of the actual questionnaire profile. There is no set order in which the CII scales have to be reviewed. If previous discussions with the respondent have identified specific areas of interest, the discussion may focus on these and spend less time on other areas. An alternative strategy is to ask the respondent to identify any areas where the questionnaire has revealed surprising results and start by exploring these.
- The CII is primarily a tool to stimulate personal development and insight and so the next stages in the development process need to be the focus of the final part of the review. Both parties should mutually agree a way forward. Points that may be included are how the issues that have been discussed will be captured, what actions the respondent has agreed to and time scales for development activities, what support the reviewer needs to give the respondent, and how any development activities will be monitored and reviewed. Finally, the respondent should be offered the opportunity to ask any outstanding questions and then thanked for attending the review session.
- It is good practice for individual organisations to develop policies around the review of assessment results, as with other aspects of psychological assessment. These should cover issues such as how reviews are conducted, confidentiality and storage of assessment data. It is important for organisations to develop their own policies, as these will help ensure consistency of approach and application over time, and will also guard against issues of fairness and discrimination. Whilst policies may draw on the guidelines given above, ultimately reviewers may develop their own style with which they feel comfortable within these frameworks.

**Note:** CII reports provide both normative and ipsative results. The use of two ways of presenting the results provides the careers professional with a valuable way of dealing with 'low level' responses. For example, a respondent may have a low overall interest in *all* the career areas, and this would be reflected in the normative comparison – all the results would probably look low and undifferentiated. However by comparison, the ipsative presentation will still give a clear indication of that person's interests, *relative to each other*, and provide a basis for moving the review forward.

Of course the interplay between ipsative and normative can also highlight how someone's personal (ipsative) hierarchy can be influenced by comparison with an external (normative) reference. The two ways of looking at the results can provide the basis for quite different, yet equally useful interpretations.

### **The MyFutureCareer (MFC) website**

A key benefit of using the CII is that the report contains direct links to a website called MyFutureCareer.co.uk (MFC). This means that it can provide a much needed springboard for exploring jobs and careers - usually one of the aims of any career guidance intervention.

The MFC website is designed differently from most job information websites because it is based on themes or interests rather than on specific jobs and careers. Thus it does not presuppose that a person already knows the kind of job they want to do. Instead, by identifying themes (such as those found in the CII questionnaires), the person can find a whole range of different jobs that may be of interest. In addition the themes are structured hierarchically. Specifically, the over-arching 6 themes are divided into 12 sub-themes (as reflected in the CII Dodec) and these 12 sub-themes are further divided into 24 job families. Thus a person can search amongst 266 jobs that are under the Doing and Implementing themes or click to see the 134 jobs in the Technical/Practical sub-theme or click and see the 23 jobs in the Transport and Logistics job family. This is illustrated by the series of screen shots below which follow from the link <http://myfuturecareer.co.uk/>



Careers in this area are concerned with business, commerce and leadership. People interested in these activities are often driven to achieve personal or organisational goals, to take risks and they enjoy debating, competing with and challenging others.

Typically they wish to receive an obvious reward (financial recognition, enhanced reputation) for what they do. They seek to reach their goals by selling their ideas to others, through putting effort into influencing, persuading and directing. In essence they like to exercise control over their own future and that of other people.

This means that this theme spans self-employment and, for example, the founding of a business as well as activities such as law and politics.

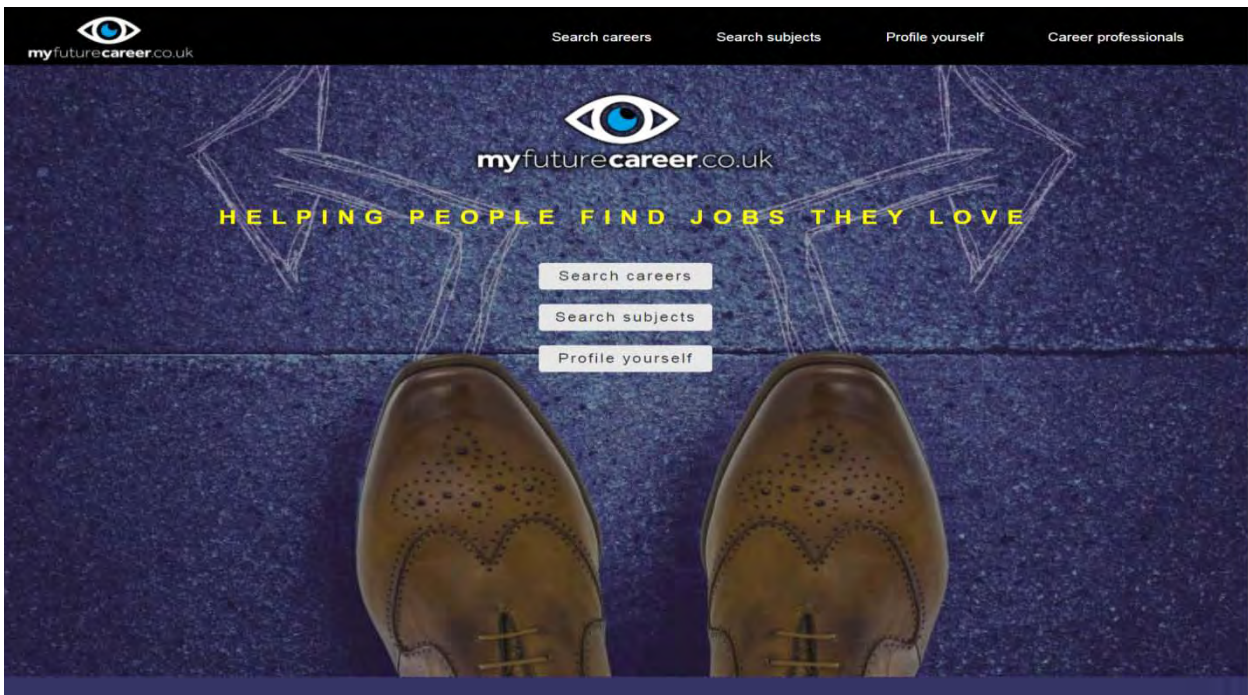
In summary this area includes all aspects of management and of business creation, finance, trading, politics and legal activities, advertising, sales and marketing, and activities that are focused on public speaking and presenting.

### Typical jobs

You can click on any of the jobs or job areas below to find out more information from the MyWorkThemes.com website.

- |   |   |  |
|---|---|--|
| <a href="#">Business Management &amp; Retail Services</a> | <a href="#">Data Analyst - Statistician</a> | <a href="#">Customer Intelligence, Marketing &amp; Advertising</a> |
| <a href="#">Leisure Centre Manager</a>                    | <a href="#">Payroll Manager</a>             | <a href="#">Advertising Account Executive</a>                      |
| <a href="#">Construction Manager</a>                      | <a href="#">Tax Adviser</a>                 | <a href="#">Advertising Media Salesperson</a>                      |
| <a href="#">Human Resources Officer</a>                   | <a href="#">Insurance Risk Surveyor</a>     | <a href="#">Public Relations Officer</a>                           |
| <a href="#">Equalities Officer</a>                        | <a href="#">Insurance Claims Handler</a>    | <a href="#">Marketing Executive</a>                                |
| <a href="#">Project Manager</a>                           | <a href="#">Legal Services</a>              | <a href="#">Conference &amp; Exhibition Organiser</a>              |
| <a href="#">Management Consultant</a>                     | <a href="#">Legal Secretary</a>             | <a href="#">Advertising Media Planner</a>                          |

Under Typical jobs are job families and specific jobs and each one will link directly to the appropriate page on this website:



Navigating this website follows the following structure:

Search careers . . .

WORK THEMES

- ▶ **Doing & Implementing**
- ▶ Thinking & Investigating
- ▶ Creating & Expressing
- ▶ Communicating & Helping
- ▶ Persuading & Influencing
- ▶ Planning & Organising

## SEARCH CAREERS

There are hundreds of jobs listed on this site. Finding one that suits you can be like seeking a needle in a haystack.

All the jobs are organised under 6 themes. Each theme has 2 sub-themes, each of which is divided into a number of job areas. Click on any theme that interests you in the navigation bar at the left. This will reveal the two sub-themes and it will filter the jobs so that you see ones associated with that theme or sub-theme. You can filter further by clicking on the job areas which make up that sub-theme. You can then click on any job in the listing to find out more about it.

### Doing & Implementing



### Thinking & Investigating



### Creating & Expressing



### Communicating & Helping



### Persuading & Influencing



### Planning & Organising



And you can also search for jobs according to what subjects you are interest in. Just click on 'Search Subjects' at the top of this page.

Search careers . . .

WORK THEMES

- ▶ **Doing & Implementing**
- ▶ Thinking & Investigating
- ▶ Creating & Expressing
- ▶ Communicating & Helping
- ▶ Persuading & Influencing
- ▶ Planning & Organising



## 266 jobs for 'Doing & Implementing'

### Acoustician

Your job will be to manage and control the noise and vibrations that surround us, this could be within various fields such as, the environment, construction, media or medical technology. You may also work in specialised areas of the industry such as audio and hi-fi design, concert hall design, telecommunications or underwater acoustics.

Doing & Implementing → Technical/Practical → Engineering & Specialist Technical Services

### Aeronautical Engineer

This role is focused on improving flight safety and fuel efficiency as well as reducing system costs. You may specialise in one particular area such as avionics, aerodynamics, propulsion or system integration.

Doing & Implementing → Technical/Practical → Engineering & Specialist Technical Services

### Aerospace Engineer

You will design, build and maintain aircraft and the parts and instruments that go into them. You will also work at the forefront of technology on space vehicles and satellites. You will be responsible for developing avionic systems like navigation instruments and communications and researching ways to make fuel-efficient parts, such as wings, fuselage and engines.

Doing & Implementing → Technical/Practical → Engineering & Specialist Technical Services

### Aerospace Engineering Technician

Search careers . . .

WORK THEMES

Doing & Implementing

Technical/Practical

Engineering & Specialist Technical Services

Construction, Maintenance & Repair

Transport & Logistics

Active/Physical

Thinking & Investigating

Creating & Expressing

Communicating & Helping

Persuading & Influencing

Planning & Organising



134 jobs for 'Technical/Practical'

Acoustician

Your job will be to manage and control the noise and vibrations that surround us, this could be within various fields such as, the environment, construction, media or medical technology. You may also work in specialised areas of the industry such as audio and hi-fi design, concert hall design, telecommunications or underwater acoustics.

Doing & Implementing -> Technical/Practical -> Engineering & Specialist Technical Services

Aeronautical Engineer

This role is focused on improving flight safety and fuel efficiency as well as reducing system costs. You may specialise in one particular area such as avionics, aerodynamics, propulsion or system integration.

Doing & Implementing -> Technical/Practical -> Engineering & Specialist Technical Services

Aerospace Engineer

You will design, build and maintain aircraft and the parts and instruments that go into them. You will also work at the forefront of technology on space vehicles and satellites. You will be responsible for developing avionic systems like navigation instruments and communications and researching ways to make fuel-efficient parts, such as wings, fuselage and engines.

Doing & Implementing -> Technical/Practical -> Engineering & Specialist Technical Services

Aerospace Engineering Technician

Search careers . . .

WORK THEMES

Doing & Implementing

Technical/Practical

Engineering & Specialist Technical Services

Construction, Maintenance & Repair

Transport & Logistics

Active/Physical

Thinking & Investigating

Creating & Expressing

Communicating & Helping

Persuading & Influencing

Planning & Organising

23 jobs for 'Transport & Logistics'

Aerospace Engineer

You will design, build and maintain aircraft and the parts and instruments that go into them. You will also work at the forefront of technology on space vehicles and satellites. You will be responsible for developing avionic systems like navigation instruments and communications and researching ways to make fuel-efficient parts, such as wings, fuselage and engines.

Doing & Implementing -> Technical/Practical -> Transport & Logistics

Air Cabin Crew

Your role is to make sure that passengers on your flight have a comfortable and pleasant journey. You will greet passengers and direct them to their seats and once on the flight make any announcements on behalf of the pilot. You will also make sure that passengers follow safety procedures.

Doing & Implementing -> Technical/Practical -> Transport & Logistics

Air Traffic Controller

You will help airline pilots take off and land safely and maintain radio/radar contact with aircraft pilots within designated areas, providing them with advice, instructions and information about weather conditions and safe flight, ascent and descent paths.

Doing & Implementing -> Technical/Practical -> Transport & Logistics

Airline Pilot

## Section Seven - Technical data

### A: Basic descriptive statistics for Version 1 of the CII

Descriptive statistics for the normative part of the questionnaire (Part A) raw scores are shown below:

Normative Scores								
Scale names		Version 1 2003-7 (N = 394)		Version 1 2007-14 (N = 6865)		Version 2 2014-5 (N = 3540)		
	PFS scale name	Holland scale name	Mean raw score	SD	Mean raw score	SD	Mean raw score	SD
1	Doing and implementing	Realistic	9.99	2.65	9.48	2.50	10.67	2.65
2	Thinking and investigating	Investigative	11.05	2.64	11.76	2.80	12.85	2.96
3	Creating and expressing	Artistic	10.85	2.98	10.19	2.88	9.96	3.03
4	Communicating and helping	Social	11.83	2.59	11.76	2.51	12.43	2.59
5	Persuading and influencing	Enterprising	11.09	2.64	11.71	2.85	10.86	2.78
6	Planning and organising	Conventional	10.32	2.96	10.17	2.97	11.16	2.85

Normative Scores								
Scale names		Version 2 2016 (N = 13,125)		Version 2 2016-7 (N = ?)		Version 2 2016-7 (N = 1500)		
	PFS scale name	Holland scale name	Mean raw score	SD	Mean raw score	SD	Mean raw score	SD
1	Doing and implementing	Realistic					10.54	2.60
2	Thinking and investigating	Investigative					11.98	3.21
3	Creating and expressing	Artistic					9.91	2.84
4	Communicating and helping	Social					11.18	2.49
5	Persuading and influencing	Enterprising					10.97	2.62
6	Planning and organising	Conventional					10.25	2.69

Descriptive statistics for the ipsative part of the questionnaire (Part B) raw scores Version 1 are shown in the following table.

Ipsative Scores			
PFS scale name	Holland scale name	Mean raw score	SD
Doing and implementing	Realistic	2.66	1.35
Thinking and investigating	Investigative	2.41	1.37
Creating and expressing	Artistic	2.30	1.29
Communicating and helping	Social	2.65	1.15
Persuading and influencing	Enterprising	2.62	1.19
Planning and organising	Conventional	2.35	1.33

Descriptive statistics for the ratings given for Part C (the self-perceptions of ability) and Part D (the self perception of importance and value) for Version 1 are shown in the following table.

	Version 1 Part C				Version 1 Part D			
	Mean	Std.Dev	Minimum	Maximum	Mean	Std.Dev.	Minimum	Maximum
Realistic	8.62	2.60	3	15	7.23	1.72	2	13
Investigative	13.25	3.51	4	20	8.97	2.93	3	15
Artistic	12.76	3.57	4	20	10.49	2.81	3	15
Social	14.01	3.70	4	20	11.07	2.78	3	15
Enterprising	13.37	3.44	4	20	8.97	2.86	3	15
Conventional	14.66	3.40	4	20	10.26	2.80	3	15



## Internal consistency

The following table shows the reliability estimates (internal consistency using Cronbach's alpha) of the CII Part A scores for the original Version 1 and the latest Version 2.

Scale	Alpha for Version 1 (2003) (N=6865)	Alpha for Version 2 (2014) (N=3540)
Realistic	0.63	0.67
Investigative	0.74	0.78
Artistic	0.63	0.76
Social	0.66	0.70
Enterprising	0.70	0.73
Conventional	0.82	0.73

## Scale inter-correlations

The following table shows the inter-correlations between the 6 scales. The figures in the grey boxes are for the previous version 1 based on a sample of 5843 respondents and the figures in the white boxes are for the current version 2 based on 3540 respondents.

	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	1.00	0.31	0.35	0.12	0.11	0.08
Investigative	0.31	1.00	0.08	-0.09	0.07	0.27
Artistic	0.51	0.23	1.00	0.30	0.29	0.09
Social	0.23	0.16	0.31	1.00	0.44	0.27
Enterprising	0.17	0.36	0.31	0.49	1.00	0.27
Conventional	0.07	0.37	0.06	0.35	0.35	1.00

## Intercorrelations between the different parts of the questionnaire

The following table shows the interrelationships between the different parts of the questionnaire in Version 1. The first column of figures for example shows the Pearson product-moment correlations between scores on Parts A and B (Interest normative scores vs Interest ipsative scores) for each of the six scales.

Parts compared	A vs B	A vs C	A vs D	B vs C	B vs D	C vs D
	Interest normative	Interest normative	Interest normative	Interest ipsative	Interest ipsative	own skills
	Interest ipsative	own skills	importance to you	own skills	importance to you	importance to you
Realistic	0.49	0.39	0.11	0.35	0.10	0.45
Investigative	0.54	0.61	0.55	0.45	0.41	0.66
Artistic	0.49	0.49	0.47	0.32	0.28	0.68
Social	0.32	0.48	0.43	0.17	0.08	0.67
Enterprising	0.38	0.43	0.49	0.17	0.28	0.56
Conventional	0.51	0.32	0.31	0.15	0.18	0.59

The following 6 tables present correlations between all scales and specific parts of the questionnaire

A vs B	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.49	-0.11	0.13	0.00	-0.26	-0.28
Investigative	-0.04	0.54	-0.12	-0.27	-0.03	-0.13
Artistic	0.16	-0.12	0.49	-0.06	-0.19	-0.29
Social	-0.18	-0.11	-0.01	0.32	0.02	0.00
Enterprising	-0.26	0.08	-0.08	-0.06	0.38	-0.04
Conventional	-0.37	0.17	-0.29	-0.12	0.08	0.51

A vs C	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.39	0.05	0.15	-0.01	-0.05	-0.04
Investigative	0.16	0.61	0.02	0.08	0.22	0.25
Artistic	0.28	0.09	0.49	0.10	0.12	-0.02
Social	0.00	0.04	0.22	0.48	0.32	0.20
Enterprising	0.11	0.30	0.20	0.25	0.43	0.26
Conventional	-0.14	0.19	-0.06	0.13	0.12	0.32

A vs D	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.11	0.05	0.18	0.02	0.01	-0.00
Investigative	0.06	0.55	0.10	0.17	0.13	0.12
Artistic	0.14	0.01	0.47	0.09	0.13	-0.08
Social	0.08	0.03	0.20	0.43	0.20	0.13
Enterprising	0.21	0.27	0.20	0.24	0.49	0.16
Conventional	-0.04	0.28	-0.02	0.17	0.08	0.31

B vs C	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.35	-0.10	0.04	-0.14	-0.18	-0.22
Investigative	-0.10	0.45	-0.10	-0.02	0.14	0.17
Artistic	0.18	-0.13	0.32	0.04	-0.01	-0.16
Social	0.02	-0.24	-0.04	0.17	-0.03	-0.07
Enterprising	-0.14	0.08	-0.00	0.02	0.17	0.13
Conventional	-0.32	-0.11	-0.21	-0.03	-0.09	0.15

B vs D	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.10	-0.14	0.05	-0.12	-0.13	-0.15
Investigative	-0.04	0.41	-0.03	0.09	0.04	0.06
Artistic	0.07	-0.19	0.28	-0.01	-0.02	-0.21
Social	-0.01	-0.20	-0.06	0.08	-0.06	-0.01
Enterprising	0.03	0.10	-0.04	-0.00	0.28	0.14
Conventional	-0.14	-0.00	-0.19	-0.04	-0.09	0.18

C vs D	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.45	0.17	0.13	0.06	0.25	0.10
Investigative	0.17	0.66	0.19	0.23	0.33	0.20
Artistic	0.17	0.08	0.68	0.30	0.29	0.06
Social	0.15	0.13	0.31	0.67	0.27	0.24
Enterprising	0.28	0.33	0.34	0.51	0.56	0.24
Conventional	0.23	0.41	0.17	0.41	0.28	0.59

## Construct validity

The following table shows the Pearson product-moment correlations of the 6 CII Version 1 Part- A standard scores with the four scales of the Type Dynamics Inventory.

	TDI simple continuous scales			
	EI	SN	TF	JP
Realistic	0.03	-0.08	0.17	-0.01
Investigative	0.21	0.09	-0.40	-0.12
Artistic	-0.01	0.18	0.27	0.15
Social	-0.50	-0.14	0.35	0.08
Enterprising	-0.44	0.08	0.03	0.10
Conventional	0.04	-0.22	-0.13	-0.34

Shaded cells are significant at  $p < 0.05$ .

It can be seen that of 24 coefficients computed, 10 coefficients are significant at  $p < 0.05$ . Of these, virtually all are in line with expectation. For example,

- respondents who score highly on CII Investigative tend to show preferences towards Introversion and Thinking
- respondents who score highly on CII Artistic tend to show preferences towards Intuition and Feeling
- respondents who score highly on CII Social tend to show preferences towards Extraversion and Feeling
- respondents who score highly on CII Enterprising tend to show preferences towards Extraversion
- respondents who score highly on CII Conventional tend to show preferences towards Sensing and Judgement.

The only statistically significant relationship which is not easily interpretable in terms of a priori expectations is that between CII Realistic and TDI Feeling.

## B Basic descriptive statistics for CII-Dodec

The CII-Dodec comprises 120 items. These provide scores for the original 6 themes identified by Holland as well as for the 12 underlying sub-themes. Descriptive statistics are shown below:

Normative Scores						
	Scale names	CII-Dodec 2018 (N = 7227)		CII-Dodec Sub-themes	CII-Dodec 2018 (N = 7227)	
	Holland themes (PFS name)	Mean raw score	SD	CII-Dodec theme name	Mean raw score	SD
1	<b>Realistic</b> (Doing and implementing)	80.34	13.42	<b>Technical/Practical</b>	20.15	3.89
				<b>Active/Physical</b>	19.15	4.69
2	<b>Investigative</b> (Thinking and investigating)	85.33	14.04	<b>Analytical/Theoretical</b>	20.91	4.84
				<b>Inquisitive/Trouble Shooting</b>	21.13	4.52
3	<b>Artistic</b> (Creating and expressing)	78.12	16.94	<b>Aesthetic/Creative</b>	19.52	5.61
				<b>Performing/Expressing</b>	19.29	5.68
4	<b>Social</b> (Communicating and helping)	85.53	15.60	<b>Individual/Caring</b>	21.24	4.31
				<b>Social/Collaborative</b>	20.85	4.63
5	<b>Enterprising</b> (Persuading and influencing)	81.84	14.55	<b>Influence/Control</b>	21.88	4.29
				<b>Risk/Initiating</b>	19.94	4.56
6	<b>Conventional</b> (Planning and organising)	78.00	15.29	<b>Quantifying/Structure</b>	18.80	5.14
				<b>Inspecting/Regulating</b>	18.81	4.82

Descriptive statistics for the ratings given for Part C (the self-perceptions of ability) and Part D (the self perception of importance and value) are shown below:

	Version 1 Part C				Version 1 Part D			
	Mean	Std.Dev.	Minimum	Maximum	Mean	Std.Dev.	Minimum	Maximum
Realistic	8.62	2.60	3	15	7.23	1.72	2	13
Investigative	13.25	3.51	4	20	8.97	2.93	3	15
Artistic	12.76	3.57	4	20	10.49	2.81	3	15
Social	14.01	3.70	4	20	11.07	2.78	3	15
Enterprising	13.37	3.44	4	20	8.97	2.86	3	15
Conventional	14.66	3.40	4	20	10.26	2.80	3	15

## Reliability (Internal consistency and Test re-test)

The following table shows the reliability estimates (internal consistency using Cronbach's alpha and test re-test) of the CII-Dodec.

Normative Scores						
	Holland themes (PFS name)	Alpha N=7227	Test re-test N=???	CII-Dodec theme name	Alpha N=7227	Test re-test N=???
1	<b>Realistic</b> (Doing and implementing)	0.80		<b>Technical/Practical</b>	0.57	
				<b>Active/Physical</b>	0.67	
2	<b>Investigative</b> (Thinking and investigating)	0.77		<b>Analytical/Theoretical</b>	0.74	
				<b>Inquisitive/Trouble Shooting</b>	0.71	
3	<b>Artistic</b> (Creating and expressing)	0.87		<b>Aesthetic/Creative</b>	0.86	
				<b>Performing/Expressing</b>	0.81	
4	<b>Social</b> (Communicating and helping)	0.88		<b>Individual/Caring</b>	0.71	
				<b>Social/Collaborative</b>	0.73	
5	<b>Enterprising</b> (Persuading and influencing)	0.76		<b>Influence/Control</b>	0.69	
				<b>Risk/Initiating</b>	0.74	
6	<b>Conventional</b> (Planning and organising)	0.78		<b>Quantifying/Structure</b>	0.81	
				<b>Inspecting/Regulating</b>	0.75	

## Scale inter-correlations

The following table shows the inter-correlations between the 6 scales. The figures in the grey boxes are for the previous version 1 based on a sample of 5843 respondents and the figures in the white boxes are for the current version 2 based on 3540 respondents.

	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	1.00	0.31	0.35	0.12	0.11	0.08
Investigative	0.31	1.00	0.08	-0.09	0.07	0.27
Artistic	0.51	0.23	1.00	0.30	0.29	0.09
Social	0.23	0.16	0.31	1.00	0.44	0.27
Enterprising	0.17	0.36	0.31	0.49	1.00	0.27
Conventional	0.07	0.37	0.06	0.35	0.35	1.00

## Intercorrelations between the different parts of the questionnaire

The following table shows the interrelationships between the different parts of the questionnaire in Version 1. The first column of figures for example shows the Pearson product-moment correlations between scores on Parts A and B (Interest normative scores vs Interest ipsative scores) for each of the six scales.

Parts compared	A vs B	A vs C	A vs D	B vs C	B vs D	C vs D
	Interest normative	Interest normative	Interest normative	Interest ipsative	Interest ipsative	own skills
	Interest ipsative	own skills	importance to you	own skills	importance to you	importance to you
Realistic	0.49	0.39	0.11	0.35	0.10	0.45
Investigative	0.54	0.61	0.55	0.45	0.41	0.66
Artistic	0.49	0.49	0.47	0.32	0.28	0.68
Social	0.32	0.48	0.43	0.17	0.08	0.67
Enterprising	0.38	0.43	0.49	0.17	0.28	0.56
Conventional	0.51	0.32	0.31	0.15	0.18	0.59

The following 6 tables present correlations between all scales and specific parts of the questionnaire

A vs B	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.49	-0.11	0.13	0.00	-0.26	-0.28
Investigative	-0.04	0.54	-0.12	-0.27	-0.03	-0.13
Artistic	0.16	-0.12	0.49	-0.06	-0.19	-0.29
Social	-0.18	-0.11	-0.01	0.32	0.02	0.00
Enterprising	-0.26	0.08	-0.08	-0.06	0.38	-0.04
Conventional	-0.37	0.17	-0.29	-0.12	0.08	0.51

A vs C	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.39	0.05	0.15	-0.01	-0.05	-0.04
Investigative	0.16	0.61	0.02	0.08	0.22	0.25
Artistic	0.28	0.09	0.49	0.10	0.12	-0.02
Social	0.00	0.04	0.22	0.48	0.32	0.20
Enterprising	0.11	0.30	0.20	0.25	0.43	0.26
Conventional	-0.14	0.19	-0.06	0.13	0.12	0.32

A vs D	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.11	0.05	0.18	0.02	0.01	-0.00
Investigative	0.06	0.55	0.10	0.17	0.13	0.12
Artistic	0.14	0.01	0.47	0.09	0.13	-0.08
Social	0.08	0.03	0.20	0.43	0.20	0.13
Enterprising	0.21	0.27	0.20	0.24	0.49	0.16
Conventional	-0.04	0.28	-0.02	0.17	0.08	0.31

B vs C	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.35	-0.10	0.04	-0.14	-0.18	-0.22
Investigative	-0.10	0.45	-0.10	-0.02	0.14	0.17
Artistic	0.18	-0.13	0.32	0.04	-0.01	-0.16
Social	0.02	-0.24	-0.04	0.17	-0.03	-0.07
Enterprising	-0.14	0.08	-0.00	0.02	0.17	0.13
Conventional	-0.32	-0.11	-0.21	-0.03	-0.09	0.15

B vs D	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.10	-0.14	0.05	-0.12	-0.13	-0.15
Investigative	-0.04	0.41	-0.03	0.09	0.04	0.06
Artistic	0.07	-0.19	0.28	-0.01	-0.02	-0.21
Social	-0.01	-0.20	-0.06	0.08	-0.06	-0.01
Enterprising	0.03	0.10	-0.04	-0.00	0.28	0.14
Conventional	-0.14	-0.00	-0.19	-0.04	-0.09	0.18

C vs D	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
Realistic	0.45	0.17	0.13	0.06	0.25	0.10
Investigative	0.17	0.66	0.19	0.23	0.33	0.20
Artistic	0.17	0.08	0.68	0.30	0.29	0.06
Social	0.15	0.13	0.31	0.67	0.27	0.24
Enterprising	0.28	0.33	0.34	0.51	0.56	0.24
Conventional	0.23	0.41	0.17	0.41	0.28	0.59



## Construct validity

The following table shows the Pearson product-moment correlations of the 6 CII Version 1 Part- A standard scores with the four scales of the Type Dynamics Inventory.

	TDI simple continuous scales			
	EI	SN	TF	JP
Realistic	0.03	-0.08	0.17	-0.01
Investigative	0.21	0.09	-0.40	-0.12
Artistic	-0.01	0.18	0.27	0.15
Social	-0.50	-0.14	0.35	0.08
Enterprising	-0.44	0.08	0.03	0.10
Conventional	0.04	-0.22	-0.13	-0.34

Shaded cells are significant at  $p < 0.05$ .

It can be seen that of 24 coefficients computed, 10 coefficients are significant at  $p < 0.05$ . Of these, virtually all are in line with expectation. For example,

- respondents who score highly on CII Investigative tend to show preferences towards Introversion and Thinking
- respondents who score highly on CII Artistic tend to show preferences towards Intuition and Feeling
- respondents who score highly on CII Social tend to show preferences towards Extraversion and Feeling
- respondents who score highly on CII Enterprising tend to show preferences towards Extraversion
- respondents who score highly on CII Conventional tend to show preferences towards Sensing and Judgement.

The only statistically significant relationship which is not easily interpretable in terms of a priori expectations is that between CII Realistic and TDI Feeling.

## Section Nine - Normative data

Normative data was originally available from a sample of 394 respondents in a careers guidance setting. The majority were still at school and the remainder were seeking advice through the Government funded Connexions Service (which was disbanded and superseded by the National Careers Service). The respondents completed the questionnaire between February 2002 and February 2003. Subsequently the statistical details that relate to the questionnaire have been analysed on the sample of 5843 (see previous section). Since then a new version of the questionnaire has been developed and this has been standardised on a sample of 3540 respondents seeking career advice from up to 50 of the University Careers Services.

	Scale names		Version 1 Norms 2003 (N = 394)		Version 2 Norms 2014 (N = 3540)	
	PFS scale name	Holland scale name	Mean raw score	SD	Mean raw score	SD
1	Doing and implementing	Realistic	9.99	2.65	10.673	2.625
2	Thinking and investigating	Investigative	11.05	2.64	12.852	2.961
3	Creating and expressing	Artistic	10.85	2.98	9.963	3.032
4	Communicating and helping	Social	11.83	2.59	12.428	2.593
5	Persuading and influencing	Enterprising	11.09	2.64	10.861	2.776
6	Planning and organising	Conventional	10.32	2.96	11.159	2.847

The age and sex distribution of the sample were as shown in the following tables.

Age	Version 1 Norms 2003 (N = 394)	Version 2 Norms 2014 (N = 3540)
14-20	67.51	37.66
21-30	7.87	45.25
31-40	10.41	9.72
41-50	8.63	4.97
51-60	4.06	1.78
>60	0.76	0.08

Sex	Norms 2003 (N = 394)	Norms 2014 (N = 3540)
Male	39.75%	34.24%
Female	59.75%	65.76%

The raw score to STEN conversion table is shown below:

**Raw score to STEN score conversion table**

raw score	Realistic	Investigative	Artistic	Social	Enterprising	Conventional
0	1	1	1	1	1	1
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	1	1	1	1	1	1
4	1	1	1	1	1	1
5	1	1	1	1	1	1
6	2	2	1	1	2	2
7	4	3	3	2	3	3
8	5	4	4	3	4	4
9	6	5	5	4	5	5
10	7	6	5	5	6	5
11	7	6	6	5	6	6
12	8	7	7	6	7	7
13	9	7	7	7	7	7
14	9	8	8	7	8	8
15	10	9	8	8	8	8
16	10	9	9	9	9	9
17	10	10	10	10	10	10
18	10	10	10	10	10	10

Please note: Normative data for the CII-Dodec has been collected and will be published in the next edition of this User Guide.

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# Appendix-1 Product Synopsis

Product



## Career Interests Inventory (CII)

Motivating career exploration through personal understanding...

Interests are the most natural starting point when exploring the world of work. When we first start to ask ourselves 'what do I want to do?', our answers reveal what we see as being exciting, challenging and fun – in short, what we are interested in. Based on John Holland's widely used model of vocational preferences, the CII explores interests, competencies and work styles to provide a multi-faceted tool for supporting career exploration.

The PFS CII is an innovative assessment of career interests offering:

- an exploration of interests, competencies and work styles based on a unifying model of vocational preferences;
- normative and ipsative interpretation of interests;
- flexible administration and reporting, fully controllable by PFS users;
- attractive design to engage respondents and enhance the assessment experience;
- online or on paper tools;
- short completion times without compromising reliability;
- comprehensive range of reports and workbooks e-mailed to you immediately.

- competencies – self-report of key work-related skills and abilities;
- work styles – an assessment of preferred working styles.

### Opening up the world of work

The CII is an engaging self-report instrument for those starting the career exploration process. Aimed at younger people or others with minimal work experience, the CII acts as a catalyst at key decision points, guiding choices through enhancing self-understanding and encouraging exploration of the world of work.

Using Holland's model of vocational preferences, each preference is examined from three perspectives, so giving a rich and stimulating source of information for exploration of potential career areas:

- interests – a normative and ipsative assessment of interests, giving alternative benchmarks for interpretation;

PFS Career Interests Inventory (CII) at a glance
<b>Use to:</b> explore career interests, competencies and work styles
<b>Use for:</b> individual and group career exploration and guidance
<b>Use with:</b> ages 13 and above
<b>Administration:</b> Online and on paper with online scoring
<b>Timing:</b> Untimed, typical completion time 20 to 25 minutes
<b>Number of items:</b> Four sections with 93 items in total
<b>Reports:</b> Administrator's report, Explorer report & Career Investigator report
<b>Norm groups:</b> UK general population sample (N=3540)
<b>Reliability:</b> 0.71 – 0.93
<b>Training required:</b> BPS Test User Ability or available to qualified Teachers and Careers Advisers



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### Supporting career exploration

The CII acts as a focus for career exploration. Respondents are encouraged to widen their personal exploration by looking at how their competencies and work styles relate to their interests, so setting an agenda for potential development.

CII reports encourage research into potential careers, containing links to careers libraries and a range of online resources for further information. Prompts also encourage critical reflection on the CII results, so supporting respondents through the first stage of their career decision-making.

### Advanced analysis and reporting

The CII comes with a range of report options for administrators and respondents. Administrators' reports contain full summaries of the data from each section of the CII. Respondents' narrative reports provide career areas to explore, guidance on research jobs and links to further resources. A workbook option is also available for respondents, giving them a structured approach to their career exploration.

For users of the paper-based CII, responses are computer-scored through the PFS data entry facility, giving access to the full range of reports available from the online assessment.

### The online advantage

Our online system works the way you want to, giving you the option of using the CII at a time that suits your guidance and development needs, controlling what reports are produced and who receives them.

### Designed for you

The PFS assessment system can be readily tailored to your needs. Company sponsored entry pages can be designed to reflect your branding and company logos included on reports.

### Training required

The CII is available to you if you are Test User Ability trained or a qualified Teacher or Careers Adviser.

If you require training, then join us on one of our Test User Ability training courses, which combine academic rigour with practical experience to build your skills as a confident user of a range of tests and assessments including the CII and the full range of PFS Reasoning Tests.



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