



# Type and entrepreneurship

A research study from  
The Myers-Briggs Company

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## Executive summary

### Purpose of the research

This research project was carried out by John Hackston, Head of Thought Leadership at The Myers-Briggs Company. The aim was to investigate the relationship between personality and entrepreneurship. In particular, the intention was to develop guidelines to help those individuals who know their psychological type to apply this self-awareness to become a more effective entrepreneur.

This report is designed for those with some knowledge of psychological type or the Myers-Briggs Type Indicator® (MBTI®) assessment. A brief description of psychological type and the MBTI model is provided in Appendix 2.

### Summary of findings

- Individuals of any MBTI type preference can and do become entrepreneurs; in our study, the group classified as entrepreneurs included people of every type. However, those with a preference for Intuition and Perceiving were significantly more likely to have become entrepreneurs than those with a preference for Sensing or Judging. In terms of dominant functions, the most likely to have become an entrepreneur were Extraverted Intuition types (Explorers – ENFP and ENTP) and the least likely were Introverted Sensing types (Conservers – ISTJ and ISFJ).
- Though some types may be more likely than others to become entrepreneurs, there were no statistically significant differences between entrepreneurs of different type preferences in terms of how successful they were (as measured by the financial performance of their organization). No one MBTI type performs significantly better than any other MBTI type in terms of organizational performance.
- There was, however, a relationship between an individual's MBTI type and the attributes they felt had either contributed to their success as an entrepreneur, or held them back. A person of each type preference, therefore, has their own likely strengths and possible development needs as an entrepreneur. These results have been used to produce advice for each dominant function on what strengths could be capitalized on, and what aspects of preference or behaviour could be an issue.
- We also measured each person's entrepreneurial orientation, on five dimensions: Creativity, Risk-taking, Impulsivity, Competitive ambition, and Autonomy. We found that:
  - The entrepreneurs in the group showed a significantly higher orientation for Creativity, Risk-taking, Impulsivity and especially Autonomy than did non-entrepreneurs
  - Competitive ambition did not distinguish between those who were or were not entrepreneurs, but did relate to those who saw themselves as more entrepreneurial
  - People with a preference for Extraversion, Intuition, Thinking and Perceiving tended to show greater levels of entrepreneurial orientation.
- Organizations owned or co-owned by entrepreneurs were seen as more entrepreneurial in character than other organizations. The data suggest that entrepreneurs can influence how entrepreneurial their organizations are, and that the higher the degree of entrepreneurial orientation the entrepreneur has (especially in terms of Creativity and Risk-taking), the more entrepreneurial their business will be.

- More entrepreneurial organizations were in general performing better than less entrepreneurial organizations.
- As employees, Intuition types appear to be particularly attracted to more entrepreneurial organizations.

## Conclusions

A need to be one's own boss seems to be a major distinguishing factor of entrepreneurs, with (to a lesser extent) an orientation towards creativity, taking risks and being impulsive. An orientation towards competition and beating the opposition appears to be much less important, but may help drive financial performance for those who do become an entrepreneur.

Business owners with higher level of entrepreneurial orientation will, on average, have created more entrepreneurial organizations. The research also suggests that more entrepreneurial businesses tend to perform better financially.

While people with some type preferences are more likely to become entrepreneurs than others, an individual's personality type does not determine how successful they may be as an entrepreneur. What is perhaps more important is how they use their self-awareness and self-knowledge in order to become as successful an entrepreneur as possible. By drawing on the guidelines included in this report, those who know their MBTI type can capitalize on their strengths, and avoid their blind spots, on the journey to becoming an entrepreneur.

## Introduction and methodology

### Introduction

#### Purpose of the research

The overall purpose of this study was to help individuals understand the ways in which their particular personality type could help (or hinder) them to become entrepreneurs, and to help those who are already entrepreneurs to develop strategies to work more effectively. We did not presuppose that there is one type of 'entrepreneurial personality', or that people with one particular set of personality type preferences would be more successful than others; we wished to help entrepreneurs of any personality type apply their particular gifts to the best advantage.

Entrepreneurs contribute significantly to the world economy (Kelley, Singer, & Herrington, 2016). The new businesses they create can drive innovation and often result in the formation of new jobs, thereby increasing economic activity; some entrepreneurs can create new markets or industry sectors. Helping entrepreneurs to understand themselves better, and hence work more effectively, should therefore give a real economic benefit.

Though entrepreneurs are sometimes seen as very distinct from other business leaders or managers, they may actually not be so very different (Ernst & Young, 2011). What then is an 'entrepreneur'? Typically a business-focussed definition is used, as for example "the founder, owner, and manager of a small business" (Zhao, Seibert, & Lunpkin, 2010), and this is the approach we took in this research<sup>1</sup>. We did however also look at those who saw themselves as entrepreneurs but who did not fit this definition.

#### Entrepreneurial orientation and intent

Previous research shows that some individuals are more likely to want to become entrepreneurs than others (Thompson, 2009). A number of dimensions or scales of entrepreneurial orientation have been suggested, including:

- Entrepreneurial Proactivity, Entrepreneurial Creativity, Entrepreneurial Opportunism and Entrepreneurial Vision (Ahmetoglu, Leutner, & Chamorro-Premuzic, 2011)
- Autonomy, Innovativeness, Risk Taking, Proactiveness and Competitive Aggression (Lumpkin & Dess, 1996)

In our survey, we included questions designed to measure the five dimensions identified by Lumpkin and Dess. For those who had started, or were thinking of starting, their own business, we also asked why they had done this or were thinking of doing this.

Entrepreneurial orientation may also apply to organizations (Wiklund & Shepherd, 2005). We asked respondents a number of questions about the entrepreneurial orientation of their organization.

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<sup>1</sup> For a longer definition of 'entrepreneur' and 'entrepreneurship', see Ahmad & Seymour, 2008:

*Entrepreneurs are those persons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.*  
*Entrepreneurial activity is the enterprising human action in the pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets.*  
*Entrepreneurship is the phenomenon associated with entrepreneurial activity.*

## Personality and personal attributes

Previous research has investigated personality differences between entrepreneurs and managers (Zhao & Seibert, 2006) and looked at the relationship of general personality to entrepreneurial intention and performance as an entrepreneur (Zhao, Seibert, & Lunpkin, 2010), and 'entrepreneurial personality' (Leutner, Ahmetoglu, Akhtar, & Chamorro-Premuzic, 2014). Much of this research has been based around the Five-Factor Model of personality (the 'Big Five'), though there has been a limited amount of research using the psychological type approach (for example Reynierse, 1997; Johnston, Andersen, Davidge-Pitts, & Ostensen-Saunders, 2009; Thompson, Schaubhut, Cooley, & Arneson, 2015).

Research has not to date focused on how to help individuals of different personality types use their individual gifts to become entrepreneurs; this was one of the principal aims of the current study. To aid in identifying the likely strengths and possible blind spots of each type, we asked respondents to identify personal characteristics that might lead to success or failure as an entrepreneur.

## Data collection

To carry out the study, we created an online survey. Participants were asked to give their MBTI best-fit (validated) type and some demographic information. In addition, they completed a number of questions about themselves and their organizations, including:

- Multiple-choice questions to assess their entrepreneurial orientation
- The extent to which they and others saw themselves as an entrepreneur
- Rating of their organization against a number of entrepreneurial factors
- Function, objectives, ownership, and performance of their organization
- Whether they had ever set up their own business, and for those who had or were thinking of doing so:
  - Why they were thinking of, or had done so
  - Objectives of the business
  - Personal characteristics contributing to success or failure.

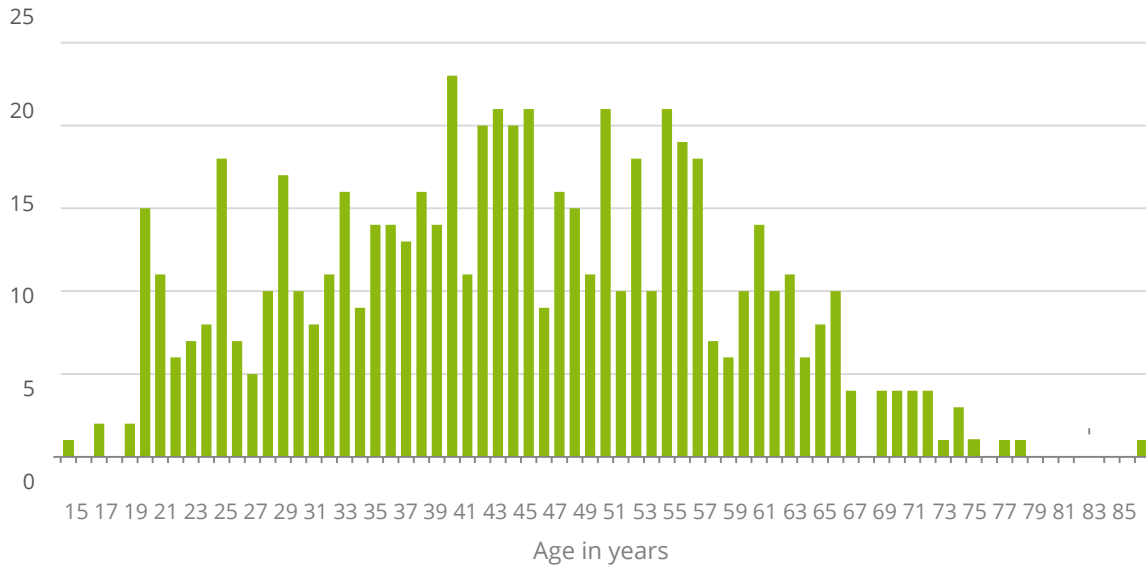
The survey was publicized to type users via social media, our websites and direct communication to workshop participants. The analysis is based on data from 584 people who completed the questionnaire and knew their best-fit type.

## Results

### The sample

#### Group demographics

70% of the group were female, and 29% male, with 1% choosing “other” or “I’d rather not say”. Age ranged from 15 to 85 years, with an average (mean) age of 44 years:

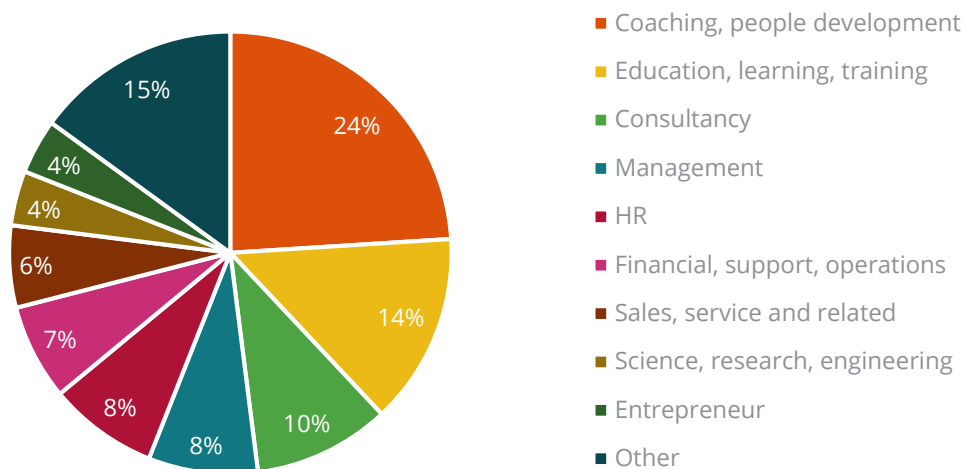


Most of the group had a people-related role, in areas such as coaching, people development, education and training, or consultancy. Four percent did however say that their job was to be an entrepreneur.

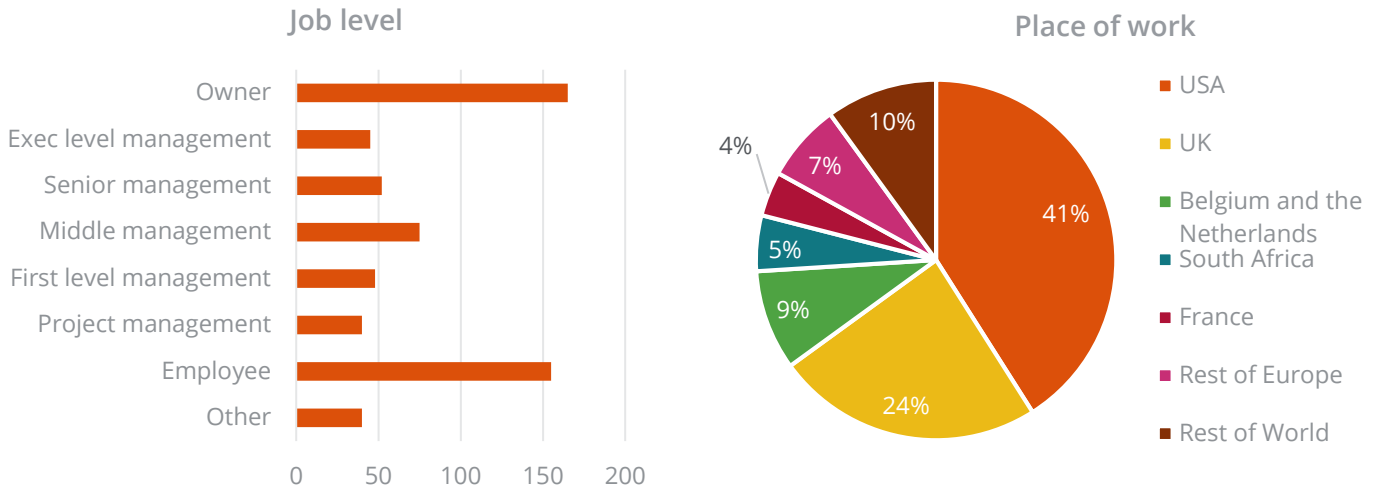
The majority worked for a consultancy or services organization.

Over half of the group (54%) were employed full-time, with a further 26% being self-employed.

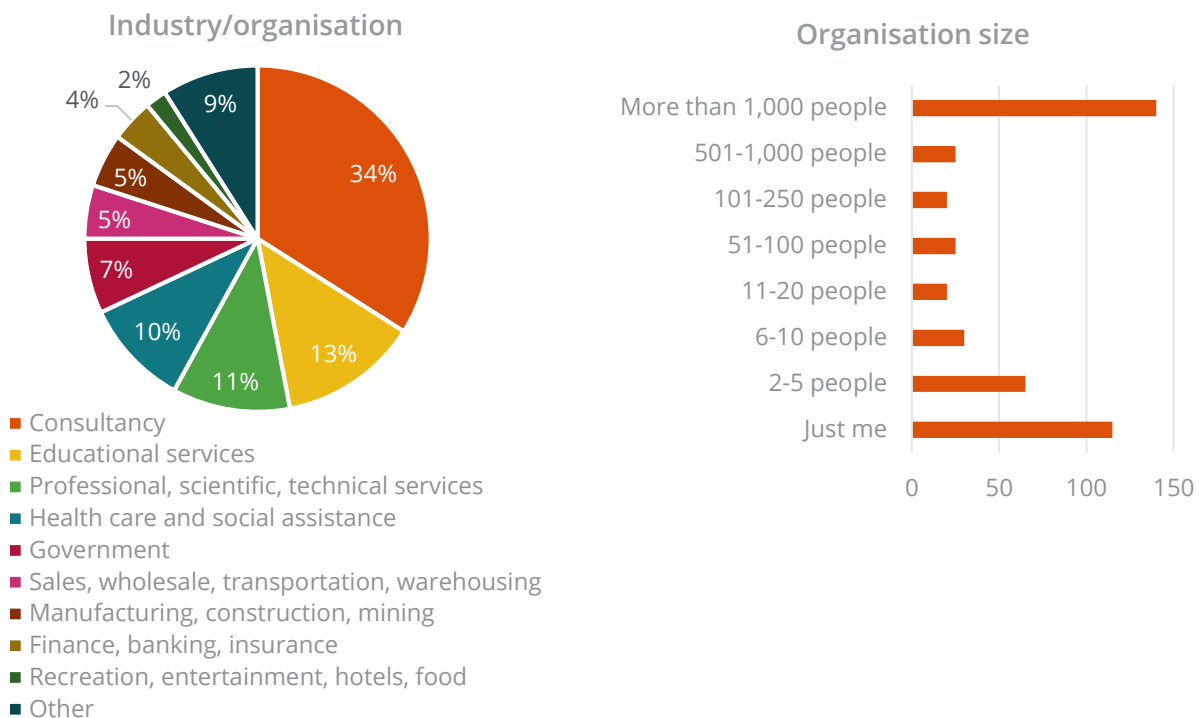
#### Job type



Job level varied from employee up to executive level and owner. The majority worked principally in the US or UK.



Most respondents worked for a consultancy or services organization. Organizations varied widely in size.



The makeup of the group reflects the demographics of those likely to be most interested in type and in type research.



### Type distribution

584 individuals knew their best-fit type. A type table for this group is shown below:

Type	N	%							
E	281	48.3%	<b>ISTJ</b> N=43 7.4% SSR=0.54	<b>ISFJ</b> N=19 3.0% SSR=0.24	<b>INFJ</b> N=46 7.9% SSR=4.65	<b>INTJ</b> N=79 13.5% SSR=9.64			
			I	303	51.7%	<b>ISTP</b> N=7 1.2% SSR=0.19	<b>ISFP</b> N=4 0.7% SSR=0.11	<b>INFP</b> N=48 8.2% SSR=2.56	<b>INTP</b> N=57 9.8% SSR=4.08
						S	150	25.6%	<b>ESTP</b> N=12 2.1% SSR=0.36
			N	434	74.4%				<b>ESTJ</b> N=29 5.0% SSR=0.48
T	318	54.5%				F	266	45.5%	J
			P	204	47.1%				

The SSR (Self-Selection Ratio) compares the sample to the general population. Types with an SSR greater than 1 are over-represented in this group compared with the general population<sup>2</sup>. All Intuition types are therefore over-represented; this is not uncommon in a group of people interested in type. However, there are sufficient numbers of each type in the sample to carry out meaningful analyses.

<sup>2</sup>The UK general population was used as a reference group

## Entrepreneurial identity and orientation

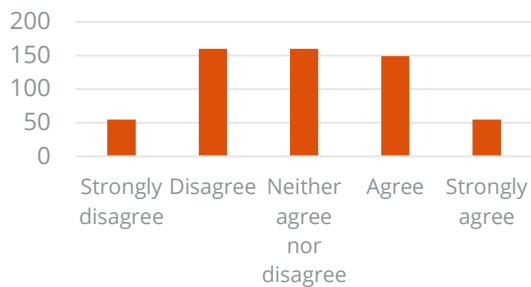
### Entrepreneurial identity

We asked respondents several questions relating to entrepreneurship, including whether they:

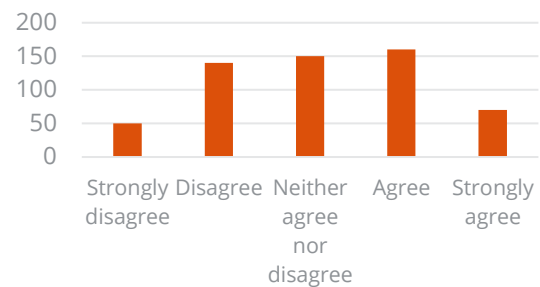
- Saw themselves as entrepreneurs
- Felt they were seen as an entrepreneur by others
- Had set up their own business or were thinking of doing so
- Owned or co-owned their business.

In addition, 'entrepreneur' was offered as an option under job role. The results are shown below:

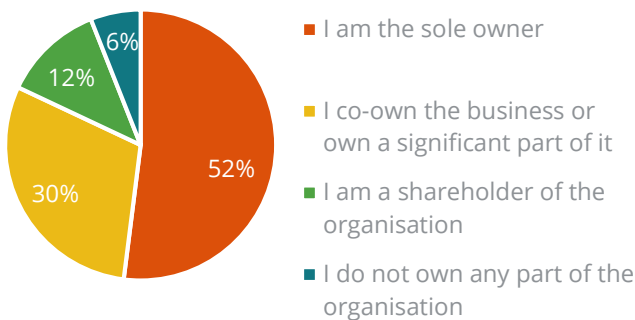
People have often described me as an entrepreneur



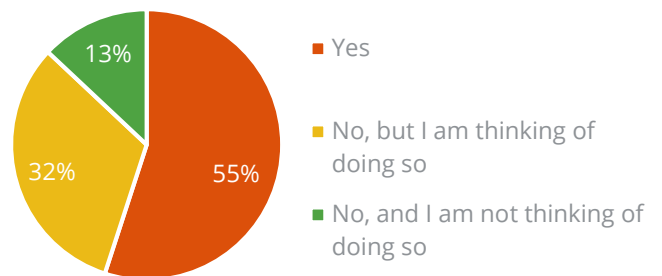
I would consider myself to be an entrepreneur



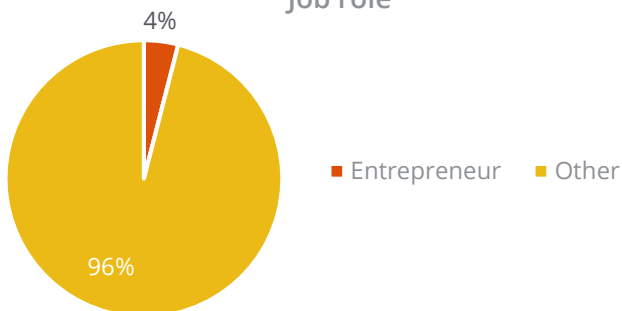
Who owns your organization?



Have you ever set up your own business?



Job role



Some researchers have developed a multi-faceted definition of entrepreneurship (Gartner, 1990), or emphasized the role of entrepreneurial leaders in organizations (Ernst & Young, 2011). Most research however defines an entrepreneur in commercial terms, as for example “the founder, owner, and manager of a small business” (Zhao, Seibert, & Lunpkin, 2010), and this is the approach we took in the current research. We calculated two indices of entrepreneurship. For the first index, we defined entrepreneurs as those who chose either “I am the sole owner” or “I co-own the business or own a significant part of it” to the ownership question AND “Yes” to the question “have you ever set up your own business?” On this basis, 167 people, just under a third of the group, qualified as entrepreneurs. For the second index, we also took into account self-perception of entrepreneurship, intention of starting one’s own business and size of organization<sup>3</sup> in order to create an entrepreneurship score.

The data showed that while most of those who thought of themselves as entrepreneurs were classified as such by the first index, there was a discrepancy. While just less than a third of the group were classified as entrepreneurs, 41% of the group agreed or strongly agreed with the statement “I would consider myself to be an entrepreneur”:

Classification as an entrepreneur	“I would consider myself to be an entrepreneur”			Total
	Agree or strongly agree	Neither agree nor disagree	Disagree or strongly disagree	
Yes	101	37	29	167 (32%)
No	112	101	145	358 (68%)
<b>Total</b>	213 (41%)	138 (26%)	174 (33%)	525 (100%)

Those who see themselves as entrepreneurs, but who work within organizations, may in effect be seeing themselves as ‘intrapreneurs’ (Ross & Unwalla, 1986). The characteristics of this group are described in a later section of this report, *‘Intrapreneurs’ – the entrepreneur within?*

<sup>3</sup> Among those who had set up their own business, those who employed several people were seen as more close to the definition of an entrepreneur than those who had simply set up on their own.

## Entrepreneurial orientation

We developed a number of questions to measure the five dimensions of entrepreneurial orientation identified by previous research (Lumpkin & Dess, 1996), and used these to produce scores on each of these dimensions. All five scales showed acceptable internal consistency reliability (coefficient alpha: Cronbach, 1951):

Scale	Items	Reliability
<b>Creativity</b>	I have more ideas than most other people I am a creative person I usually spot new trends before other people do	0.727
<b>Risk taking</b>	I'm comfortable taking financial risks I am prepared to take risks with my career If you don't take significant risks you can never really succeed in life If you don't act till you are certain of the outcome, you have probably missed an opportunity I see opportunities where others see threats	0.725
<b>Impulsivity and novelty seeking</b>	I enjoy doing new or different things in my working life I often act on impulse I always plan any big decision carefully (-) I'm always careful with money (-) I get bored easily	0.622
<b>Competitive ambition</b>	Success is very important to me I am more competitive than most people I have a clear vision for the future I create my own opportunities I can be aggressive at times I'm more likely to implement my ideas than most people are to implement theirs Beating the opposition is really important to me	0.711
<b>Autonomy</b>	I dislike being told what to do I often don't follow the rules I enjoy being my own boss I find it difficult to take orders from other people	0.691

While there is an inter-correlation between these dimensions, they are sufficiently distinct to be treated as separate scales.

	Creativity	Risk-taking	Impulsivity	Competitive	Autonomy
Creativity	1	0.402	0.303	0.249	0.330
Risk taking		1	0.409	0.456	0.320
Impulsivity			1	0.099	0.352
Competitive				1	0.117
Autonomy					1

Four of the scales showed a significant difference between entrepreneurs and non-entrepreneurs, and all showed a correlation with the entrepreneurial score.

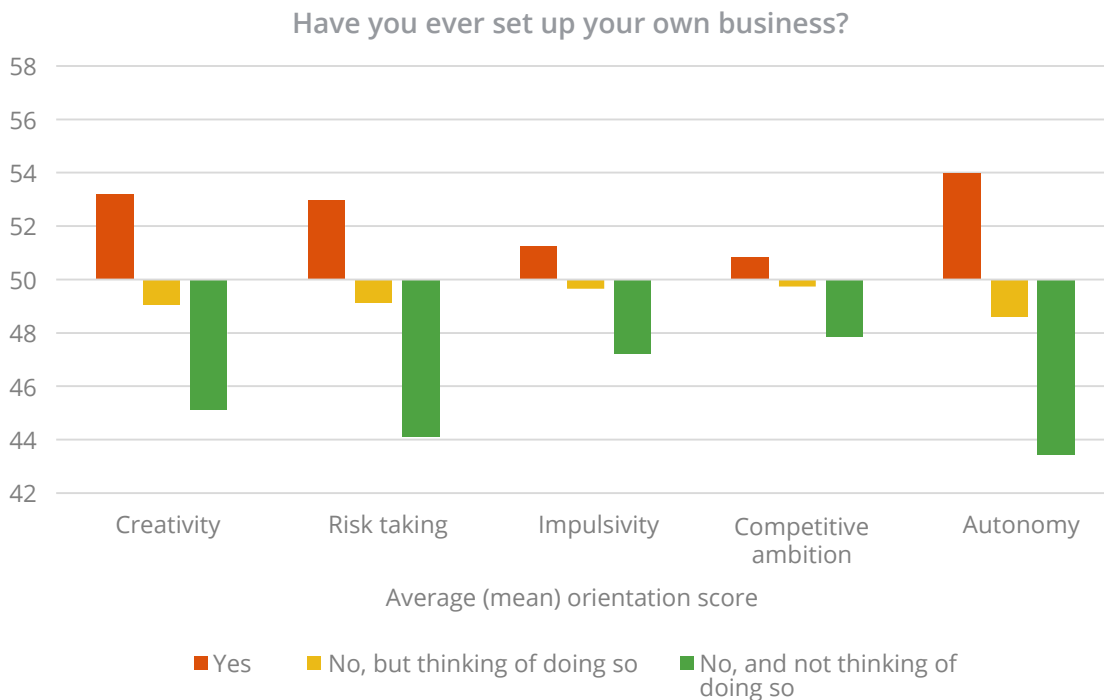
	Mean for entrepreneurs	Mean for 'not entrepreneurs'	Sig level	Cohen d <sup>4</sup>	Correlation with entrepreneur score
Creativity	52.60	49.01	**	0.36	0.247**
Risk taking	53.47	48.05	**	0.54	0.390**
Impulsivity	51.20	49.21	*	0.20	0.141**
Competitive	50.36	49.56	NS	0.08	0.175**
Autonomy	55.30	49.49	**	0.78	0.434**

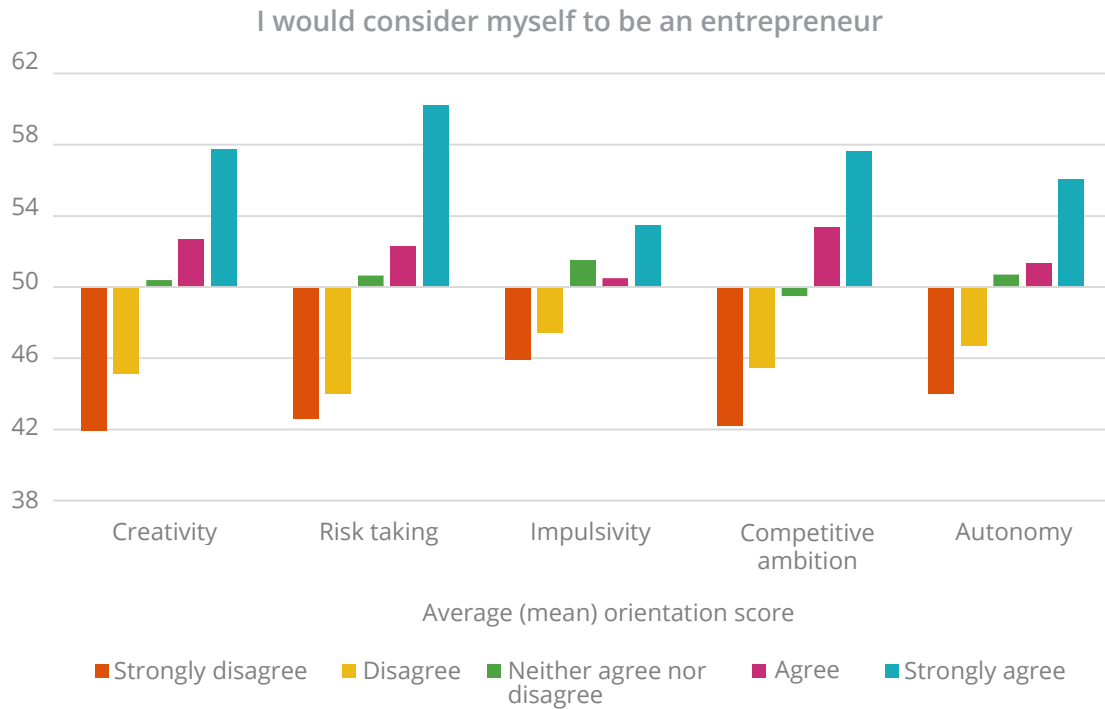
\*\* - significant at the 1% level \* - significant at the 5% level.

The entrepreneurs in the group showed a significantly higher orientation for creativity, risk taking, impulsivity and especially autonomy, than the non-entrepreneurs. There was no significant difference on competitive ambition, although this scale did show a correlation with the entrepreneur score. Closer inspection of the data suggests that, compared with other scales, the average (mean) scores for competitive ambition differ only slightly between those who had set up their own business, those who were thinking of doing so, and those who were not thinking of doing so. However, this varied to a much greater extent when respondents were asked if they or others saw them as entrepreneurs.

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<sup>4</sup> Cohen's d (Cohen, 1988) is a measure of effect size – in this case, the practical significance of a difference between two means. A d of 0.2 is considered small, 0.5 medium, 0.8 large and 1.2 very large.





In summary, an orientation towards creativity, risk taking, autonomy, and to a lesser extent impulsiveness, relate to whether an individual is an entrepreneur; competitive ambition may relate more to whether an individual sees themselves as or believes they are seen by others as an entrepreneur. It may be that those who were more competitive or ambitious were more ready to see themselves in this light.

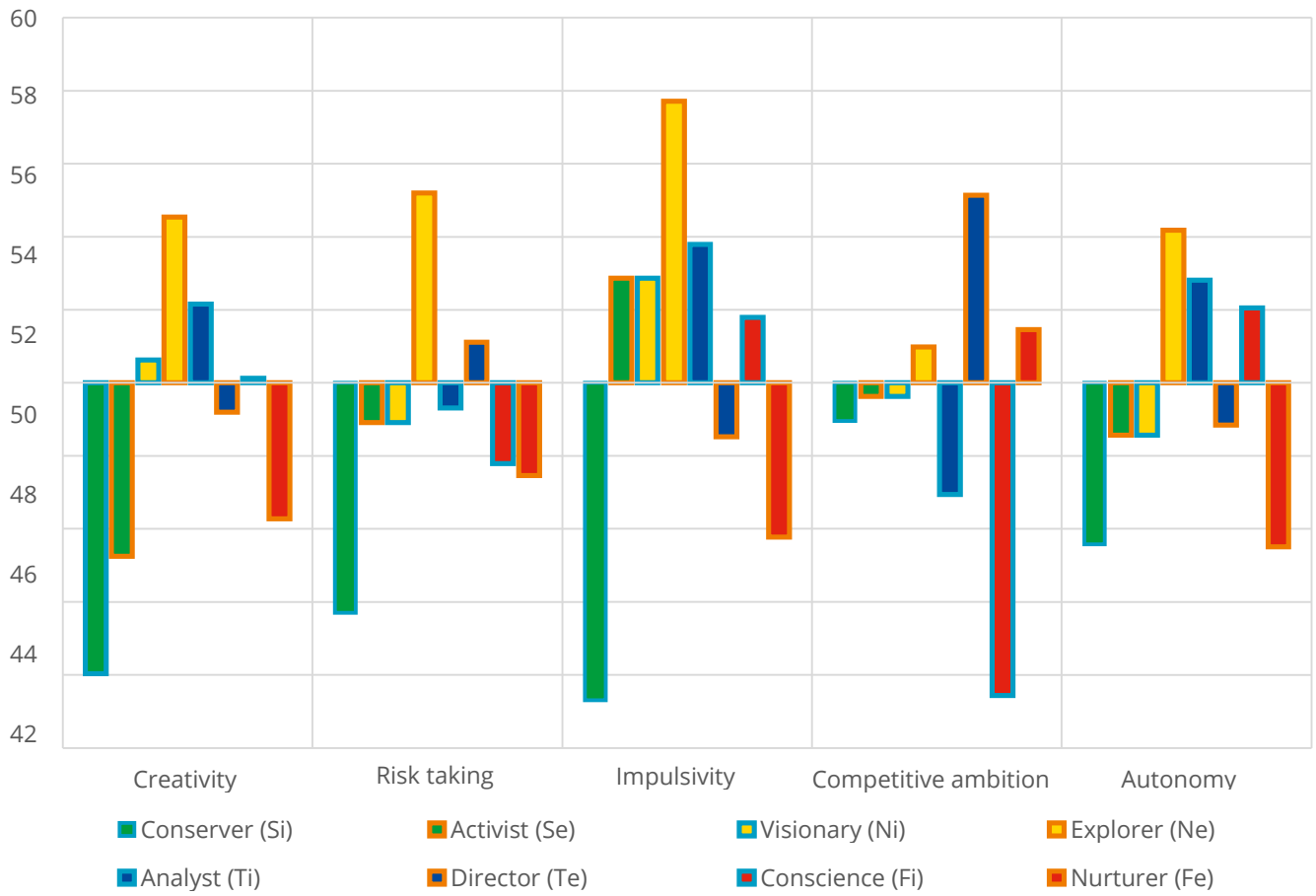
### Relationship with personality

T-tests were used to look at differences in entrepreneurial orientation at the type dichotomy level – do Extraverts show a higher degree of orientation towards impulsivity, for example. The statistically significant results (based on an independent samples t-test) are shown below:

Orientation	E-I	S-N	T-F	J-P
Creativity		N more than S Cohen d 0.98		P more than J Cohen d 0.43
Risk taking	E more than I Cohen d 0.47	N more than S Cohen d 0.57		P more than J Cohen d 0.39
Impulsivity	E more than I Cohen d 0.51	N more than S Cohen d 0.55		P more than J Cohen d 0.98
Competitive ambition	E more than I Cohen d 0.45		T more than F Cohen d 0.45	J more than P Cohen d 0.31
Autonomy		N more than S Cohen d 0.66	T more than F Cohen d 0.21	P more than J Cohen d 0.49

A one-way analysis of variance showed a significant effect of MBTI favorite process with all five orientation scores, as shown below:

Average (mean) orientation scores by dominant function





To summarize these results:

- All four type dichotomies show a relationship with entrepreneurial orientation, but especially J-P and S-N. Extraversion, Intuition, Thinking and Perceiving types tend to show greater levels of entrepreneurial orientation, except for Competitive ambition.
- Favorite processes show a clear relationship to entrepreneurial orientation, specifically:
  - Conservers (dominant Introverted Sensing) show on average the least orientation for Creativity, Risk taking, and Impulsivity, and the second least for Autonomy
  - Activists (dominant Extraverted Sensing) on average have a mid-range to low score on all orientations except Impulsivity
  - Visionaries (dominant Introverted Intuition) are mid-range on most orientations
  - Explorers (dominant Extraverted Intuition) show on average the greatest orientation for Creativity, Risk taking, Impulsivity, and Autonomy
  - Analysts (dominant Introverted Thinking) show on average the second highest orientation for Impulsivity and for Autonomy
  - Directors (dominant Extraverted Thinking) show on average the greatest orientation for Competitive ambition
  - Consciences (dominant Introverted Feeling) show on average the least orientation for Competitive ambition
  - Nurturers (dominant Extraverted Feeling) show on average the least orientation for Autonomy.

Within the group, those with a preference for Intuition and Perceiving were significantly more likely to actually have become entrepreneurs than those with a Sensing or Judging preference, though the differences were small in real terms.

Entrepreneur?	Total group	E	I	S	N	T	F	J	P
Yes	34%	37%	30%	25%	36%	35%	32%	29%	38%
No	66%	63%	70%	75%	64%	65%	68%	71%	62%
Significance ( $\chi^2$ )		NS		p=0.027		NS		p=0.034	

In terms of dominant functions, the most likely to be an entrepreneur were Extraverted Intuition types (Explorers), and the least likely were Introverted Sensing types (Conservers).

	N <sup>e</sup>	F <sup>i</sup>	T <sup>e</sup>	T <sup>i</sup>	N <sup>i</sup>	F <sup>e</sup>	S <sup>e</sup>	S <sup>i</sup>
Percent of function within entrepreneurs	44	37	36	33	29	28	26	23

This is broadly in line with the findings of Reynierse (1997).

### Gender

Men were no more likely than women to be entrepreneurs; however men were more likely than women to agree or strongly agree with the questions “people have often described me as an entrepreneur” and “I would consider myself to be an entrepreneur”.

Men scored significantly higher than women on the entrepreneurial orientations of Creativity and Competitive ambition (based on an independent-samples t-test). These findings are broadly in line with previous research (Sexton & Bowman-Upton, 1990).

### Age

The entrepreneur group were on average significantly older than the non-entrepreneurs (based on an independent-samples t-test). The mean age of entrepreneurs was 53 years, compared with 42 for non-entrepreneurs. Older people were also more likely to agree or strongly agree to the questions “people have often described me as an entrepreneur” and “I would consider myself to be an entrepreneur”.

There are statistically significant correlations between age and three of the dimensions of entrepreneurial orientation:

	Creativity	Risk taking	Impulsivity	Competitive	Autonomy
Correlation with age	0.163**	0.038	0.101*	-0.072	0.271**

\*\* - significant at the 1% level \* - significant at the 5% level.

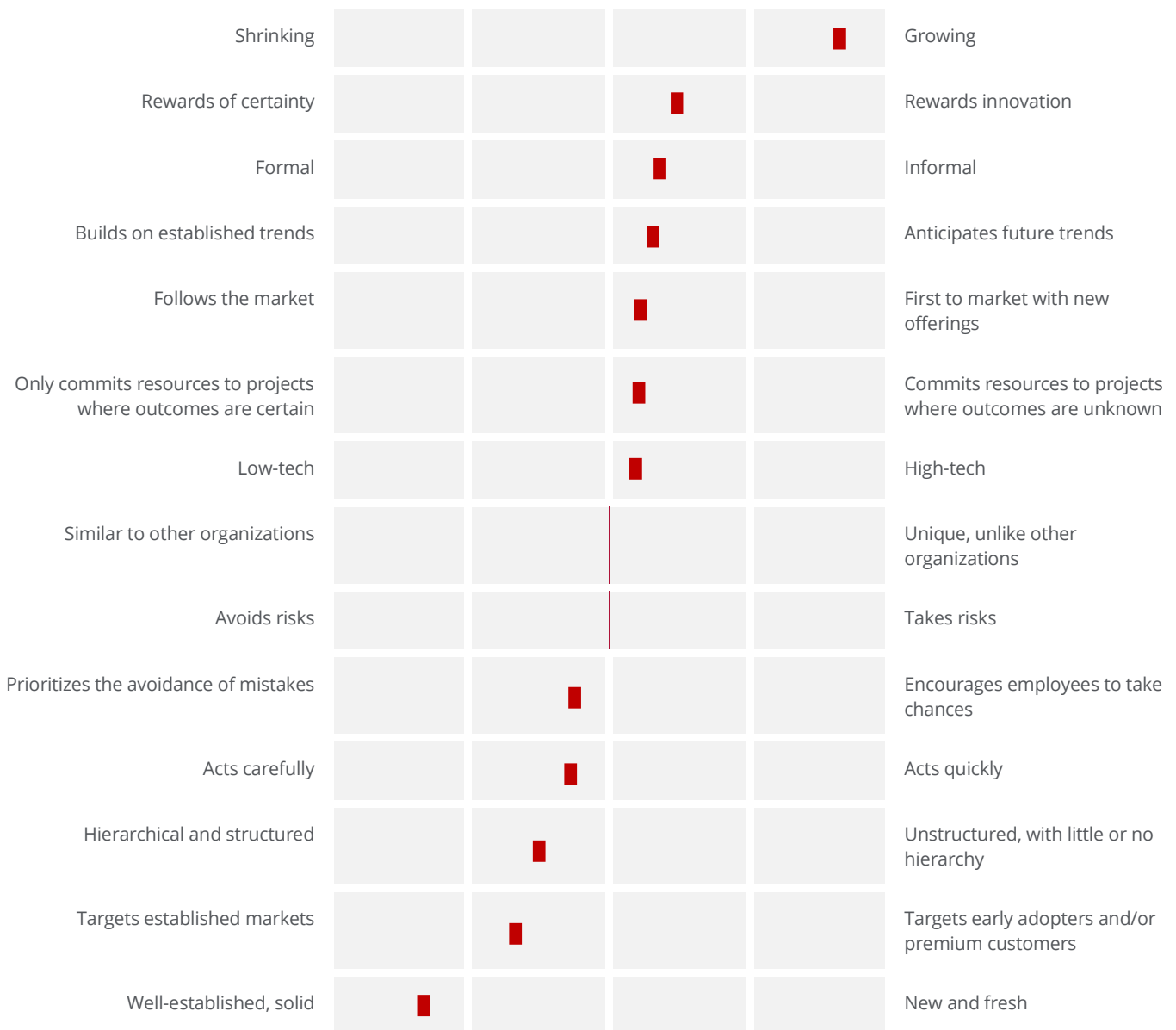
This suggests that older people in the group have a greater orientation towards autonomy.

# The entrepreneurial organization

## Overview

Entrepreneurs operate within businesses (even when they are, at least to begin with, the only employee of their business) and it is this business which succeeds or fails in the commercial world. Some researchers have therefore argued that it is important to look at how entrepreneurial a business or organization is (Covin & Slevin, 1991). More entrepreneurial businesses may be less formal, structured and hierarchical than other organizations, more willing to take risks, more agile, more tolerant of ambiguity, and more likely to be working in a new, innovative or cutting-edge field. In our survey, we asked respondents to rate their organization, across a number of dimensions, on a scale between two alternatives. For example, on a scale between “rewards certainty” and “rewards innovation”, where would they place their organization? The chart below shows the average (mean) score for each of these questions for the whole group.

Organizational characteristics



The scores for each respondent were averaged to give a total organizational entrepreneurship score. This scale had good internal consistency reliability (alpha = 0.878).

### Relationship with entrepreneurial identity and orientation

Not surprisingly, the organizations of those classed as entrepreneurs were seen as significantly more entrepreneurial overall, and significantly more entrepreneurial on all the individual organizational questions except for Shrinking-Growing (no significant difference) and Low-tech-High-tech (non-entrepreneurial organizations were more high-tech, possibly reflecting the number of small businesses in the entrepreneur sample).

Organizational characteristic	Mean for entrepreneurs	Mean for non-entrepreneurs	Sig level	Cohen d
Shrinking-growing	68.46	64.89	NS	0.36
Rewards certainty-rewards innovation	66.13	48.84	**	1.73
Formal-informal	71.78	44.35	**	2.74
Builds on established-anticipates future trends	60.88	49.15	**	1.17
Follows the market-First to market	58.37	48.76	**	0.96
Only commits to certain-Commits to unknown	63.03	46.22	**	1.68
Low-tech-High-tech	48.03	52.84	*	-0.48
Similar to other organizations-Unique	58.29	46.71	**	1.16
Avoids risks-Takes risks	58.21	45.81	**	1.24
Avoids mistakes-Encourages taking chances	65.41	39.37	**	2.60
Acts carefully-Acts quickly	60.26	40.66	**	1.96
Hierarchical, structured-Unstructured	79.96	28.82	**	5.11
Targets established-Targets early/premium	54.23	38.94	**	1.53
Well established, solid-New and fresh	55.79	24.75	**	3.10
Average organizational entrepreneurship	62.40	44.19	**	1.82

\*\* - significant at the 1% level \* - significant at the 5% level.

Some of these differences are extremely large; in particular, entrepreneurs tend to see their organizations as very much more unstructured, new and fresh, informal, and encouraging of taking chances. However, almost all these differences can be considered large and as having a practical impact. In summary, entrepreneurs see their organizations as significantly more entrepreneurial.

For entrepreneurs, owning or co-owning their own business, there was a statistically significant correlation between their own entrepreneurial orientations, in particular Creativity and Risk taking, and how entrepreneurial they felt their organization to be (as measured by the organizational entrepreneurship score). For other respondents, there was no significant correlation.

	Creativity	Risk taking	Impulsivity	Competitive	Autonomy
Entrepreneurs	0.529**	0.606**	0.297**	0.338**	0.285**
Non-entrepreneurs	-0.023	-0.040	-0.017	-0.048	-0.100

\*\* - significant at the 1% level \* - significant at the 5% level.

In other words, and with the caveat that this data is based on self-report:

- Entrepreneurs can influence how entrepreneurial their organizations are
- The more entrepreneurially orientated the entrepreneur is, the more entrepreneurial their organization will be.

Creativity and Risk taking in particular also correlated highly with individual characteristics, including:

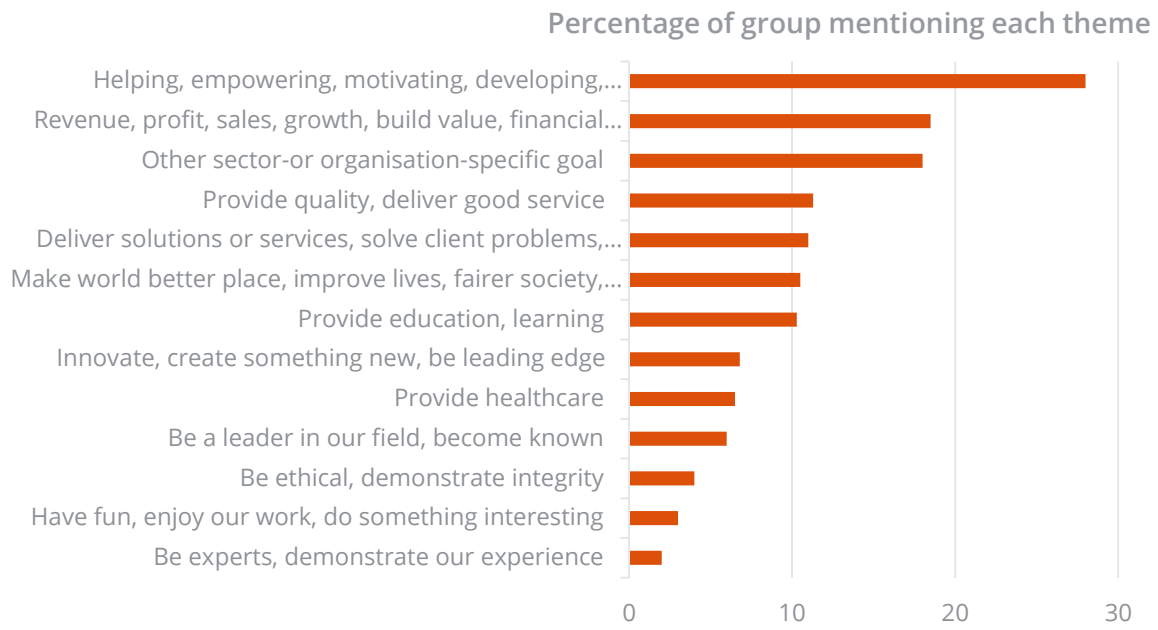
- Both Creativity and Risk taking with Rewards innovation (r=0.483 and 0.485)
- Risk taking with Takes risks (r=0.628), Encourages taking chances (r=0.521), and Acts quickly (r=0.434)
- Creativity with Anticipates future trends (r=0.471) and First to market (0.436).

For all organizational characteristics except Shrinking–Growing, smaller organizations were in general seen as more entrepreneurial than larger organizations.



### Organizational goals

Respondents to the survey were asked “in a few words, what are the main goals or objectives of your organization?” A wide range of responses were received, and categorized into 13 themes:



The themes reflect the makeup of the sample, and the types of organizations included in the study.

Respondents from more entrepreneurial organizations were more likely to mention goals from the following themes:

- Helping, empowering, motivating, developing or coaching others
- Deliver solutions or services, solve client problems, deliver consultancy
- Make the world a better place, improve lives, have a fairer society, sustainability
- Innovate, create something new, be leading edge
- Have fun, enjoy work, do something interesting

Those from less entrepreneurial organizations were more likely to mention the following themes:

- Revenue, profit, sales, growth build value, financial security
- Provide quality, deliver good service
- Healthcare, education, learning, other sector- or organization-specific themes

Compared with non-entrepreneurs, the goals mentioned by entrepreneurs were more likely to include the following themes:

- Helping, empowering, motivating, developing or coaching others
- Providing education, learning
- Providing healthcare
- Other sector- or organization-specific goals
- Having fun, enjoying work, doing something interesting

### Relationship with personality

T-tests were used to look at differences in organizational entrepreneurship at the type dichotomy level. Overall, more entrepreneurial organizations were more likely to contain individuals with preferences for Extraversion, Intuition, and Perceiving. Specifically:

- Compared to Introverts, Extraverts are more likely to work in organizations which are rated as likely to act quickly and as encouraging taking chances.
- Compared to those with a Sensing preference, Intuition types tend to be found in organizations more entrepreneurial overall, and in particular those rated as newer (rather than well established), more willing to take risks, being first to market, more unstructured, rewarding innovation, anticipating trends, targeting early or premium customers, being informal, and encouraging taking chances.
- There were no statistically significant differences between those with a Thinking preference, and those with a Feeling preference.
- Compared to those with a Judging preference, Perceiving types tend to be found in organizations more entrepreneurial overall. In particular, those rated as newer (rather than well-established), more unstructured, as anticipating trends, more likely to act quickly, targeting early or premium customers, able to commit resources to projects where outcomes are unknown, being informal, and encouraging taking chances.

The total group contains both entrepreneurs, owning or co-owning a business that they have created, and non-entrepreneurs working within an organization. Within the entrepreneur group, we might expect a relationship between organizational entrepreneurship and personality, as entrepreneurs may, at least to some extent, shape their own business to be congruent with their own personality. However, do non-entrepreneurs of particular personality types self-select into

more entrepreneurial organizations? The T-test analysis was repeated within the non-entrepreneur sample. Within this group:

- There were no statistically significant differences between Extraversion and Introversion types.
- Compared to those with a Sensing preference, Intuition types tend to be found in organizations more entrepreneurial overall, and in particular those rated as new (rather than well established), more unstructured, more informal, and more encouraging of employees taking chances.
- Compared with those with a Thinking preference, those with a Feeling preference tend to be found in organizations seen as unique and different from other organizations.
- There were no statistically significant differences between those with a Judging preference, and those with a Perceiving preference.

It may therefore be that as employees, Intuition types are particularly attracted to more entrepreneurial organizations.

The research also suggested that to some extent, people with different type preferences tended to see their organizational goals in different ways, or tended to belong to organizations with differently themed organizational goals. The table below shows which types were over-represented for each theme where there was a statistically significant difference (based on  $\chi^2$  analysis).

Theme	Preference pairs	Functional pairs	Dominant functions
Helping, empowering	E, F	NF	Ne, Fi
Revenue, profit, sales, etc.	T	ST, NT	(None)
Be a leader in our field	E	(None)	(None)

Similar results were found within the entrepreneur-only group

Theme	Preference pairs	Functional pairs	Dominant functions
Helping, empowering	E, F, P	NF	Ne, Fi
Revenue, profit, sales, etc.	T, J	(None)	Si, Ni, Te
Be a leader in our field	(None)	(None)	Te
Have fun, enjoy work	(None)	NT	(None)

### Gender

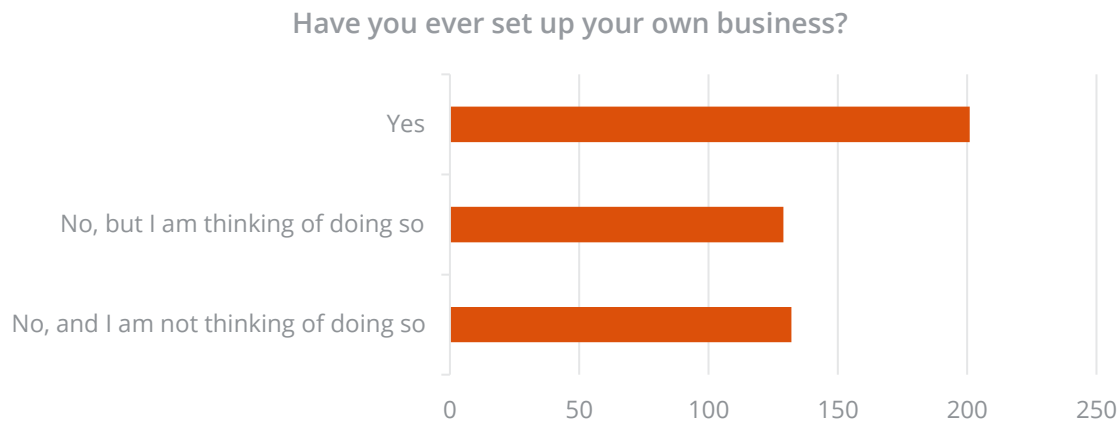
Within the entrepreneur group, men on average rated their organizations as more high-tech, and more unique, than did women.



## Why become an entrepreneur?

### Overview

We asked each respondent the question, “Have you ever set up your own business?” with the following results:



For those who chose “Yes” or “No, but I am thinking of doing so”, we asked them why they set up/were thinking of setting up the business. A wide range of responses were received, and categorized into a number of themes:

Reason	Percentage of choosing reason	
	Why set up	Why thinking of setting up
Independence, autonomy, flexibility, to be own boss	26%	55%
Money, financial security, to support lifestyle	16%	9%
Saw/there is an opportunity, gap in the market, good timing	15%	8%
Intrinsic interest or challenge of the work	11%	2%
Better work-life balance, hours, fit in with family, less stress	11%	5%
Make a difference, work ethically/to values, be principled	11%	11%
To go into consultancy	9%	5%
Disliked/dislike working in a corporate environment	7%	4%
Organization not supporting interests, can't use strengths etc.	7%	9%
Be more creative or innovative	6%	11%
Do something in retirement/end of career	4%	5%
Redundancy	4%	1%
Bored of, demotivated by, cynical about role or organization	1%	5%

There is a broad degree of similarity between the reasons why active entrepreneurs set up their business, and why prospective entrepreneurs are doing so. However, there are also differences. For example, while a need for autonomy is the most mentioned reason for both groups, it is particularly at front of mind for prospective entrepreneurs.

### Relationship with organizational goals

For those who had already set up their own business, the reasons why they did so were compared with the stated goals of that business, using a  $\chi^2$  analysis. The results show that there is a significant relationship between some of the reasons for setting up a business and some of the goals.

Reason for setting up	Relationship	Organizational goal theme
Independence, autonomy, flexibility, to be own boss	More likely to mention	Have fun, enjoy my work, do something interesting
	Less likely to mention	Provide healthcare
Money, financial security, to support lifestyle	More likely to mention	Be experts, demonstrate expertise
	Less likely to mention	Innovate, create something new, be leading edge
Intrinsic interest or challenge of the work	More likely to mention	Be a leader in our field, become known Be experts, demonstrate expertise
	Less likely to mention	Revenue, profit, sales, growth, build value, financial security
Better work-life balance, hours, fit in with family, less stress	More likely to mention	Make world a better place, improve lives, fairer society, sustainability
	Less likely to mention	Deliver solutions or services, solve client problems, consultancy
Make a difference, work ethically/to values, be principled	More likely to mention	Make world a better place, improve lives, fairer society, sustainability
	Less likely to mention	Deliver solutions or services, solve client problems, consultancy
To go into consultancy	More likely to mention	Be ethical, demonstrate integrity
	Less likely to mention	Innovate, create something new, be leading edge
Disliked/dislike working in a corporate environment	More likely to mention	Helping, empowering, motivating, coaching others
	Less likely to mention	Helping, empowering, motivating, coaching others
Organization not supporting interests, can't use strengths etc.	More likely to mention	Innovate, create something new, be leading edge
Be more creative or innovative	Less likely to mention	Helping, empowering, motivating, coaching others

The reasons for setting up a business which showed no significant relationship with organizational goals included:

- Saw/there is an opportunity, gap in the market, good timing
- Do something in retirement/end of career
- Redundancy
- Bored of, demotivated by, cynical about role or organization

In general, these reasons tend to relate to a particular situation or time.

### Relationship with entrepreneurial orientation

It might be expected that there would be a link between an individual's entrepreneurial orientation and the reasons why they had chosen to, or were thinking of, starting their own business. The table below looks at those individuals who had started their own business. For each reason 'why', the mean score on each entrepreneurial orientation is shown for those who mentioned that reason, and for those who did not mention that reason. Only those reasons and those orientations where there was a statistically significant difference (based on the results of an independent-samples T- test) are shown.

Reason why I started my own business	Mentioned	Not mentioned	Cohen d
Independence, autonomy, flexibility, to be own boss Orientation: Autonomy	56.1	53.6	0.25
Money, financial security, to support lifestyle Orientation: Impulsivity and novelty seeking	47.3	52.6	-0.53
Saw/there is an opportunity, gap in the market, good timing Orientation: Impulsivity and novelty seeking	55.0	51.2	0.38
Saw/there is an opportunity, gap in the market, good timing Orientation: Competitive ambition	53.4	50.1	0.33
Better work-life balance, hours, fit in with family, less stress Orientation: Competitive ambition	45.4	52.1	-0.67
To go into consultancy Orientation: Creativity	48.9	53.9	-0.50
Organization not supporting interests, can't use strengths etc. Orientation: Competitive ambition	57.3	50.1	0.72

There is a match between entrepreneurial orientation and the reasons for starting a business. Those with a higher degree of impulsivity were more likely to start a business because they spotted an opportunity, and less likely to be looking for money and financial security. Those with a higher level of competitive ambition were more likely to start a business because they spotted an opportunity, or because they could not use their strengths in their previous organization, and were less likely to be looking for better work-life balance. Those with a need for autonomy were more likely to have started their own business in order to be their own boss. Creativity and risk taking, however, do not show such clear links.

Similar results were found for those people who were thinking of starting, but had not yet started, their own business, as shown below (see over):

Reason why I'm thinking of starting my own business	Mentioned	Not mentioned	Cohen d
Saw/there is an opportunity, gap in the market, good timing Orientation: Competitive ambition	55.4	48.2	0.72
Make a difference, work ethically/to values, be principled Orientation: Risk taking	51.7	47.9	0.38
Be more creative or innovative Orientation: Creativity	54.25	48.45	0.58
Bored of, demotivated by, cynical about role or organization Orientation: Autonomy	59.71	48.64	1.11

### Relationship with personality

For those who had already started their own business, most of the themes as to why they had done so were no more likely to be mentioned by any one personality type than another, with three exceptions:

- Extraversion and Intuition types and NTs (and in terms of individual type, ENTJ and ENTP) were more likely than others to mention seeing a gap in the market, or an opportunity, or good timing
- Introverts and those with a Judging preference, and especially INTJ, were more likely to mention money, financial security, and supporting their lifestyle
- Those with preferences for INFP were more likely than others to mention redundancy.

For those who were thinking of setting up their own business, but who had not yet done so, the results were slightly different:

- Those with an Intuition or a Thinking preference, and NTs, were more likely than others to mention seeing a gap in the market, or an opportunity, or good timing
- Those with a Sensing preference, and in particular SF, were more likely to mention wanting a better work-life balance, better hours, fitting in with their family, etc
- Those with a Sensing preference, and in particular ST, were more likely to mention that the organization is not supporting their interests, or allowing them to use their strengths

Those with an Intuition preference were more likely to mention the need to be more innovative or creative.

## Gender and age

Men were more likely than women to mention money, financial security, and supporting their lifestyle as a reason why they had set up their own business.

Amongst those who were thinking of setting up their business, women were more likely than men to mention the need for independence and autonomy, or that the organization does not support their interests or allow them to use their strengths. Men were more likely to mention seeing an opportunity or a gap in the market.

There was only one age relationship with the reasons why people had started their own business; unsurprisingly, older people were more likely to mention doing something in retirement or for the end of their career.

Looking at the reasons why people were thinking of starting their own business, older people were again more likely to mention doing something in retirement or for the end of their career, but also to mention being bored, demotivated or cynical about their current role. Younger people were more likely to mention the need for independence and autonomy or making a difference and working ethically.

## Attributes contributing to success or failure

### Overview

We asked every respondent who reported that they had set up their own business the following question: "Thinking about yourself, what abilities, personal characteristics or other attributes do you have that contributed positively to the success of your business". For those thinking of setting up their own business, we asked "Thinking about yourself, what abilities, personal characteristics or other attributes do you have that could make your business a success". A wide range of responses were received, and categorized into a number of themes:

Attribute	Percentage mentioning attribute	
	Business already set up	Thinking of setting up
Creative, innovative, open to ideas, has vision, curious	37%	32%
Has contacts, interpersonal skills, can network, can negotiate, socially confident, builds relationships	34%	43%
Hard worker, delivers, persistent, perseveres, tenacious, follows through, dedicated	26%	20%
Experienced, knowledgeable, has business acumen/market knowledge	21%	21%
Clever, intelligent, analytical, solves problems, logical, good learner, shows quick thinking	17%	10%
Passionate, enthusiastic, motivated, energetic, driven, determined, competitive	16%	31%
Detail conscious, quality focused, diligent, organized, reliable, disciplined, conscientious, efficient	15%	18%
Friendly, co-operative, supportive, people-focused, caring, empathic, emotionally intelligent, has long-term relationships	14%	20%
Calm, resilient, optimistic	14%	8%
Skilled, competent, expert, capable, able, efficient	13%	13%
Flexible, adaptable	11%	3%
Shows integrity, is ethical, builds a good reputation	9%	4%
Competitive, takes risks, has a go	9%	8%
Independent, self-confident, has self-belief	6%	4%

The data suggests that compared to the reality of actually running one's own business, those currently thinking of setting up for themselves may be somewhat over-estimating the importance of contacts and interpersonal skills, being passionate and enthusiastic, and being friendly, co-operative and supportive. They may be under-estimating the importance of hard work and persistence, intelligence and problem-solving ability, and resilience.

The two groups were also asked what attributes they had that did (or could) make success less likely.

Attribute	Percentage mentioning attribute	
	Business already set up	Thinking of setting up
Distractible, gets bored, dislikes admin, not methodical, structured, organized, detailed	26%	17%
Poor at or dislikes marketing/selling, lacks 'entrepreneurial' selling skills	19%	7%
Pessimistic, worrying, lacks confidence, risk averse, conservative	16%	23%
Not outgoing/extravert, lacks social confidence, shy, dislikes networking, lacks people skills	13%	12%
Lacks energy, drive, motivation	10%	7%
Lack of resources, financial and other external constraints	9%	7%
Impatient, does not suffer fools gladly	8%	7%
Procrastinates, indecisive, overthinks things	7%	16%
Too emotional/sensitive, not resilient, too kind, avoids conflict, too focused on pleasing others	6%	9%
Too ethical, idealistic, values driven	5%	6%
Not competitive or pushy	5%	3%
Impulsive, too quick, gets carried away, headstrong, overconfident	5%	5%
Dislikes or poor with data, statistics, numbers, finance	3%	3%
Lacks experience, lacks business skills, lacks specific skills	3%	10%
Lacks creativity or innovation	1%	2%

The data suggest that those thinking of setting up for themselves may be somewhat under-estimating the practical importance of admin and detail, and of marketing and selling, or else over-estimating their own abilities in these areas. Conversely, a lack of experience, business skills, or specific skills may not be as important as they imagine. It is also interesting that they see procrastination, and pessimism, as larger problems than do those whose businesses have already been set up. It may of course be that a tendency towards pessimism and procrastination makes it less likely that they will actually go ahead and set up their own business; in effect these individuals may self-select out of the entrepreneur group.

### Relationship with personality

Many people who are thinking of starting up their own business will already know their own MBTI type preferences. If these can be linked to particular strengths or development needs, then they can be offered valuable advice as to what to capitalize on, and what to avoid, in setting up their business. The table below shows which positive attributes are significantly more likely to be mentioned by one type than by another type (based on a  $\chi^2$  analysis):

Attribute (business already set up)	Dichotomies	Functiona l pairs	Favorite processes	Whole types
Creative, innovative, open to ideas, has vision, curious	N	NT+	Fi+ Si, Se, Fe-	INFP, INTP+
Has contacts, interpersonal skills, can network, can negotiate, socially confident, builds relationships	E, F	NF+ NT-	Ne+ Si, Ni, Ti-	ENFP+ ISFJ, INTJ-
Clever, intelligent, analytical, solves problems, logical, good learner, shows quick thinking			Ti, Te+ Si, Fi-	
Passionate, enthusiastic, motivated, energetic, driven, determined, competitive	E			

Detail conscious, quality focused, diligent, organized, reliable, disciplined, conscientious, efficient	S, J		Si+ Ne, Ti-	ISTJ, INTJ+ INTP, ENFP -
Flexible, adaptable	F, P			
Competitive, takes risks, has a go	T	NT, ST+ NF, SF-	Fi, Fe-	ESTP+ ENFP, ENFI, INFP-
Attribute (thinking of setting up)	Dichotomies	Functional pairs	Dominant functions	Whole types
Creative, innovative, open to ideas, has vision, curious	N	NT+ ST-	Ni, Ne, Ti+ Si, Se, Fi-	INFJ, INTP+ ISTJ-
Hard worker, delivers, persistent, perseveres, tenacious, follows through, dedicated	I			
Experienced, knowledgeable, has business acumen/market knowledge				INTJ, ENFJ+ ENFP-
Clever, intelligent, analytical, solves problems, logical, good learner, shows quick thinking	J			
Passionate, enthusiastic, motivated, energetic, driven, determined, competitive	E			
Friendly, co-operative, supportive, people-focused, caring, empathic, emotionally intelligent, has long-term relationships	F			
Skilled, competent, expert, capable, able, efficient	S			
Competitive, takes risks, has a go	P			
Independent, self-confident, has self-belief	J			



The negative attributes showing a significant difference between types are as follows:

Attribute (business already set up)	Dichotomies	Functional pairs	Favorite processes	Whole types
Distractible, gets bored, dislikes admin, not methodical, structured, organized, detailed	E, P		Se, Ne+ Si-	ENFP, ENTP+ ISTJ, INFJ-
Poor at or dislikes marketing/selling, lacks 'entrepreneurial' selling skills	I			ISTJ, INTJ+ ENTP-
Pessimistic, worries, lacks confidence, risk averse, conservative	J			
Not outgoing/extravert, lacks social confidence, shy, dislikes networking, lacks people skills	I	NT+ ST-	Ni+ Ne-	INTJ+ ENFP, ENFP-
Lacks resources, has financial and other external constraints			Se-	
Impatient, does not suffer fools gladly	T	NT+ NF-		
Procrastinates, indecisive, overthinks things	I			
Impulsive, too quick, gets carried away, headstrong, overconfident	J		Fe+	ENFJ, ENTJ+ INFP, INTP, ENFP+
Attribute (thinking of setting up)	Dichotomies	Functional pairs	Dominant functions	Whole types
Distractible, gets bored, dislikes admin, not methodical, not structured, not organized, not detailed	N, P			
Pessimistic, worries, lacks confidence, risk averse, conservative	J			
Not outgoing/extravert, lacks social confidence, shy, dislikes networking, lacks people skills	I			
Lacks resources, has financial and other external constraints			Se-	
Not competitive or pushy	F			
Lacks experience, lacks business skills, lacks specific skills	F			ENFP+ ISTJ, INTP

The advice of those who have already set up their own businesses is arguably particularly useful here. The following tables show, for this group, the percentage of individuals of each type dichotomy, dominant function, and whole type, who chose each positive and each negative attribute. This data was then used to create the recommendations in the section titled "Type-based advice for entrepreneurs" later in this report.

Positive attributes by type dichotomy are shown in the following table:

Attribute	Percentage mentioning each attribute								
	All	E	I	S	N	T	F	J	P
Creative, innovative, open to ideas, has vision, curious	37	32	45	22	41	42	33	33	42
Has contacts, interpersonal skills, can negotiate, socially confident, can network	34	47	22	28	37	27	45	33	38

Hard worker, delivers, follows through, persistent, perseveres, dedicated	26	25	25	19	26	25	25	28	23
Experienced, knowledgeable, has business acumen/market knowledge	21	20	24	16	23	22	21	22	21
Clever, intelligent, analytical, logical, solves problems, good learner, shows quick thinking	17	17	18	13	18	20	14	19	16
Passionate, enthusiastic, motivated, energetic, driven, determined, competitive	16	22	10	9	18	15	19	15	19
Detail conscious, quality focused, diligent, organized, reliable, disciplined, efficient	15	11	19	25	13	13	16	25	7
Friendly, co-operative, supportive, people- focused, empathic, emotionally intelligent	14	18	10	25	12	13	16	16	13
Calm, resilient, optimistic	14	16	11	19	13	13	15	12	15
Skilled, competent, expert, capable, able, efficient	13	11	15	9	14	14	11	11	14
Flexible, adaptable	11	13	9	6	12	6	18	7	15
Shows integrity, is ethical, builds a good reputation	9	11	8	6	10	12	8	11	8
Competitive, takes risks, has a go	9	8	10	16	8	14	8	8	10
Independent, self-confident, has self-belief	6	5	8	6	6	5	8	4	8

So, for example, the positive attribute “creative, innovative, open to ideas, has vision, curious” was mentioned by:

- 37% of all those who had started their own business
- 32% of Extraverts who had started their own business
- 45% of Introverts who had started their own business.

Negative attributes by type dichotomy

Attribute	Percentage mentioning each attribute								
	All	E	I	S	N	T	F	J	P
Distractible, gets bored, dislikes admin, not methodical, not structured, not organized, not detailed	26	38	14	24	27	26	27	16	35
Poor at or dislikes marketing/selling, lacks 'entrepreneurial' selling skills	19	13	26	28	18	19	19	23	16
Pessimistic, worries, lacks confidence, risk averse, conservative	16	13	21	24	16	14	21	24	11
Not outgoing/extravert, shy, lacks social confidence, lacks people skills, dislikes networking	13	7	20	10	14	14	12	15	11
Lacks energy, drive, motivation	10	10	12	7	11	8	14	9	12
Lacks resources, has financial and other external constraints	9	9	7	3	9	9	8	8	8
Impatient, does not suffer fools gladly	8	9	7	3	9	13	1	9	7
Procrastinates, indecisive, overthinks things	7	3	11	10	6	8	5	5	8
Too emotional/sensitive, not resilient, too kind, avoids conflict, focus on pleasing others	6	7	6	3	7	4	9	6	6
Too ethical, idealistic, values driven	5	3	7	3	5	5	5	5	5
Not competitive or pushy	5	7	5	3	6	5	6	3	8
Impulsive, too quick, gets carried away, headstrong, overconfident	5	8	2	3	5	5	5	9	2
Dislikes or poor with data, statistics, numbers, finance	3	5	1	0	4	2	5	3	4
Lacks experience, lacks business skills, lacks specific skills	3	4	1	3	3	4	1	3	3
Lacks creativity or innovation	1	1	1	0	1	1	1	1	1

Positive attributes by dominant function:

Attribute	Percentage mentioning each attribute								
	All	Si	Se	Ni	Ne	Ti	Te	Fi	Fe
Creative, innovative, open to ideas, has vision, curious	37	18	0	41	37	52	36	65	18
Has contacts, interpersonal skills, can negotiate, socially confident, can network	34	18	20	28	52	5	36	29	47
Hard worker, delivers, follows through persistent, perseveres, dedicated	26	18	0	36	29	5	23	29	24
Experienced, knowledgeable, has	21	18	20	26	19	19	27	29	12

business acumen/market knowledge									
Clever, intelligent, analytical, logical, solves problems, good learner, quick thinker	17	0	0	21	14	38	23	0	24
Passionate, enthusiastic, motivated, energetic, driven, determined, competitive	16	9	20	3	19	14	32	24	24
Detail conscious, quality focused, diligent, organized, reliable, disciplined, efficient	15	45	0	26	8	0	14	12	24
Friendly, co-operative, supportive, people-focused, empathic, emotionally intelligent	14	27	20	10	17	0	18	12	18
Calm, resilient, optimistic	14	9	40	8	13	10	23	24	12
Skilled, competent, expert, capable, able, efficient	13	18	0	13	14	14	9	18	6
Flexible, adaptable	11	0	0	10	19	14	0	6	12
Shows integrity, is ethical, builds a good reputation	9	9	0	10	11	5	18	6	6
Competitive, takes risks, has a go	9	9	60	10	6	14	9	6	0
Independent, self-confident, has self-belief	6	9	20	8	6	0	0	18	0

Negative attributes by dominant function:

Attribute	Percentage mentioning each attribute								
	All	Si	Se	Ni	Ne	Ti	Te	Fi	Fe
Distractible, gets bored, dislikes admin, not methodical, structured, organized, detailed	26	20	60	11	45	20	22	12	22
Poor at or dislikes marketing/selling, lacks 'entrepreneurial' selling skills	19	30	0	26	13	25	17	24	14
Pessimistic, worries, lacks confidence, risk averse, conservative	16	40	0	21	9	15	17	18	29
Not outgoing/extravert, shy, lacks social confidence, lacks people skills, dislikes networking	13	10	20	26	7	10	6	24	0
Lacks energy, drive, motivation	10	0	0	8	9	10	11	29	14
Lacks resources, has financial and other external constraints	9	10	0	5	9	10	6	6	14
Impatient, does not suffer fools gladly	8	0	0	8	7	15	17	0	7

Procrastinates, indecisive, overthinks things	7	20	20	5	4	15	0	12	0
Too emotional/sensitive, not resilient, too kind, avoids conflict, focuses on pleasing others	6	0	0	8	7	5	6	6	7
Too ethical, idealistic, values driven	5	0	0	8	4	5	6	12	0
Not competitive or pushy	5	0	0	3	9	10	6	6	0
Impulsive, too quick, gets carried away, headstrong, overconfident	5	0	0	5	4	0	6	0	29
Dislikes or poor with data, statistics, numbers, finance	3	0	0	3	7	0	6	0	0
Lacks experience, lacks business skills, lacks specific skills	3	0	0	0	4	0	11	6	0
Lacks creativity or innovation	1	0	0	3	2	0	0	0	0

Positive attributes by whole type:

Note that in this table, only the percentages for the most popular attributes for each type are shown. Also, ISFP and ESFP have been omitted from the table as there were insufficient cases for analysis.

Attribute	Percentage mentioning each attribute														
	All	ISTJ	ISFJ	INFJ	INTJ	ISTP	INFP	INTP	ESTP	ENFP	ENTP	ESTJ	ESFJ	ENFJ	ENTJ
Creative, innovative	37				50	50	69	53		33	44	40			33
Has contacts, interpersonal skills	34	33		46			31		25	58	44	40	67	43	33
Hard worker, delivers, persistent, perseveres	26		40		43		31			25		40		29	
Experienced, knowledgeable	21		40	36			31	21	25						33
Clever, intelligent, analytical, logical	17			36		50		37					33		
Passionate, driven, motivated, energetic	16								25					29	40
Detail conscious, quality focused	15	33	60		25								33		
Friendly, co-operative, supportive, caring	14		40												
Calm, resilient, optimistic	14								25						
Skilled, competent, expert, capable, able	13														
Flexible, adaptable	11					50				25			33		
Shows integrity, ethical	9														
Competitive, takes risks, has a go	9								75						
Independent, self-confident, has self-belief	6								25						

Negative attributes by whole type:

Note that in this table, only the percentages for the most popular attributes for each type are shown. Also, ISFP and ESFP have been omitted from the table as there were insufficient cases for analysis.

Attribute	Percentage mentioning each attribute														
	All	ISTJ	ISFJ	INFJ	INTJ	ISTP	INFP	INTP	ESTP	ENFP	ENTP	ESTJ	ESFJ	ENFJ	ENTJ
Distractible, gets bored, dislikes admin	26		40	22				22	75	38	57		50	17	33

Poor/dislikes selling, marketing	19	40	20	22	28	60	19	17		19		22		17	
Pessimistic, worries, lack confidence	16	40	40	22	21		19	17		16		22	50	25	
Not outgoing/extravert, lacks social confidence	13		20	22	28		19				13				
Lacks energy, drive, motivation	10						31						50		
Lacks resources, has financial constraints	9	20												17	
Impatient, does not suffer fools gladly	8							17			17				22
Procrastinates, indecisive, overthinks	7	20	20					17	25						
Too emotional, kind, not resilient	6			22											
Too ethical, idealistic, values driven	5														
Not competitive or pushy	5														
Impulsive, too quick, overconfident, headstrong	5												50	25	
Poor/dislikes numbers, stats, data, finance	3														
Lacks experience, lacks business/specific skills	3														
Lacks creativity or innovation	1														

### Gender

Women were more likely than men to mention a number of positive attributes, including being tenacious and a hard worker, being independent, being self-confident with self-belief, and being calm, resilient and optimistic.

### Age

Younger entrepreneurs were more likely than older entrepreneurs to mention passion, enthusiasm, motivation, energy, drive, and determination as a strength. Older entrepreneurs were more likely to mention integrity and taking an ethical approach

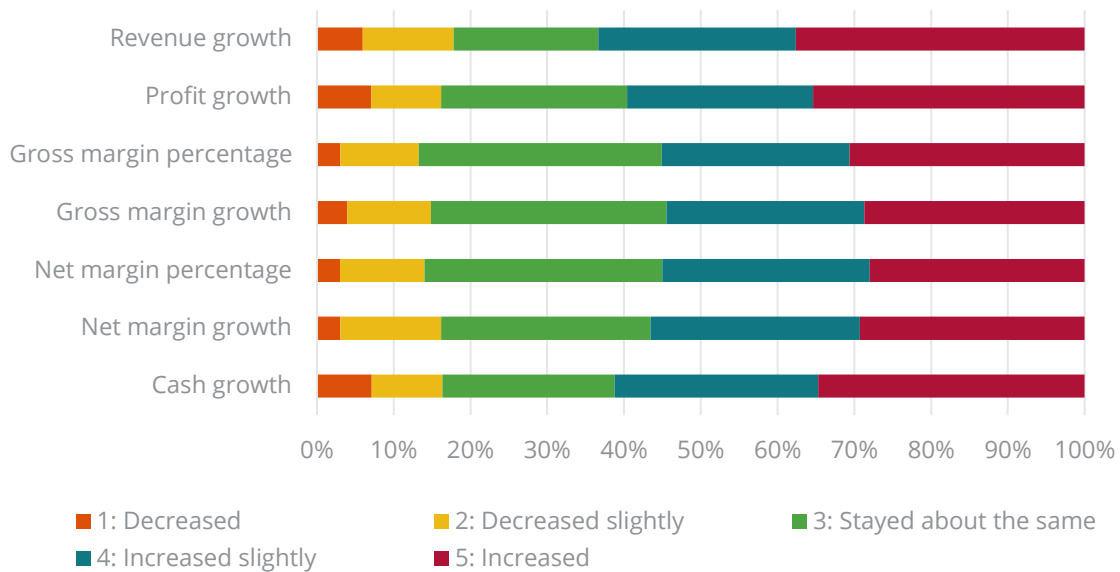
Older entrepreneurs were more likely than younger ones to see a lack of competition, energy or drive as a failing.

## Organizational performance

### Overview

Organizations may be more or less entrepreneurial, but does this mean that they perform better? We asked survey respondents to answer a number of questions about the financial performance of their organization, including revenue growth, profit growth, gross margin, percentage, gross margin growth, net margin percentage, net margin growth and cash growth. For each index, we asked whether it had decreased, stayed about the same, or increased over the last year. Around half of the group were able to supply this information. For most organizations, the indicators were positive.

Financial indicators - whole group





### Relationship with entrepreneurship

There was no significant difference between entrepreneurs and non-entrepreneurs in terms of any of the financial indicators. Across the group as a whole, the entrepreneurial orientation of the individual did not correlate highly with the financial indicators. However, many dimensions of organizational entrepreneurship did correlate, in particular being first to market, anticipating future trends, and taking a high-tech approach.

Organizational characteristic	Revenue growth	Profit growth	Gross margin %	Gross margin growth	Net margin %	Net margin growth	Cash growth
Shrinking-Growing	0.533*	0.497**	0.450**	0.452**	0.442**	0.469**	0.430**
Rewards certainty-Rewards innovation	0.250**	0.227**	0.140*	0.161*	0.134*	0.164*	0.178**
Formal-Informal	NS	NS	-0.131*	-0.124*	-0.193**	-0.173**	-0.129*
Builds on established-Anticipates future trends	0.310**	0.302**	0.207**	0.255**	0.210**	0.237**	0.190**
Follows the market-First to market	0.324**	0.348**	0.256**	0.277**	0.239**	0.281**	0.283**
Only commits to certain-Commits to unknown	0.157**	0.163**	0.167**	0.180**	0.137*	0.155*	0.118*
Low-tech-High-tech	0.306**	0.305**	0.242**	0.288**	0.245**	0.275**	0.290**
Similar to other organizations-Unique	0.203**	0.214**	0.230**	0.239**	0.185**	0.225**	0.177**
Avoids risks-Takes risks	0.209**	0.198**	0.243**	0.240**	0.236*8	0.230**	0.181**
Avoids mistakes-Encourages taking chances	0.142**	0.138*	NS	NS	Ns	NS	NS
Acts carefully-Acts quickly	0.215**	0.189**	NS	NS	NS	NS	0.150*
Hierarchical, structured-Unstructured	NS	NS	NS	NS	NS	NS	NS

Targets established- Targets early/premium	0.177**	0.164**	0.186**	0.181**	0.129*	0.149*	0.141*
Well established, solid-New and fresh	NS	NS	NS	NS	NS	NS	NS
Average organizational entrepreneurship	0.326**	0.316**	0.238**	0.269**	0.211**	0.247**	0.217**

\*\* – significant at the 1% level

\* – significant at the 5% level

NS – not significant

In other words, organizations that are more entrepreneurial tend to be increasing their performance across all the financial indicators, suggesting that entrepreneurial organizations tend to perform better in financial terms.

Within the non-entrepreneur group, there were no significant correlations at all with individual entrepreneurial orientation, but correlations with organizational entrepreneurship were higher than for the whole group. Within the entrepreneur group, however, individual entrepreneurial orientation did correlate with financial success. The organizations of individual entrepreneurs who were more oriented towards creativity, risk-taking and competitive ambition performed better. There was no significant correlation with impulsivity and need for novelty, nor with need for autonomy.

Entrepreneurial orientation	Revenue growth	Profit growth	Gross margin %	Gross margin growth	Net margin %	Net margin growth	Cash growth
Creativity	0.248**	0.269**	0.221*	0.201*	0.226*	0.215*	NS
Risk taking	NS	NS	0.213*	0.192*	0.273**	0.223*	Ns
Impulsivity and novelty	NS	NS	NS	NS	NS	NS	NS
Competitive ambition	0.225**	0.234*8	0.226*	NS	0.238*	NS	0.187*
Autonomy	NS	NS	NS	NS	NS	NS	NS

\*\* – significant at the 1% level      \* – significant at the 5% level      NS – not significant

These relationships are similar to those seen in previous research (Rauch, Wiklund, Lumpkin, & Frese, 2009).

Within the entrepreneur group, organizations that were seen as anticipating future trends, being first to market and taking a high-tech approach once again performed better financially. It is notable that those organizations which were seen as more informal or unstructured performed less well.

Organizational characteristic	Revenue growth	Profit growth	Gross margin %	Gross margin growth	Net margin %	Net margin growth	Cash growth
Shrinking–Growing	0.489**	0.479**	0.391**	0.405**	0.379**	0.392**	0.354**
Rewards certainty–Rewards innovation	0.225**	0.218*	NS	NS	0.188*	0.210*	0.181*
Formal–Informal	NS	NS	-0.186*	NS	-0.216**	-0.192**	-0.231*
Builds on established–Anticipates future trends	0.232**	0.218*	0.196*	0.213*	0.222*	0.229*	NS
Follows the market–First to market	0.318**	0.342**	0.275**	0.288**	0.284**	0.326**	0.246**
Only commits to certain–Commits to unknown	NS	Ns	NS	NS	0.205*	0.208*	NS

Low-tech-High-tech	0.221*	0.254**	0.231*	0.271*	NS	NS	0.199*
Similar to other organizations-Unique	NS	0.190*	NS	NS	NS	NS	NS
Avoids risks-Takes risks	NS	0.187*	0.264**	0.265**	0.284**	0.263**	NS
Avoids mistakes-Encourages taking chances	NS	NS	NS	NS	NS	NS	NS
Acts carefully-Acts quickly	NS	NS	NS	NS	NS	NS	NS
Hierarchical, structured-Unstructured	-0.230**	-0.221**	NS	NS	NS	NS	-0.240**
Targets established-Targets early/premium	NS	NS	NS	NS	NS	NS	NS
Well established, solid-New and fresh	NS	NS	NS	0.194*	NS	NS	NS
Average organizational entrepreneurship	0.240*	0.258**	0.241*	0.250*	0.260*	0.260*	NS

### Relationship with goals

Across both entrepreneurs and non-entrepreneurs, those who said that their organizational goals involved innovation, creating something new, or being leading edge, tended to be performing better on the financial indicators.

### Relationship with personal attributes

For those who had started their own business, there were surprisingly few relationships between the financial indicators and the personal attributes they mentioned as helping or hindering them in being successful.

In terms of positive attributes, those who mentioned themes of being independent, self-confident, or having self-belief, and those who mentioned being calm, resilient or optimistic, did tend to perform significantly better on some indicators. Interestingly, those who mentioned a theme of having contacts, interpersonal skills, networking, negotiation, being socially confident or building relationships actually performed less well on revenue growth and profit growth.

In terms of negative attributes, those who mentioned disliking or being poor with data, statistics, numbers or finance, and those who mentioned not being outgoing or extravert, lacking social confidence, being shy, disliking networking or lacking people skills did perform worse. Those who

saw their faults as including being impatient and not suffering fools gladly actually performed significantly better in terms of revenue growth profit growth and sales margin.

### **Relationship with personality**

There are no statistically significant differences between any of the type pairs (E-I, S-N, T-F, J-P) in terms of any of the financial indicators, either for the whole group or within either the entrepreneur or non-entrepreneur groups. Nor are there significant differences by dominant function, functional pairs, or temperaments. Within the limits of the data, it is not possible to say that any one MBTI type performs significantly better than any other MBTI type in terms of organizational performance.

### **Gender**

Women, on average, worked for businesses that were performing better on the financial indicators. However this did not apply within the entrepreneur group, suggesting that women and men perform no better or worse than each other as entrepreneurs, in financial terms.

## 'Intrapreneurs' – the entrepreneur within?

### Overview

Though most definitions of an entrepreneur are based around an individual who starts up their own business, there is an increasing tendency to talk about 'intrapreneurs' (Ross & Unwalla, 1986) or 'entrepreneurial leaders' (Ernst & Young, 2011). Intrapreneurs may for example increase the degree of innovation, especially in smaller organizations. (Camelo-Ordaz, Fernandez-Alles, Ruiz-Navarro, & Sousa-Ginel, 2012)

Within our sample, we could not of course directly assess who was or was not carrying out more entrepreneurial activities while still working within organizations. However, as a proxy for this, we selected those who we had not classed as entrepreneurs – ie they were not individuals who had set up a business which they owned or co-owned – and who also fitted at least one of the following three criteria:

- Answering "agree" or "strongly agree" to the statement "people have often described me as an entrepreneur"
- Answering "agree" or "strongly agree" to the statement "I would consider myself to be an entrepreneur"
- Describing their job as an "entrepreneur".

On this basis, 167 people in the sample can be described as entrepreneurs, 127 as intrapreneurs, and 228 as non-intrapreneurs.

### Characteristics of 'intrapreneurs'

Comparing intrapreneurs with non-intrapreneurs, then those who see themselves as intrapreneurs are significantly more likely to be:

- Male (46% of men and 32% of women fit the criteria for intrapreneurs)
- At higher levels in an organization (20% of those at employee level, 31% to 67% of those at higher levels)
- Have personality preferences for:
  - Extraversion (45% of Extraverts, 25% of Introverts)
  - Intuition (40%, compared with 22% of Sensing types)
  - NT (40%) or NF (39%) but not SF (8%)
  - T<sup>e</sup> (60%) or N<sup>e</sup> (56%) but not S<sup>i</sup> (17%) or S<sup>e</sup> (12%)
  - ENTP (61%), ESTJ (59%), ENTJ (57%) or ENFP (53%) but not ISFJ (9%) or ESFP (0%)
- Score significantly higher on all five entrepreneurial orientations:

	Mean for intrapreneurs	Mean for 'not intrapreneurs'	Sig level	Cohen d
Creativity	54.00	46.29	**	0.77
Risk taking	53.13	45.28	**	0.78
Impulsivity	51.00	48.24	*	0.28
Competitive ambition	55.29	46.50	**	0.88
Autonomy	50.50	45.71	**	0.48

\*\* – significant at the 1% level

\* – significant at the 5% level

## Organizational differences

Comparing those organizations containing intrapreneurs with those containing non-intrapreneurs, no statistically significant differences were found, in terms of organization size, organizational entrepreneurship, organizational goals, or financial indicators. Of course, one intrapreneur may only have a very limited degree of influence within an organization. However, re-running the analysis either to only include those in smaller organizations, or to only include those at a more senior level, made no difference to this result.

## Gender and age

Men were over-represented within the intrapreneur group; men are more likely to see themselves as entrepreneurs when, in objective terms, they may not be.

There was no significant age difference between the intrapreneur and non-intrapreneur groups.

## Type-based advice for entrepreneurs

### Overview

#### Introduction

The results of this research have shown that, while people with certain personality type preferences are more likely to become entrepreneurs than others, people of all types are represented in this group. Importantly, there are no personality differences in success (as measured by rising or falling financial indicators); people of any type can be successful as an entrepreneur.

Of course, people of each type will typically have strengths that will help them to be successful entrepreneurs, and features of their personality that might make them less successful. If entrepreneurs and aspiring entrepreneurs are aware of these, it can give them a head start; almost 60% of UK businesses will fail within 5 years (Office for National Statistics, 2016).

In this section, we have drawn on the comments made by entrepreneurs in order to provide first, general advice across all types, and second, specific advice for each dominant function. The principal data we have drawn on were those factors that related to financial success, and the responses of those who had founded their own business to the following two questions:

*Thinking about yourself, what abilities, personal characteristics or other attributes do you have that contributed positively to the success of your business?*

*And what attributes do you have that made success less likely?*

#### General advice for all types

- Those organizations whose financial performance was improving tended to be those which:
  - Reward innovation
  - Anticipate future trends
  - Take a more high-tech approach
  - Have at least some structure.

None of this may be surprising – but entrepreneurs may nevertheless wish to consider how to build these characteristics into their organization.

- Similarly, it may be useful to include being innovative, creating something new, or being leading edge among an organization's goals, as these also linked to financial performance
- Across the group as a whole, entrepreneurs tended to see the following attributes as contributing most to success. While each of these may come more naturally to some people than to others, it may be useful for any aspiring entrepreneur to consider how they could best achieve each of these. Some may be skills that can be developed; others may be something that an entrepreneur relies on others to provide.
  - Being creative and innovative, having vision, being curious, being open to ideas
  - Having contacts, being able to network, being socially confident, having interpersonal skills, being able to build relationships
  - Working hard, persevering, following through and delivering, being tenacious and persistent, dedicated
  - Having relevant experience, being knowledgeable, having business acumen or market knowledge.



- Similarly, these attributes were those that were most often mentioned as making success less likely; prospective entrepreneurs may wish to consider which apply to them and how they could avoid falling into these traps.
  - Being distractible, easily bored, disliking admin, not being methodical, structured, organized or detailed
  - Poor at or disliking marketing or selling oneself, lacking 'entrepreneurial' selling skills
  - Being pessimistic, worrying, lacking self-confidence, being risk averse, conservative
  - Not sufficiently outgoing, lacking social confidence, shy, dislikes networking, lacking people skills.

## Advice for each dominant function

### Introduction

People of each type preference will have their own particular strengths as an entrepreneur – and things that they should watch out for. This section presents these for each dominant function.

#### Dominant Introverted Sensing – the Conservator (ISTJ, ISFJ)

Likely strengths as an entrepreneur:

- Conservators are generally detail-conscious, and very aware of the importance of producing high-quality work. They are likely to be structured, organized, and focused.
- They often pride themselves on their reliability, and are likely to be hard-working, and to deliver on time. They usually avoid procrastination on everyday tasks.
- Conservators are typically knowledgeable, and can draw on past experience.
- They may have a good understanding of introverted customers or clients, especially when they can draw on shared experience with the individual customer.

Things to watch out for:

- They may be risk-averse and miss opportunities. Although in general, Conservators like to finish things off, they may hesitate and procrastinate before important decisions, possibly engaging in less strategically important displacement activities instead.
- They may dislike selling themselves and their business, and feel they lack entrepreneurial skills. Building up contacts may eat up their energy, and as a result Conservators may either neglect this or else put so much effort in that they neglect other areas – possibly some of the more ‘big-picture’ tasks.
- Conservators will often prefer the tried and tested solution. In setting up their own business, it may be important for them to actively attempt new things.
- The uncertainty of setting up a new business can be stressful for Conservators, and they may need to consider how they can set up a ‘safety net’ or otherwise introduce some support or structure to their activities.

#### Dominant Extraverted Sensing – the Activist (ESFP, ESTP)

Likely strengths as an entrepreneur:

- Activists are happy to take risks and ‘go for it’.
- They are generally positive and optimistic, with a strong degree of self-belief; they are unlikely to spend a great deal of energy worrying.
- Activists seek out new experiences, people, and things. They may bring a great deal of energy to the business.
- They are unlikely to be particularly deterred by a lack of resources.

Things to watch out for:

- Activists can be easily distracted and may be unfocused; they may be easily bored. As a result, the administrative tasks needed for a small business can slip.
- They may pay insufficient attention to contacts or colleagues who they find less interesting – even when these individuals could be useful to their business.

- Activists can be too focused on the here and now rather than on future direction or past experience.

### **Dominant Introverted Intuition – the Visionary (INFJ, INTJ)**

Likely strengths as an entrepreneur:

- They are tenacious and persistent, working hard and persevering until the job is done.
- Visionaries enjoy creativity and problem-solving; they may see themselves as being able to construct an effective vision for their business or their clients (though this vision may sometimes be over-elaborate or difficult to describe).
- Many Visionaries feel that they have a high level of personal integrity and that this has proven extremely useful.

Things to watch out for:

- Many Visionaries dislike promoting, advertising or marketing themselves or their business and they may struggle to summon up the energy or motivation to do so; some feel they lack the requisite skills.
- Visionaries can be risk-averse and over-think the negative possibilities in a situation; they may suffer from 'analysis paralysis'.
- Visionaries are more likely than others to see themselves as shy, finding social interactions and networking difficult and getting tired of being around people. Training in this area may be particularly useful for those wanting to become entrepreneurs.
- They can sometimes struggle to enunciate their vision; to others they may occasionally seem vague, unclear, and not easy to understand.

### **Dominant Extraverted Intuition – the Explorer (ENFP, ENTP)**

Likely strengths as an entrepreneur:

- Most Explorers are socially confident and happy to meet new people; they are likely to enjoy building a network of contacts and they typically see themselves as socially skilled.
- They see themselves as curious, creative and innovative, and are willing to try new approaches and take risks.
- They are flexible, adaptable, and (generally) enthusiastic.

Things to watch out for:

- Explorers can get bored or distracted, especially by detail; they will often find admin tasks tedious and may miss important information or even make mistakes with figures or finances.
- If setting up as a one-person or other small business, Explorers can find the lack of contact with other people isolating, draining or demotivating.
- Explorers often dislike structure and may appear, or be, disorganized and lacking in planning, with the possibility of trying to finish too many things at the last minute. They can be distracted by new or interesting ideas not pertinent to the task at hand.

### **Dominant Introverted Thinking – the Analyst (ISTP, INTP)**

Likely strengths as an entrepreneur:

- Analysts can bring a logical, objective focus to problems, and many see this as their most important attribute as an entrepreneur. Some see this as a good way to take calculated risks.

- Many (though not all) Analysts see themselves as creative and innovative, flexible, adaptable and open to new ideas or experiences. Some may come up with solutions that are significantly different from what is currently available.
- In different ways, many Analysts see some aspect of expertise or competence as contributing to their success as an entrepreneur. The nature of this expertise will vary depending on the individual and their chosen field – ‘numeracy’, ‘financial acumen’, ‘technical leadership’ or ‘an expert in my field’ for example – but Analysts see this as an important attribute and will often have deep knowledge in particular areas.

Things to watch out for:

- Some analysts see themselves as shy and lacking in interpersonal skills; many do not enjoy networking or promoting themselves and may put this off in favour of other activities that they find more interesting.
- Analysts may be disorganized or dislike administrative tasks; they can be distracted from finishing a piece of work if something more interesting or involving comes along.
- They often have a high degree of independence and are generally happy to work alone. This may stand them in good stead if they set up in business for themselves, but means that they can be internally focused and impatient with others, which may become an issue if their business starts to grow. Indeed they may not always be particularly motivated to expand their business.
- Analysts will typically want a clear rationale for carrying out any action. When this is not forthcoming, they may be slower than others to seize opportunities; over time this may turn into scepticism or cynicism.

### **Dominant Extraverted Thinking – the Director (ESTJ, ENTJ)**

Likely strengths as an entrepreneur:

- As entrepreneurs, Directors typically see themselves as tenacious, driven, hardworking, passionate, persistent and resilient, driving hard to make things happen.
- Directors enjoy working with, and organising, other people; most see themselves as socially confident, interpersonally skilled, and able to build rapport with contacts and clients.
- They are typically organized, structured, and planned.
- Directors enjoy solving problems and finding solutions.

Things to watch out for:

- Directors can be impatient with others, and may even be aggressive at times; while this may achieve the immediate goal it is often not a good long-term strategy.
- They may believe that only they know the ‘right’ way to do things, and become irritated when others do things in a different way or reach a different conclusion. This may impact negatively on their business relationships, or result in a tendency to micromanage, and could mean that their new business loses valuable staff.
- Directors may not always be aware of their own faults. In our survey, the question “what attributes do you have that have made success less likely” seemed to be one that several Director entrepreneurs found difficult to answer.

### **Dominant Introverted Feeling – the Conscience (ISFP, INFP)**

Likely strengths as an entrepreneur:

- Many Consciences see themselves as persistent, determined, hard-working, passionate and optimistic. Often this is tied to something that is particularly important to them, or strong underlying principles; for the Conscience entrepreneur, it may be particularly important that their business and the way they carry it out matches these values.
- Conscience entrepreneurs will often mention a specific skill or knowledge area as something that contributed to their success – more so than most other people. While the nature of this will vary from person to person, many see this as a cornerstone of their success or else something to fall back on.
- Many Consciences see themselves as connecting well with individuals, and some see themselves as good at building relationships and networks.

Things to watch out for:

- Several Conscience entrepreneurs have lost work or been less commercially successful because, ethically, they felt they had to turn work down. This of course may well be a sacrifice that they are very prepared to make, as commercial success or money are unlikely to be their primary drivers.
- Though many feel that they can connect well with individuals, and indeed see this as a strength, many dislike active networking, selling, or marketing themselves. They are likely to prefer to build trust and rapport on an individual basis.
- They may procrastinate, and in particular may put things off in order to avoid possible conflict. They may sometimes be disorganized or unplanned.
- Consciences can sometimes be easily hurt or discouraged, and when this happens can become anxious and overwhelmed and find it difficult to summon up the energy they need. This seems to be more acute if they do not have a clear picture of the purpose or ethos of their business.

### **Dominant Extraverted Feeling – the Nurturer (ESFJ, ENFJ)**

Likely strengths as an entrepreneur:

- Many Nurturers see themselves as caring, supportive, as ‘good with people’ and as good people managers who seek to empower and develop their employees and others.
- They are likely to have extensive and reciprocal networks that they can draw on.
- They are likely to be organized, and to be persistent and driven in achieving their goals – and in helping others to achieve theirs.

Things to watch out for:

- Nurturers may be too focused on maintaining relationships and on caring for others; this can get in the way if making hard, objective or even selfish decisions is the right call for their business.
- They can be too talkative and ‘not know when to stop’.
- Nurturers can be overly sensitive and may take things personally. They may find it difficult to work alone, or without the support of others. This can be an issue if they are starting up as a one-person business, and they may need to find other sources of support.
- They want to make things happen and may be impatient; although Nurturers do not typically see themselves as risk takers, they may rush to a decision or take an action before considering all the facts or possibilities. Some Nurturers believe that they know what is best for others and they may seek to make this happen.

## Summary and conclusions

### Overview and purpose of the research

Entrepreneurs contribute significantly to the world economy (Kelley, Singer, & Herrington, 2016), and previous research has investigated how entrepreneurship relates to factors such as organizational performance (Rauch, Wiklund, Lumpkin, & Frese, 2009), personality (Leutner, Ahmetoglu, Akhtar, & Chamorro-Premuzic, 2014) or other personal characteristics (Markman & Baron, 2003). In terms of personality, much research has been based on the Five-Factor Model (the 'Big Five'), with only a small number of studies using the MBTI model or other type approaches to personality, and research has not to date focused on how to help individuals of different personality types to use their particular gifts to become entrepreneurs.

This study was carried out in order to address this issue. It allows people to understand the ways in which their particular personality type could help (or hinder) them in becoming entrepreneurs, and it helps those who are already entrepreneurs to develop strategies to work more effectively. In order to find answers, we asked respondents for their MBTI personality type, and in addition asked them a number of questions designed to assess their entrepreneurial orientation, whether they or others saw themselves as an entrepreneur, how entrepreneurial their organization or business was, how well their organization was performing, and what personal characteristics they possessed that had, or could, contribute to the success or failure of their business.

The survey was publicized to type users via social media, our websites and direct communication to workshop participants.

### Entrepreneurship

#### Entrepreneurial identity

Most research defines entrepreneurship in commercial terms, as for example "the founder, owner, and manager of a small business" (Zhao, Seibert, & Lumpkin, 2010), and this is the approach taken in this study; an entrepreneur was defined as someone who was the sole owner or co-owner of their organization and who had set up their own business. On this basis, 167 people, just under a third of the group, qualified as entrepreneurs. A significant part of the group, 127 people, did not fit this definition but nevertheless described themselves as entrepreneurs or believed that they were seen by others in this way.

#### Entrepreneurial orientation

Previous research (e.g. Lumpkin & Dess, 1996) has suggested that some people are more likely to want to become entrepreneurs than others, and that this 'entrepreneurial orientation' can be assessed on a number of dimensions. We developed questions to measure five scales of (self-reported) entrepreneurial orientation:

- Creativity
- Risk taking
- Impulsivity
- Competitive ambition
- Autonomy.

The entrepreneurs in the group showed a significantly higher orientation for Creativity, Risk taking, Impulsivity and especially Autonomy than the non-entrepreneurs. There was no significant

difference in terms of degree of orientation for Competitive ambition. Closer inspection of the data suggests that, compared with other scales, the average (mean) scores for Competitive ambition differ only slightly between those who had set up their own business, those who were thinking of doing so, and those who were not thinking of doing so. However, this score varied to a much greater extent between respondents who did or did not agree that they saw themselves as entrepreneurs, or that others saw them as entrepreneurs.

In summary, Creativity, Risk taking, Autonomy and to a lesser extent Impulsivity relate to whether an individual is an entrepreneur; Competitive ambition may relate more to whether an individual sees themselves as or believes they are seen by others as an entrepreneur. It may be that those who were more competitive or ambitious were more ready to see themselves in this light.

### Reasons for becoming an entrepreneur

Respondents who had set up their own business, or who were thinking of doing so, were asked why they had done or were thinking of doing this. The most mentioned theme in their responses concerned the need for independence, for autonomy, and to be one's own boss. For those who had set up their own business, most themes matched the goals of the organization they had set up.

There was also, in general, a match with entrepreneurial orientation; for example, those with a higher degree of orientation towards Impulsivity were more likely than others to start a business because they had spotted an opportunity or a gap in the market, and less likely than others to be looking for money or financial security.

### Organizational entrepreneurship

We asked respondents to the survey to rate their organizations, across 14 areas, on questions relating to how entrepreneurial their organization was. The responses from each respondent across the questions were averaged to give a total organizational entrepreneurship score. The organizations owned by those who we had classed as entrepreneurs were rated as significantly more entrepreneurial overall, and as significantly more entrepreneurial in their answers to almost all the individual questions. In particular, entrepreneurs tended to see their organizations as very much less structured, as new and fresh, informal, and encouraging staff to take chances.

For entrepreneurs, owning or co-owning their own business, there was a statistically significant correlation between their own entrepreneurial orientations, in particular Creativity and Risk taking, and how entrepreneurial they felt their organization to be (as measured by the organizational entrepreneurship score). For other respondents, there was no significant correlation. This suggests that:

- Entrepreneurs can influence how entrepreneurial their organizations are
- The more entrepreneurially orientated the entrepreneur is, the more entrepreneurial their organization will be.

### Entrepreneurial performance

Respondents who had set up their own business were asked what abilities, personal characteristics or other attributes they had that had contributed to the success of their business – and which of their personal attributes had made success less likely. Those thinking of setting up their own business were asked similar questions. The results showed that:

- The attributes most often mentioned by entrepreneurs as contributing to success included creativity, innovation, openness and vision; having contacts, interpersonal skills, networking

abilities and social confidence; and having experience, knowledge and business acumen/market knowledge.

- Those thinking of setting up for themselves gave similar answers, but may somewhat overestimate the importance of: contacts and interpersonal skills; being passionate and enthusiastic; and being friendly, co-operative and supportive. They may underestimate the importance of hard work and persistence; intelligence and problem-solving; and resilience.
- The attributes most often mentioned by entrepreneurs as making success less likely included being distractible, easily bored, not methodical and with a dislike of admin; being poor at or disliking marketing or selling; and being pessimistic, worrying, underconfident and risk-averse.
- Those thinking of setting up for themselves may be somewhat underestimating the practical importance of admin and detail, and of marketing and selling, or else overestimating their own abilities in these areas. Conversely, a lack of experience, business skills, or specific skills may not be as important as they imagine.

Respondents to the survey were also asked whether a number of financial indicators were improving or declining in their organizations. The results showed that:

- Overall, there was no significant difference between the organizations of entrepreneurs, and the organizations of non-entrepreneurs, on any of the financial indicators. However, more entrepreneurial organizations (as measured by average organizational entrepreneurship) were performing better, in particular those organizations seen as being first to market, as anticipating future trends, and as taking a high-tech approach. More entrepreneurial organizations tend to perform better in financial terms.
- The organizations owned by those entrepreneurs who were more orientated towards Creativity, Risk taking and Competitive ambition tended to perform better. There was no significant correlation with Impulsivity or Autonomy.
- Across both entrepreneurs and non-entrepreneurs, those who said that their organizational goals involved innovation, creating something new, or being leading edge, tended to perform better on the financial indicators.



## Personality type and relation to entrepreneurship

### Type distribution

The results of the research were based on 584 people who completed the questionnaire who knew their best-fit (verified) MBTI personality type. The most common four-letter types in the group were ENFP (14%) and INTJ (13%), but all Intuition types were over-represented.

Type	E	I	S	N	T	F	J	P
Number	281	303	150	434	318	266	310	204
Percent	48.3%	51.7%	25.6%	74.4%	54.5%	45.5%	52.9%	47.1%

This is not uncommon in a group of people interested in type. However, there were sufficient numbers of each type in the group to carry out meaningful analysis.

### Relation of type to entrepreneurship

Those with a preference for Intuition or for Perceiving were significantly more likely to have actually become entrepreneurs than those with a Sensing or a Judging preference, though the differences were small in real terms. In terms of dominant functions, the most likely types to be an entrepreneur were Extraverted Intuition (Explorers – ENFP and ENTP) and the least likely were Introverted Sensing (Conservers – ISTJ and ISFJ).

Each of the entrepreneurial orientation scales showed a clear relationship to personality type dichotomies, especially J–P and S–N. Extraversion, Intuition, Thinking and Perceiving types in general tend to show greater levels of entrepreneurial orientation, as follows:

- Extraversion types were on average significantly more orientated than Introversion types towards Risk taking, Impulsivity, and Competitive ambition
- Intuition types were on average significantly more orientated than Sensing types towards Creativity, Risk taking, Impulsivity and Autonomy
- Thinking types were on average significantly more orientated than Feeling types towards Competitive ambition and Autonomy
- Judging types were on average significantly more orientated than Perceiving types towards Competitive ambition
- Perceiving types were on average significantly more orientated than Judging towards Creativity, Risk taking, Impulsivity and Autonomy.

It is not therefore surprising that dominant functions also show a clear relationship to entrepreneurial orientation, as follows:

- Conservers (dominant Introverted Sensing) show on average the least orientation for Creativity, Risk taking, and Impulsivity, and the second least for Autonomy
- Activists (dominant Extraverted Sensing) on average have a mid-range to low score on all orientations except Impulsivity
- Visionaries (dominant Introverted Intuition) are mid-range on most orientations
- Explorers (dominant Extraverted Intuition) show on average the greatest orientation for Creativity, Risk taking, Impulsivity, and Autonomy
- Analysts (dominant Introverted Thinking) show on average the second highest orientation for Impulsivity and for Autonomy
- Directors (dominant Extraverted Thinking) show on average the greatest orientation for Competitive ambition

- Consciences (dominant Introverted Feeling) show on average the least orientation for Competitive ambition
- Nurturers (dominant Extraverted Feeling) show on average the least orientation for Autonomy.

At the organizational level, more entrepreneurial organizations were more likely to contain individuals with preferences for Extraversion, Intuition, and Perceiving. Within the entrepreneur group, we might expect a relationship between organizational entrepreneurship and personality, as entrepreneurs may, at least to some extent, shape their own business to be congenial to their own personality. Looking only at the employee group, no significant E-I or J-P differences were found and one small T-F difference, but more entrepreneurial organizations were still more likely to contain individuals with preferences for Intuition. It may therefore be that as employees, Intuition types are particularly attracted to more entrepreneurial organizations.

### Type and entrepreneurial performance

There are no statistically significant differences between any of the type pairs (E-I, S-N, T-F, J-P) in terms of any of the financial indicators, either for the whole group or within either the entrepreneur or non-entrepreneur groups. Nor are there significant differences by dominant function, functional pairs, or temperaments. Within the limits of the data, it is not possible to say that any one MBTI type performs significantly better than any other MBTI type in terms of organizational performance.

There was, however, a relationship between an individual's type and the attributes they felt had or would contribute to their success, or act as obstacles to their success. For example, those with an Intuition preference (and especially INFP and INTP) were more likely than others to see creativity, innovation and openness to ideas as a particular strength; Extraverts (and especially ENFP) to see having contacts, interpersonal skills, etc. as a strength. These results have been used to produce advice for each favorite process function on what strengths they could capitalize on, and what aspects of their behaviour they should look out for.

## Gender and age

### Distribution

70% of the group were female, and 28% male, with 1% choosing “other” or “I’d rather not say”. Age ranged from 16 to 85 years, with an average (mean) age of 44 years.

### Relationship with entrepreneurship

Men were no more likely than women to actually be entrepreneurs; however, men were more likely than women to agree or strongly agree with the questions “people have often described me as an entrepreneur” and “I would consider myself to be an entrepreneur”.

Men scored significantly higher than women on the entrepreneurial orientations of Creativity and Competitive ambition (based on an independent-samples t-test).

The entrepreneur group were on average significantly older (53 years) than the non-entrepreneurs (42 years). Older people were also more likely to agree or strongly agree to the questions “people have often described me as an entrepreneur” and “I would consider myself to be an entrepreneur”.

There were statistically significant correlations between age and three of the dimensions of entrepreneurial orientation, suggesting that older people in the group had a greater orientation towards Autonomy in particular.

### Relation with performance

Women were more likely than men to mention a number of positive attributes, including being tenacious and a hard worker; being independent, self-confident and having self-belief; and being calm, resilient and optimistic.

Younger entrepreneurs were more likely than older entrepreneurs to mention passion, enthusiasm, motivation, energy, drive, and determination as a strength. Older entrepreneurs were more likely to mention integrity and taking an ethical approach.

Older entrepreneurs were more likely than younger ones to see a lack of competition, energy or drive as a failing.

Women, on average, worked for businesses that were performing better on the financial indicators. However this did not apply within the entrepreneur group, suggesting that women and men perform no better or worse than each other as entrepreneurs, in financial terms. These findings are in line with previous research (Sexton & Bowman-Upton, 1990), which has suggested minimal differences between male and female entrepreneurs.

## Conclusions

In some quarters, there is an image of the 'entrepreneur' as a competitive, ambitious, driven maverick. The results of this study do not however entirely support this picture. Individuals become entrepreneurs for many different reasons, and the definition of an entrepreneur may vary. Some who see themselves as an entrepreneur do not own or have not founded their own business; some of those who have do not see themselves as an entrepreneur. A need to be one's own boss seems to be a major distinguishing factor of entrepreneurs, with (to a lesser extent) an orientation towards creativity, taking risks and being impulsive. An orientation towards competition and beating the opposition appears to be much less important, but may help drive financial performance for those who do become an entrepreneur.

In general, the more entrepreneurially orientated an entrepreneur is, the more entrepreneurial their organization will be; and the results suggest that more entrepreneurial organizations perform better financially. For entrepreneurs for whom this is important, it may be worthwhile reviewing just how entrepreneurial their organization actually is, using the checklist in appendix 1.

While people with some type preferences are more likely to become entrepreneurs than others, an individual's personality type does not determine how successful they may be as an entrepreneur. What is perhaps more important is how they use their self-awareness and self-knowledge in order to become as successful an entrepreneur as possible. By drawing on the guidelines in this report, those who know their MBTI type can capitalize on their strengths, and avoid their blind spots, on the journey to becoming an entrepreneur.

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## Appendices

### Appendix 1: How entrepreneurial is your organization?

Follow the checklist below to work out how entrepreneurial your organization is.

1. In the table below, you will see 13 pairs of descriptions (for example, is “Solid, well-established” a good description, or would “New and fresh” be better?). On each line, mark the position that best describes your organization.

	0	10	20	30	40	50	60	70	80	90	100		
Solid, well-established												New and fresh	
Avoids risks												Takes risks	
Follows the market												First to market	
Hierarchical and structured												Unstructured, little or no hierarchy	
Shrinking												Growing	
Rewards certainty												Rewards innovation	
Builds on established trends												Anticipates future trends	
Acts carefully												Acts quickly	
Targets established markets												Targets early adopters and/or premium customers	
Similar to other organizations												Unique, unlike other organizations	
Only commits resources to projects with certain outcomes												Commits resources to projects with unknown outcomes	
Low-tech												High-tech	
Formal												Informal	
Prioritizes the avoidance of mistakes												Encourages employees to take chances	
												Total	
												Average (Total/14)	

2. Enter the score (from 0 to 100) for each line in the column at the right
3. Add up the total for the column and enter it in the box marked “Total”
4. Divide this total by 14 to give the average score
5. Compare the average score with the table below

Score	Description
83-100	You see your organization as much more entrepreneurial than most.
67-82	You see your organization as more entrepreneurial than most. You may find it useful to review the table on the previous page to see if there are any particular areas where your organization is particularly entrepreneurial.
34-66	You see your organization as about as entrepreneurial as most people do. You may find it useful to review the table on the previous page to see if there are any particular areas where your organization is more, or less, entrepreneurial.
18-33	You see your organization as less entrepreneurial than most. Are there any specific areas where your organization could be more entrepreneurial?
0-16	You see your organization as much less entrepreneurial than most.



## Appendix 2: Psychological type and the MBTI® assessment

The Myers-Briggs Type Indicator® (MBTI®) assessment is probably the most widely used personality questionnaire in the world. It does not measure our ability or skill, or how much of a personality trait we have. It looks at whether we have an inbuilt preference to do things in one way or in another way. It looks at four pairs of preferences:

How do you direct and receive energy?	
<b>Extraversion (E)</b>	<b>Introversion (I)</b>
Gets energy from the outer world of people and experiences	Gets energy from the inner world of reflections and thoughts
Focuses energy and attention outwards in action	Focuses energy and attention inwards in reflection
How do you take in information?	
<b>Sensing (S)</b>	<b>Intuition (N)</b>
Prefers real information coming from five senses	Prefers information coming from associations
Focuses on what is real	Focuses on possibilities and what might be
How do you decide and come to conclusions?	
<b>Thinking (T)</b>	<b>Feeling (F)</b>
Steps out of situations to analyze them dispassionately	Steps into situations to weigh human values and motives
Prefers to make decisions on the basis of objective logic	Prefers to make decisions on the basis of values
How do you approach the outside world?	
<b>Judging (J)</b>	<b>Perceiving (P)</b>
Prefers to live life in a planned and organized manner	Prefers to live life in a spontaneous and adaptable way
Enjoys coming to closure and making a decision	Enjoys keeping options open

For convenience, these pairs of preferences, or pairs of opposites, are often called type dichotomies. So we might talk about the E-I dichotomy, the S-N dichotomy, the T-F dichotomy or the J-P dichotomy.

In each preference pair, we will have a preference for one type. So for example, we might prefer E rather than I, and spend much more of our time and energy doing things typical of Extraverts, and little of our time or attention on activities and ways of doing things typical of Introverts. Or we might prefer I rather than E. Whatever our preference, however, we will spend some time and carry out some activities associated with the other side. The same applies to S-N, T-F and J-P; in each case we will have a preference, but we will visit the other side from time to time. We will use all eight modes at least some of the time.

The MBTI assessment is a method for helping individuals to work out what their type preferences are; so you may hear people say things like "I'm an ESTJ" or "I've got preferences for INFP" or "I'm definitely a Perceiving type". They can then use this knowledge in all sorts of ways to help them with their development as human beings. The four letters can be combined to give 16 different types, but this four-letter type formula should not be used to "put people in a box"; the Indicator is used to open up possibilities, not to limit individuals.

The 16 types are often illustrated using a type table, as shown opposite.

Each of these 16 types has a particular Core Character taking the lead in directing their personality – what's often called their favorite process. So for ISTJ and ISFJ, for example, Introverted Sensing (Si), the Conservator, is their leading Core Character. Central to their personality is the importance of lived experience, and drawing on their rich store of memories. For ESTP and ESFP, it is Extraverted Sensing (Se) – the Activist, experiencing the moment, the here and now with all their senses – and so on for all 16 types, as shown below.



Types	Favorite process
ISTJ, ISFJ	Introverted Sensing (S <sup>i</sup> )
ESTP, ESFP	Extraverted Sensing (S <sup>e</sup> )
INFJ, INTJ	Introverted Intuition (N <sup>i</sup> )
ENTP, ENFP	Extraverted Intuition (N <sup>e</sup> )
ISTP, INTP	Introverted Thinking (T <sup>i</sup> )
ESTJ, ENTJ	Extraverted Thinking (T <sup>e</sup> )
ISFP, INFP	Introverted Feeling (F <sup>i</sup> )
ESFJ, ENFJ	Extraverted Feeling (F <sup>e</sup> )