Who is the technical professional?
A description of five identity profiles

Maaike Endedijk | Dieuwertje ten Berg | Marlon Nieuwenhuis
Ruth van Veelen | Natascha van Hattum| Mirte Disberg

Identity profiles of technical professionals

Who am I as a professional?
Professionals who are able to formulate a clear answer to this question, have a strong sense of their *professional identity.* A strong professional identity is important, because it helps to boost self-confidence as a professional, it contributes to stable career choices and more optimal work performance. The development of one's professional identity already starts during early years of schooling, and keeps on changing and developing over the course of one's professional career. A professional identity profile can be based on 4 dimensions in one's self-concept namely personality, competencies, values and interests. While technical talents from the same study program of the same function profile may partly overlap on these 4 dimensions, importantly, they also vary strongly in how they see themselves professionally. Thus, people with a similar backgrounds in their technical education or function, are still highly diverse in their professional identity profile.

Why focus on identity profiles among technical professionals?
In this editorial, we provide a description of 5 identity profiles from (future) technical professionals. The reason for developing these profiles is two-fold.

First, people form their professional identities by both reflecting on themselves, as well as by comparing themselves to other professionals in their field. When you feel similar to most people in your professional or educational environment, this confirms and boosts your sense of identity; it is easy to build a strong professional identity ("I am a prototypical engineer"). However, when you do feel dissimilar to most people in your professional or educational context, comparing yourself to the average professional in your field does not help to confirm and boost your sense of identity; it is more difficult to build a strong professional identity (I am not a typical engineer) Social stereotypes about the prototypical technical

professional play an important role in this process; biases about who successful technical professionals should be (for example, highly analytical, brilliant, interested in things not people, specialist rather than generalist) shape people's ideas about their own professional identity and whether they fit in or not. Yet importantly, there is not such a thing as one prototypical technical professional. By demonstrating that professional identity profiles of technical professionals are highly diverse and vary a lot, our aim is to provide a more inclusive picture of this professional field. We expect this to make it easier and more appealing for a diverse group of (future) technical talents to build a strong professional identity in their field.

Secondly, we know that not everyone with a degree in a technical educational program actually opts to work in the technical sector. In the Netherlands, currently more than half of the graduates with a technical degree opts for a career outside the technical sector. This means a great loss of human capital for one of the most important economic sectors in the Netherlands, with the largest number of vacancies to fill. By offering insight in the various professional profiles among technical talent, we aim to better understand which students and young professionals perceive the technical sector as an appealing place to work and which students rather opt out. Subsequently, we aim to provide technical companies with insights on how they can improve their recruitment & selection tactics and their working culture, in order to attract and retain a more diverse group of technical talent. Herewith we aim to contribute to more and better technicians.

The research

The profiles were established based on research among 445 employees from five technical companies and 601 students from 20 technical educational programs (Applied University and University).

Professional identity was measured with a tool called the Career Compass. It measures the interests, personality, values and competencies from (future) technical professionals. The Career Compass was developed in earlier research and further optimized in this current study. On the basis of the answer patterns from the participants we were able to distinguish between 5 distinct identity profiles based on advanced statistical analyses.

all-rounder	analyst	individualist	innovator	team player
Open	Zelfstandig	Taakgericht	Initiatief	Proactief
Brede interesse	Betrouwbaar	Rustig	nemen	Pragmatisch
Positief	Problemen	Kritisch	Uitdaging	Sociaal
zelfbeeld	oplossen	zelfbeeld	Creatieve	competent
			denker	

Every participant has one dominant profile; the profile that most resembles the professional self-concept. At the same time, every participant will also always show overlap with other profiles. Below you will find a description of each profile, based on the most distinctive characteristics of the profile.
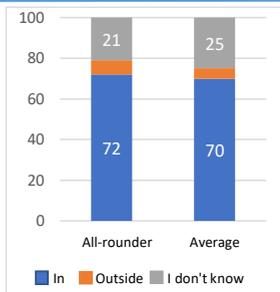
Factsheet All-rounder

Who is the All-rounder?

The all-rounder is open, interested and focused on people and society.
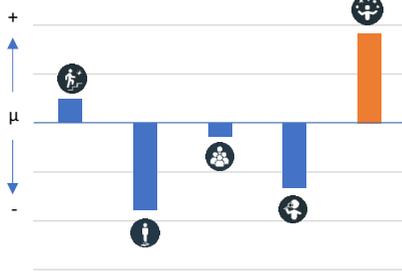
1 in 3 technical professionals is an All-rounder

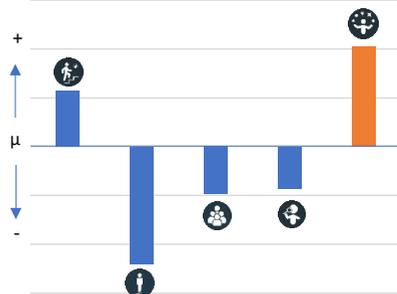33,0 % of women is an **All-rounder**

27,8% of men is an **All-rounder**

In — Outside — I don't know

Where do you intend to work?
(in-/outside the technical sector)?

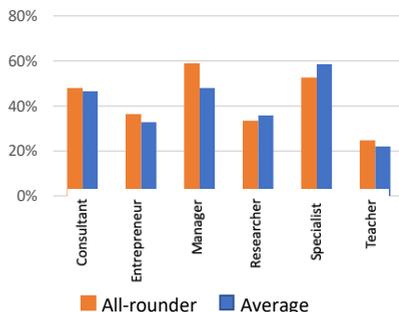*"I try to find out a lot about my career opportunities"*

"I know what I want in my career"

"I feel at home in my study/organization"

"I want this role in my future job"

All-rounder — Average

All-rounder

People in the 'All-rounder' profile have many different motivational drivers. They value **intellectual challenges** and are keen to support other people and **contribute to society**. All-rounders like to **enjoy** life. They generally care about having good **family relationships**, their **health** and **career**, while to a lesser degree they also value predictability.

Many all-rounders seem **curious** and have a **wide variety of interests**. They tend to be open to **new ideas** and **innovations** and participate actively in conversations about these. They are frank and direct in expressing their views, which can make them appear **passionate** or **critical** and **argumentative** - in particular when for them important matters are at stake. Many all-rounders are meticulous and well organized in their approach to work, which may help to satisfy their diverse motivational interests.

All-rounders have great confidence in their competencies. In particular skills such as **management, collaboration**, dealing with change and working in **international environments** comes easy to them they say. They are also positive about their abilities to do **research**, work **analytically**, design systems or products, mentor others and organize their own time for maximum effectiveness.

In short, all-rounders have broad interests encompassing people and society, collaboration with others and creativity. They tend to be curious and enjoy practical activities. This diversity of interests could make it difficult for some all-rounders to make decisions about what goals to pursue.

Who is the Analyst?
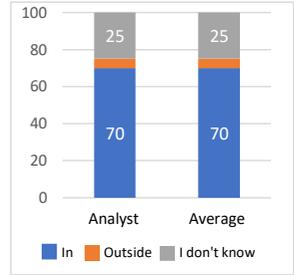
The analyst is independent and loves analysing and solving problems.

1 in 5

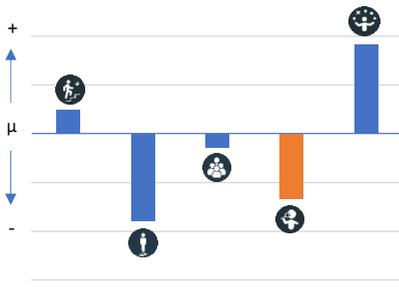technical professionals is an **Analyst**

27,8 % of women is an **Analyst**

21,6% of men is an **Analyst**

Legend: In — Outside — I don't know

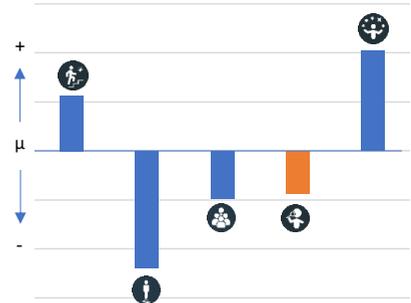Values: Analyst: 70 / 25; Average: 70 / 25

Where do you intend to work? (in-/outside the technical sector)?
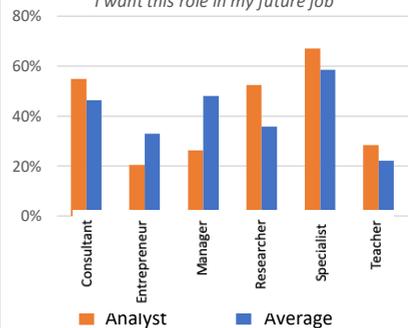

"I try to find out a lot about my career opportunities"

"I know what I want in my career"

"I feel at home in my study/organization"

"I want this role in my future job"

Legend: Analyst — Average

Categories: Consultant, Entrepreneur, Manager, Researcher, Specialist, Teacher

Analyst

People in the 'Analyst' profile love **intellectual stimulation**. They are driven to **understand problems** and **find solutions**, in particular when this benefits other people and society. Analysts are often satisfied having a **modest** lifestyle without unnecessary luxuries. Most analysist are not interested in status or power; for them career success often revolves around developing their **expertise** and solving increasingly **complex analytical issues**.

Most analysts appear **independent** and **introverted**; they tend to **listen** more than they talk. At times, this makes it hard for others to understand what thoughts analysts are having on their mind. Analysts typically seem **friendly**, concerned about other people and reasonably **structured in their approach to work** - which makes them appear **reliable**. They tend to be somewhat sensitive to work pressure or may doubt the quality of their own work.

Analysts are generally confident in their **analytical skills**. They tend to believe in their abilities to conceptualize high quality research, execute the studies and write up the results. Analysts are significantly less confident in their competencies regarding management, collaboration, flexibility in times of change and the creative design of systems or products.

In short, analysts enjoy working independently on complex analytical issues. In their limited interaction with others, they are focused on the contents of their work and tasks at hand.
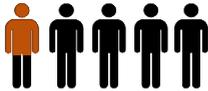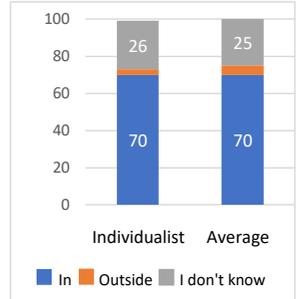
Who is the Individualist?

The individualist is task-oriented, calm and values comfort.
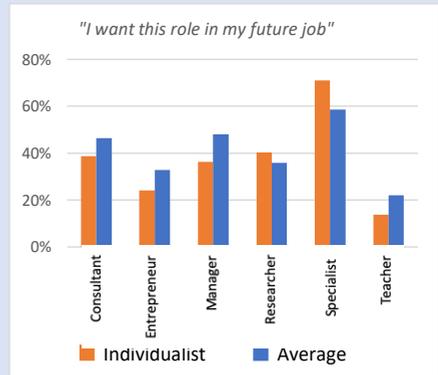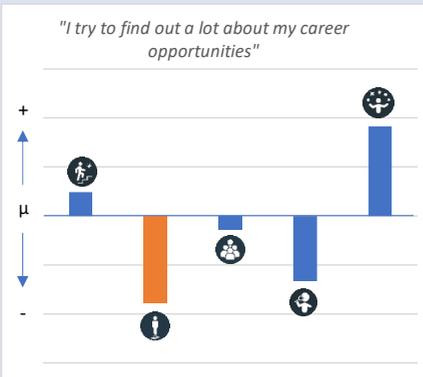
1 in 9 technical professionals is an **Individualist**

6,7 % of women is an **Individualist**

13,2% of men is an **Individualist**

Where do you intend to work?
(in-/outside the technical sector)?

Legend: In | Outside | I don't know

Chart values — Individualist: 70, 26 | Average: 70, 25

"I try to find out a lot about my career opportunities"

"I know what I want in my career"

"I feel at home in my study/organization"

"I want this role in my future job"

Legend: Individualist | Average

Individualist

People in the 'Individualist' profile value a **comfortable** and **simple life**; they are not looking for challenges for their own sake. Individualists are most comfortable on their own and typically do not need much contact, interaction or activities with other people. **Gaming** is a favorite pastime and some individualists also enjoy **working with their hands**. Individualists tend to be less interested in topics concerning society.

In their behavior, individualists may seem **flexible** but also somewhat **chaotic**; they may wait for deadlines to come really close and work with bursts of action. When they are amongst others, they tend to **listen** rather than speak. When working on projects, it can be a challenge for individualists to stay actively involved with the team. They enjoy working on **practical matters**, appear **task-focused** and prefer for others to take the lead. Often, they make a **calm** impression on others, which can however also make them appear indifferent.

Individualist are often **very critical** when evaluating their own competencies. In particular when these competencies are related to interaction with other people, for example managing, collaborating with or mentoring other people. Because many individualists prefer to be on their own and not pro-actively seek out challenges, they may not have practiced these competencies as often.

In short, many individualists like to work independently on clearly defined tasks. They tend to feel most comfortable with technical or functional tasks they can complete on their own.
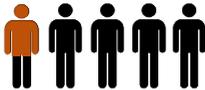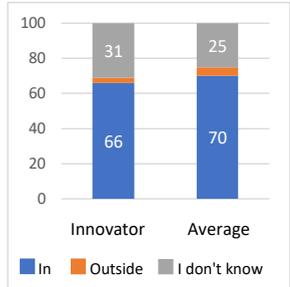
Who is the Innovator?

The innovator takes initiative and loves challenges.

1 in 9

technical professionals is an **Innovator**

5,7 % of women is an **Innovator**

13,3% of men is an **Innovator**

Where do you intend to work?
(in-/outside the technical sector)?

	Innovator	Average
I don't know	31	25
In	66	70

Legend: ■ In ■ Outside ■ I don't know

"I try to find out a lot about my career opportunities"

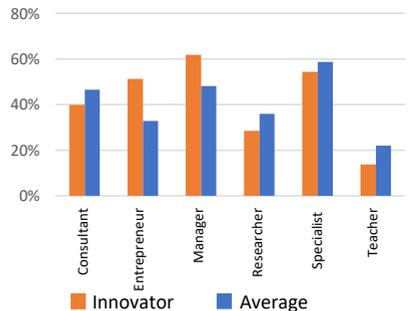*"I know what I want in my career"*

"I feel at home in my study/organization"

"I want this role in my future job"

Legend: ■ Innovator ■ Average

Categories: Consultant, Entrepreneur, Manager, Researcher, Specialist, Teacher

Innovator

People in the 'Innovator' profile typically enjoy **challenging** and **intellectually stimulating work**. They value having **good career perspectives**, which is likely to be more important than family relationships and adhering to traditions. Typically, they do not need predictability, preferring instead to **experiment** and seek out **challenges**. Social conventions, volunteering and societal themes such as the natural environment are often of little importance to innovators.

Innovators are full of **initiative**, **creative in their thinking** and very **open to new ideas**. They tend to appear **optimistic**, **self-assured** and **assertive**. When collaborating with others, they may benefit from not running ahead of the group and ensuring they complete tasks and initiatives before starting new ones. Generally, Innovators seem friendly, spontaneous and tolerant of others.

Innovators have a lot of **confidence** in their **competencies** when it comes to **entrepreneurship**, **collaboration** and **analyzing problems**. Designing systems or products and making the most of changes in the environments are also competencies that come easy to them. They tend to struggle to structure their work and organize their time efficiently.

In short, innovators like to understand how things work and are often interested in creative, artistic and innovative activities. They prefer to minimize screen time, spending their time working with their hands instead.

Who is the Team player?

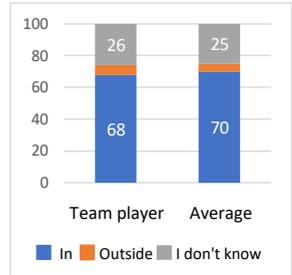The team player is socially proactive, pragmatic en action-oriented.

1 in 4 technical professionals is a **Team Player**
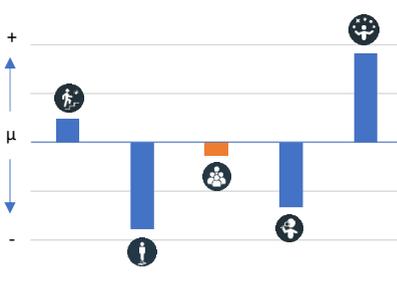
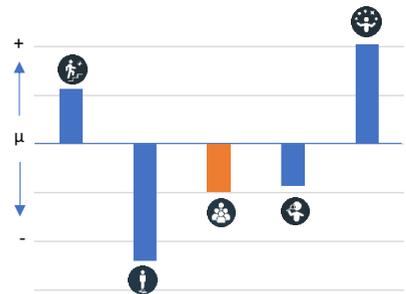26,8 % of women is a **Team Player**

24,2% of men is a **Team Player**

Where do you intend to work? (in-/outside the technical sector)?

Bar chart:
	Team player	Average
I don't know	26	25
In	68	70

Legend: ■ In ■ Outside ■ I don't know

"I try to find out a lot about my career opportunities"

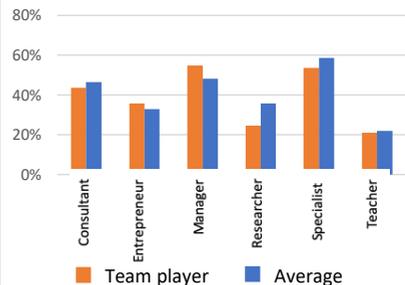*"I know what I want in my career"*

"I feel at home in my study/organization"

"I want this role in my future job"

Legend: ■ Team player ■ Average

Categories: Consultant, Entrepreneur, Manager, Researcher, Specialist, Teacher

Team player

People in the 'Team-player' profile value **social etiquette** and having good **family relationships**. These values also tend to surface in their community spirit, interest in local clubs and a desire to maintain a good **work-life balance**. Team players care about being in good health, they value **certainty** and appreciate a **comfortable life**. They are generally less interested in intellectual stimulation.

Team-players tend to be **socially pro-active**; they seek contact and touchpoints with others and during meetings they are active participants. They often have a **grounded and pragmatic view** on matters and are focused on **action** rather than analysis. Their outgoing nature helps to make connections between people when collaborating, however team-players may at times be too attention-seeking and benefit from allowing others more time to speak. While team-players like to take action, they may at times benefit from being more open to creatives ideas and innovations.

Team-players tend to be confident in their competencies regarding **managing other people**, **collaborating** and dealing with changes. They evaluate their own analytical skills and ability to conduct research negatively though. Designing systems or products and working in international or intercultural teams also does not come as easy to them.

In short, team-players are interested in social interaction and the communities they are part of. They prefer to act and get things done rather than analyze and think things through, which surfaces in their pragmatic approach.

Preview: the future of 'Bridge the Gap!'

This brochure is part of a larger research project called '**Bridge the Gap!**', executed from 2018 to 2021.

In the upcoming years, we will focus on attaining three main goals:

- To provide insight in **crucial phases and critical events** in the development of the professional identity and its impact on making career choices

- To establish the **context factors** in educational and technical environments that influence professional identity development, related to career choices among different types of professionals.

- To design and test tools and interventions to support students and. young professionals to develop self-knowledge and self-confidence in their professional profile.

For more information about this project, please go to our project website via: **www.techyourfuture.nl**

If you have any questions about the project, or if you would like to participate, please do not hesitate to contact us via: bridgethegap@utwente.nl.

'Bridge the Gap!' is powered by: