Fraunhofer

CORPORATE CULTURE MATTERS
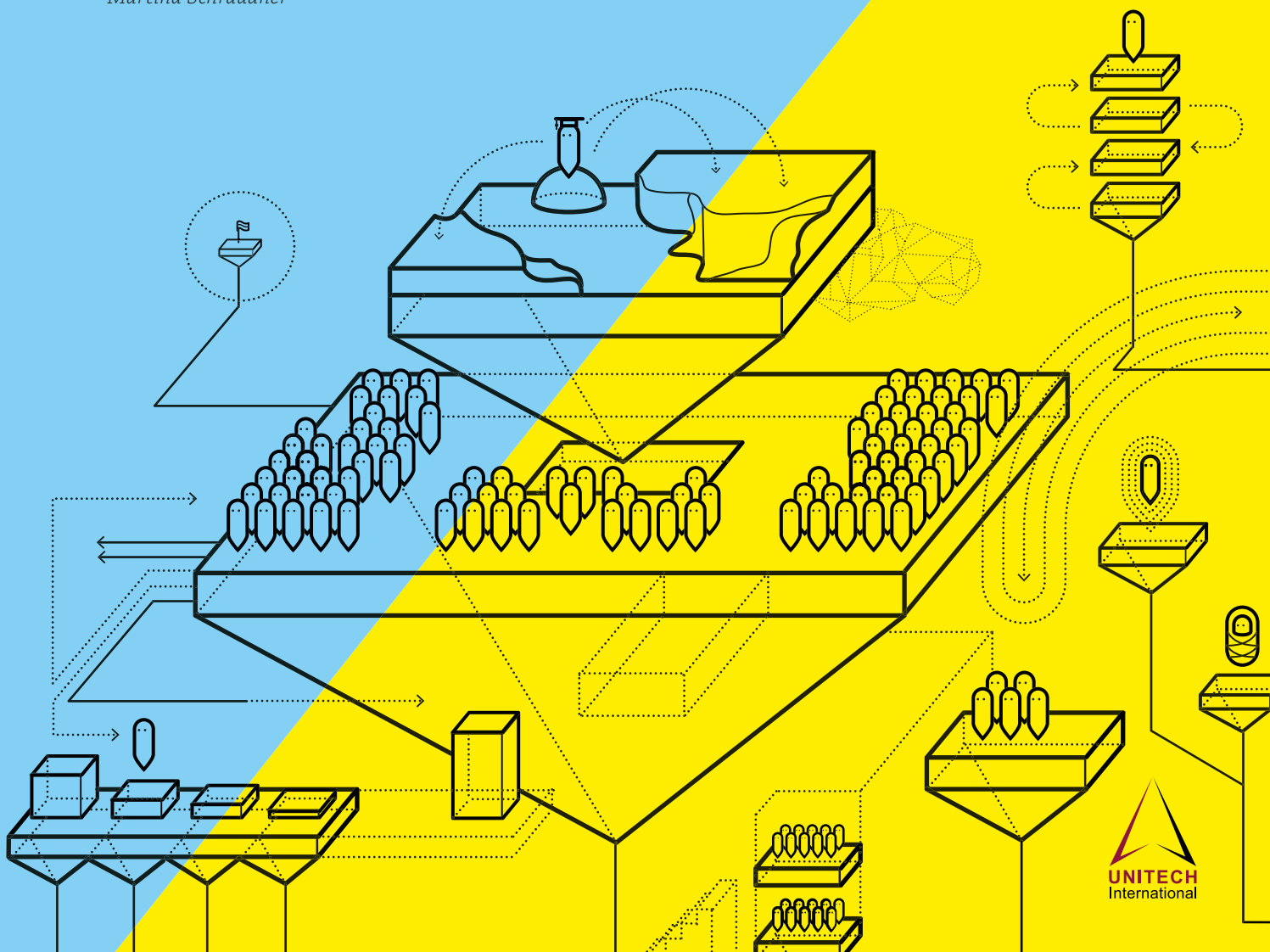
ALUMNI OF UNITECH INTERNATIONAL AND THEIR WORKPLACE PREFERENCES
AN EXPLORATORY STUDY

Angelika Trübswetter
Karen Genz
Katharina Hochfeld
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UNITECH
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ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

CORPORATE CULTURE MATTERS

Seeking to best utilize the potential of diversity, FRAUNHOFER CENTER FOR RESPONSIBLE RESEARCH AND INNOVATION, CERRI, develops innovative career models and identifies those attributes of corporate cultures that can attract and, in the long term, motivate highly-skilled employees. For individual organizations, we scientifically evaluate their existing practices, develop recommendations for potential adjustments, and facilitate such adjustments.

In particular, we focus on the following questions. How can diversity foster innovation? What work designs, corporate cultures, and leadership styles might be most effective in this regard, both now and in the future? How can these be implemented? And how can these bring economic benefits to individual organizations?

We combine original interaction formats with established social science methods such as polls, qualitative interviews, focus group discussions, etc.

For more information, visit **www.cerri.fraunhofer.de**

The UNITECH INTERNATIONAL SOCIETY is based in Zurich, Switzerland and comprises both academic and commercial organizations. By providing a range of courses, internships, and foreign exchange programs, it helps outstanding students in STEM fields gain exceptional business know-how and develop social, academic, and managerial skills. At present, there are approximately 700 UNITECH alumni and 30% among them are women. The alumni association has approximately 400 registered members.

For more information, visit **www.unitech-international.org**

ETH ZURICH is one of the leading international universities in technology and the natural sciences, and it is well-recognized for its outstanding education, ground-breaking fundamental research, and history of putting such research into practice. For researchers, it provides an inspiring working environment and for students, it offers comprehensive education. Founded in 1855, ETH ZURICH currently has more than 18,000 students from more than 110 countries, including 3,900 doctoral students.

For more information, visit **www.ethz.ch/en.html**

INTRODUCTION

Fraunhofer Society is one of the leading applied research organizations in Europe. Seeking to explore what kinds of organizational cultures might be most effective in attracting and retaining highly skilled and internationally mobile engineers, it conducted an exploratory study in cooperation with ETH ZURICH and the UNITECH INTERNATIONAL SOCIETY. This study included semi-structured individual interviews with 19 UNITECH alumni and a standardized online survey of 172 registered members of the alumni association about their career development strategies, motivators, sources of frustration, experiences with different organizations, etc. Due to their outstanding qualifications, international experiences, and broad educational backgrounds, UNITECH alumni constitute a unique and scientifically relevant group.

This booklet presents the conducted study, which is intended
— to provide scientific evidence about the workplace preferences of UNITECH alumni;
— to help individual organizations adjust their HR strategies, re-shape their cultures, and, ultimately, more effectively utilize the potential of diversity; and
— to better familiarize the UNITECH INTERNATIONAL SOCIETY with the preferences of their alumni and provide a solid basis for mutual communication.

OUR THREE MAJOR FINDINGS ARE:

1 — **Corporate culture matters.** By establishing an atmosphere of trust and personal and professional recognition and by ensuring intellectually stimulating work and opportunities for learning, organizations can more effectively attract and retain highly skilled employees.

2 — **Workplace preferences may differ between men and women.** Among surveyed UNITECH alumni, a significantly greater proportion of women than men prioritized job security and work-life balance. Among those who had more than five years of professional experience, a greater proportion of men had come to prioritize a high income over time.

3 — **Priorities change with time.** Respondents who had more than five years of professional experience agreed that they were now less mobile than in the past and a greater proportion of women than men among them had come to place a higher value on job security. Respondents with less professional experience expected for their priorities to change in a similar way in the future.

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THEORETICAL BACKROUND

In an increasingly globalized world, ongoing demographic changes force organizations to compete for talent. This competition is particularly fierce in STEM fields, in which skills shortages continue to increase and the workforce continues to age.

Fouad, Singh, Fitzpatrick, and Liu (2012) surveyed female engineers who opted against working in the field of engineering and established that »thirty percent left engineering because of organizational climate« (Fouad et al., 2012). This was the fourth most-mentioned reason in frequency, preceded by *lost interest*, *no advancement*, and *wanted more time with family*. By accommodating needs and preferences of high potentials, in particular, with regard to work design and the culture and atmosphere in the workplace, organizations can more effectively attract and retain highly skilled employees.

Over the recent years, both the scientific and business communities have devoted much attention to organizational culture. Organizations have re-considered their practices and scholars have developed constructs and assessment methods (Kaiser et al., 2012; Schönborn, 2014). Over the years, many different definitions of the term corporate, or organizational, culture have been developed. Sackmann, for example, defines this culture as »core assumptions and beliefs, typical for a group, which significantly influence this group's perceptions, way of thinking, and actions« (Sackmann, 2002). Many scholars regard shared norms, values, and beliefs as essential components of culture. Edgar Schein has developed the probably most cited following definition:

> »*The culture of a group can be defined as a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*« (*Schein, 1985*).

Schein's three-level model – an analytical integrative model (Haschke, 2012) that has probably received the most attention – distinguishes between three levels of organizational culture and the degree of their exposure. The top level contains visible artefacts – organizational infrastructures and processes; the middle level comprises norms and values; and the bottom level consists of underlying basic ideologies and assumptions, operating as a form of organizational „subconscious." These levels are interwoven – while culture manifests itself through artefacts and values, its essence can only be comprehended by interpreting the underlying assumptions (Schein, 1985).

RESEARCH QUESTIONS AND METHODOLOGY

In our exploratory study, we combined both quantitative and qualitative methods. The purpose was to assess the workplace preferences of UNITECH alumni and to develop recommendations that could help organizations adjust their HR strategies and re-shape their cultures.

Specifically, our research questions are:

> *1. What are workplace preferences of high potentials? and*
> *2. What kinds of corporate cultures might be most effective in attracting and retaining highly skilled and internationally mobile engineers?*
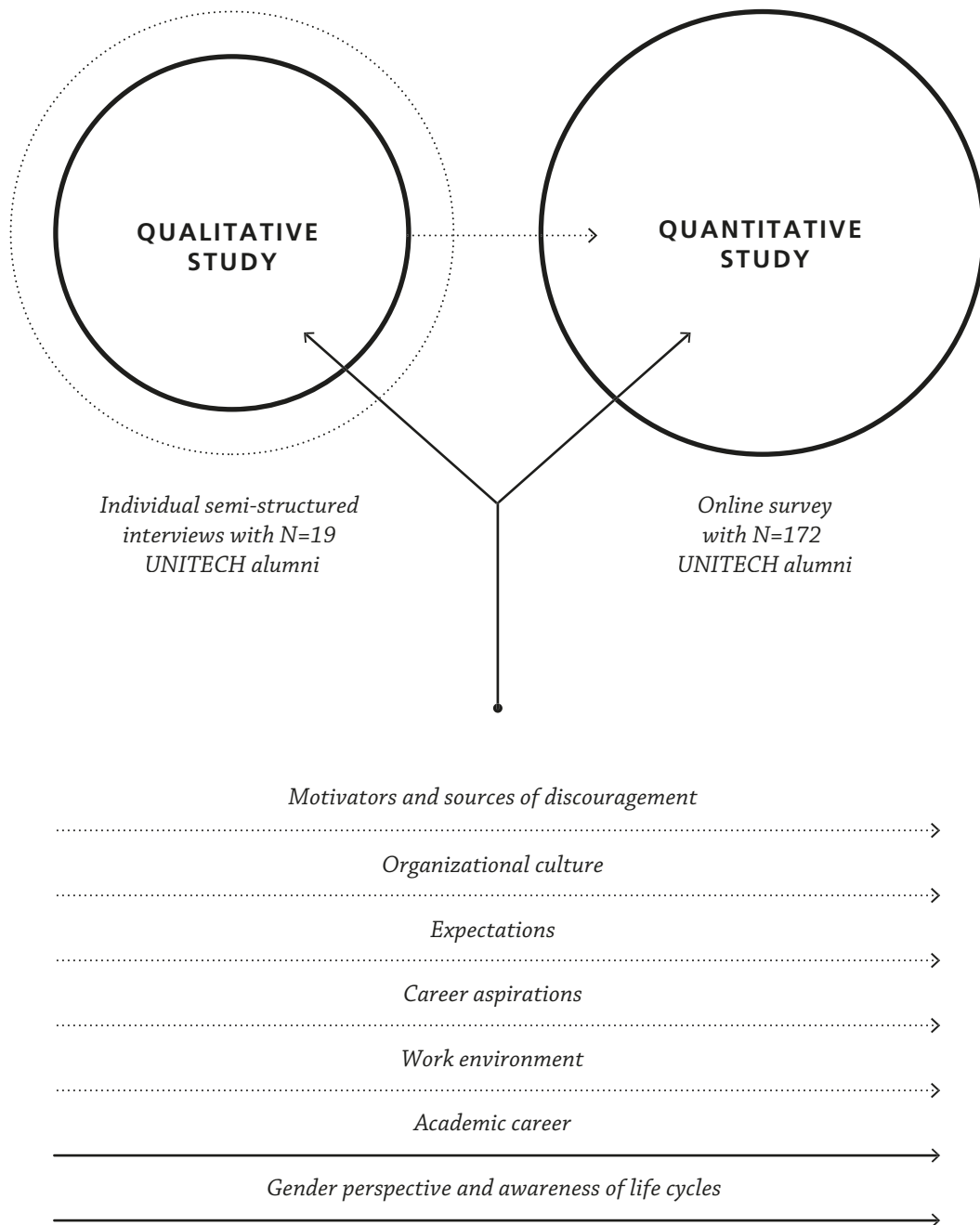
Between June and October 2013, we conducted individual interviews with 19 UNITECH alumni. In accordance with the principles of theoretical sampling and with specific categories, theoretically derived by the authors, the group of interviewees included men and women in approximately equal proportions and was diversified based on age, nationality, marital status, and the degree of international mobility and experience. Each interview lasted approximately 90 minutes. Interview records were transcribed and evaluated.

An online survey was tested in April 2014 and conducted between April and May 2014. Governed by the information privacy law, the survey was administered by UNITECH International. Originally, all 400 members of the alumni association were invited to participate. Ultimately, 172 alumni, or 43% of those invited, participated. The questionnaire was designed to take approximately 20 minutes.

Figure 1 shows how the exploratory study was designed.

FIGURE 1

EXPLORATORY STUDY – THE DESIGN

QUALITATIVE STUDY

QUANTITATIVE STUDY

Individual semi-structured interviews with N=19 UNITECH alumni

Online survey with N=172 UNITECH alumni

Motivators and sources of discouragement

Organizational culture

Expectations

Career aspirations

Work environment

Academic career

Gender perspective and awareness of life cycles

Source: Fraunhofer, 2014

THE QUALITATIVE STUDY

SAMPLE

Figure 2 shows personal characteristics of the 19 interviewed UNITECH alumni.

SEX

11 — | — 8

— *male* — *female*

INTERNSHIPS

1-4

LANGUAGES

Ø 3

CHILDREN

*Interviewees
with children - 4*

16

PROFESSIONAL EXPERIENCE

Ø 3,8 years

INTERNATIONAL EXPERIENCE

*Number of countries,
in which at least one had studied - 9
Number of countries,
in which at least one was living - 12*

AGE

Ø 30 years
Range : 22-38 years

**TIME WITH CURRENT
ORGANIZATION**

Ø less than 2 years
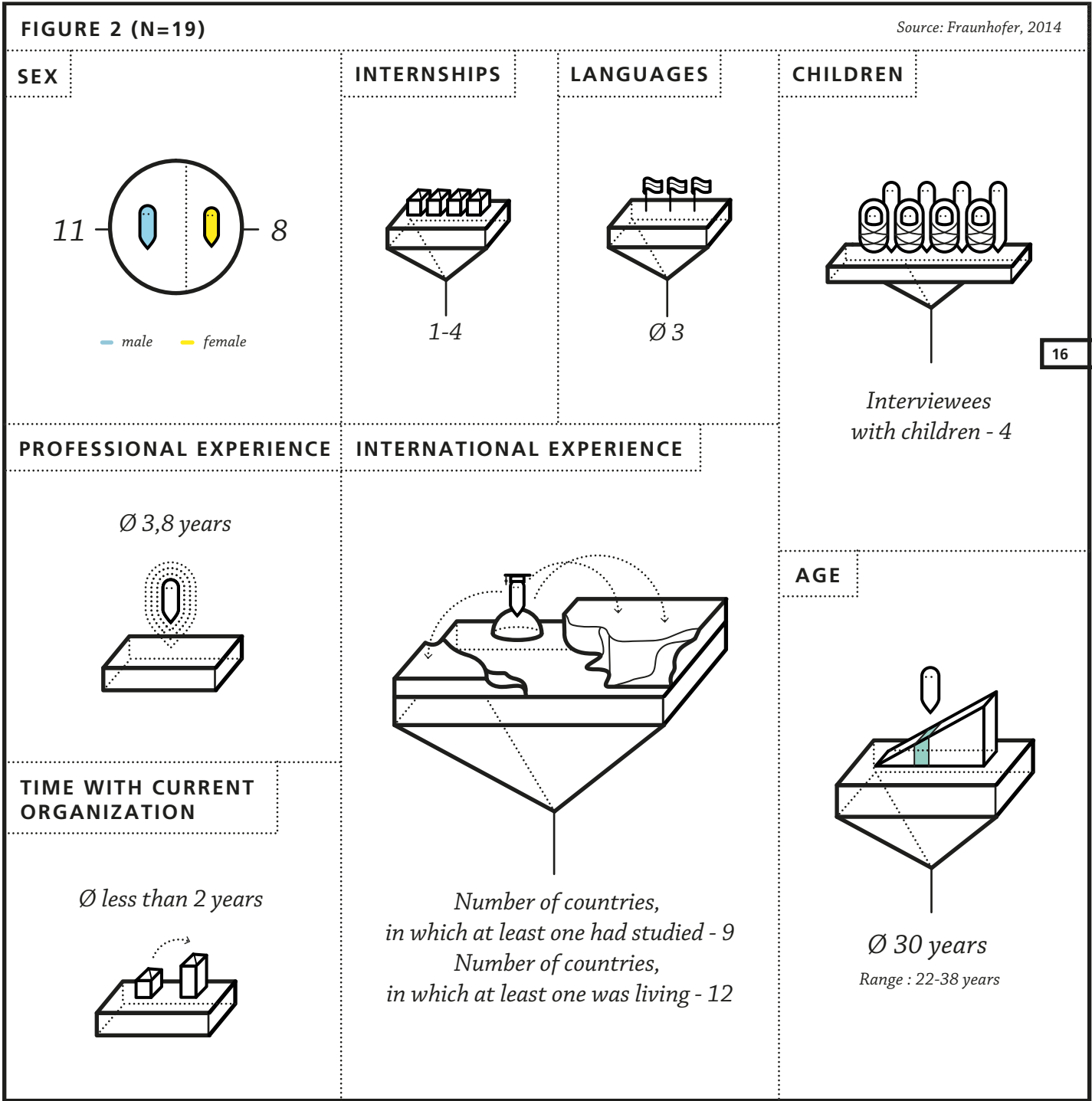
The 19 interviewed UNITECH alumni considered themselves to be flexible, were highly mobile, and had both a high need for professional development and a strong entrepreneurial spirit. We found one significant difference between responses of men and women. A greater proportion of female than male interviewees found job security important. Figure 3 shows the seven most distinctive traits of interviewed UNITECH alumni.

FIGURE 3

THE SEVEN MOST DISTINCTIVE TRAITS OF INTERVIEWED UNITECH ALUMNI (N=19)

Flexible

Mobile

Needs professional development

Has high career aspirations

Has a strong entrepreneurial spirit

Has few career doubts

Needs job security

Source: Fraunhofer, 2014

male   female
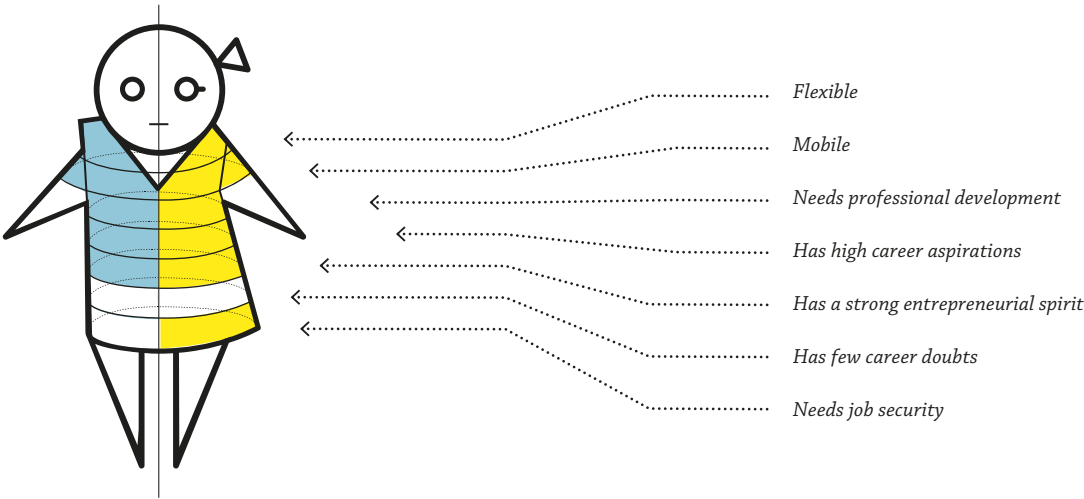
FINDINGS

MOTIVATORS AND SOURCES OF DISCOURAGEMENT
OF INTERVIEWED UNITECH ALUMNI

Most interviewees agreed that opportunities to work autonomously, for learning and professional development, to take responsibility, and to have an impact with their work motivated them most. The following quotations illustrate.

> *»Motivating for me is to have the power to decide or organize my work. That might be one of my key motivating factors, having this kind of freedom and trust, that I do the things and I have a certain independence.«*
> *(UNITECH alumna)*

> *»It´s that I get the freedom and the responsibility together for something that I know is important for the company.« (UNITECH alumna)*

> *»This is great. I mean that you´re learning. I think when you feel that you´re learning, it´s motivating.« (UNITECH alumna)*

> *»[Motivating is] the ability to have an impact, the ability to change something in a positive way.« (UNITECH alumnus)*

Most interviewees agreed that *slow decision-making processes* and *excessive bureaucracy* frustrated them most. The following quotations illustrate.

> *»The factor that frustrates me, it´s when things go slowly and when it´s like no, they have to be approved, this has to be approved and blahblah. Then it takes ages to do something.« (UNITECH alumna)*

> *»But with the culture of the company, there is sometimes the process that´s also annoying. You are frustrated when you have to follow a process for everything.« (UNITECH alumnus)*

ORGANIZATIONAL CULTURES – IMAGE AND REALITY

In the face of fierce competition, ongoing demographic changes, and the increasing skills shortage, many organizations are intensifying employer branding and head hunting. To their both actual and potential employees, most of them promote their cultures as flexible, family-friendly, and prioritizing work-life balance and claim to provide clarity of working processes, great work autonomy, and ample opportunities for career advancement. Simultaneously, when asked about what they had hoped for in a potential new employer, very few interviewees mentioned high or clear expectations. The following quotations illustrate.

> »Well, when I was started, it I really didn't have a clear idea of what was expected because it was only after a few months that I started to understand what the job was about [...].« (UNITECH alumnus)

> »I had very little expectations. I had no idea what to expect.« (UNITECH alumnus)

> »My expectation was to work in international projects and they gave me everything. So it was very good.« (UNITECH alumna)

Many interviewees were able to observe a discrepancy between how their organizations promoted themselves and what they actually practiced. The latter was often observed to include *slow decision-making*, *lack of clarity of working processes*, and *high workloads*. Many interviewees perceived this inconsistency as highly frustrating. The following quotations illustrate.

> »Because here we say we have a good work-life balance but at the same time they are giving you 70 hours of workload.« (UNITECH alumnus)

> »For me I think it would be one to apply the policies they do have, to make it real. If you're talking about flexibility, make it real. Make it really that it goes to all the levels.« (UNITECH alumna)

IDEAL ORGANIZATIONAL CULTURE

We identified five attributes of organizational culture that most interviewees valued, shown in Figure 4.

According to interviewees, a *flexible* culture rewards performance and accommodates employees by giving them the autonomy to determine when, where, and how they will work, including how they will distribute work among themselves. The following quotation illustrates.

> *»If the company needs you to work extra hours because of a project you should stay and finish your job without hesitation even though that means staying until 10 pm. Yet, you should be rewarded for that. Not necessarily with money but maybe with some time off: like ok, on Friday, I'm not coming, because I've been working a lot on Thursday.« (UNITECH alumna)*

Flexible

Work-Life balance is closely related to flexible work design. Many interviewees were glad to be of service to their organizations and to work extra hours during stressful times. At the same time, they equally valued their personal lives and recognized that taking »mental breaks« and »disconnecting« was necessary for them to stay healthy and to keep inner balance. The following quotation illustrates.

> *»And I had one project which made me change because it was just crazy until 1 and 2 a.m., which doesn't make any sense because I get scared for even driving back on Thursday, I was so tired. So this kind of, for three months I haven't been seeing any friends, no family and then I realized I cannot go on like that. So it's important for me to do the job right, to have some time to disconnect, and so that's why it has changed due to experience.« (UNITECH alumna)*

Prioritising work-life balance

Many interviewees had a great need for *autonomous*, *challenging*, and *intellectually stimulating work*. Simultaneously, fewer interviewees who had children expressed that need than those who had none. The following quotation illustrates.

> *»But what has changed is that I started very motivated and with the time you lose a little bit of motivation. So that's why it's good to keep changing jobs. You do not necessarily have to change companies but maybe just responsibilities or the department because this motivates you, gives new strength and new opportunities and challenges.« (UNITECH alumnus)*

Empowering

FIGURE 4

ATTRIBUTES OF AN APPEALING ORGANIZATIONAL CULTURE
(N=19)

Flexible

Multi-cultural

Prioritizing work-life balance

Employee-centered

Empowering
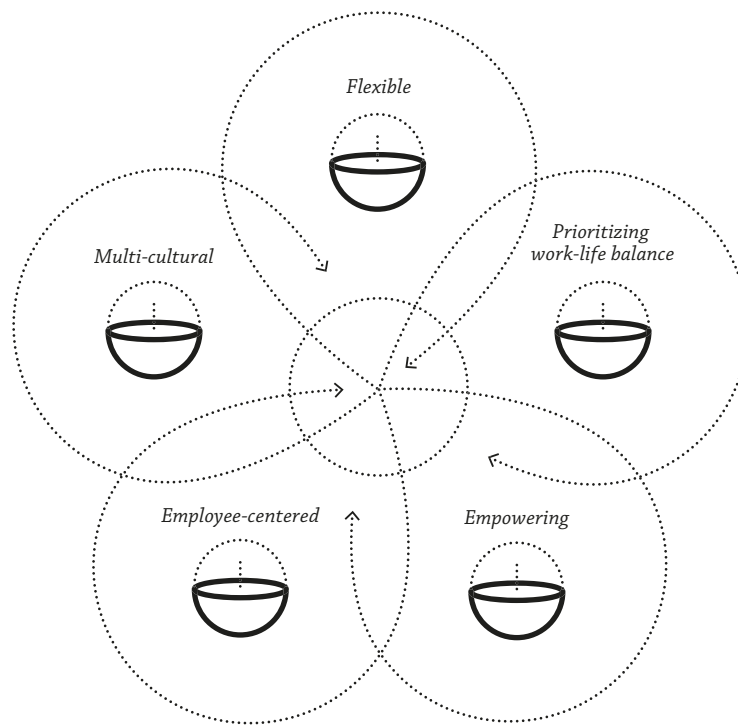
Source: Fraunhofer, 2014

Many interviewees valued an *employee-centered* culture, employer trust in their abilities, recognition of their performance, and good relationships with their co-workers that ideally had the potential of turning into friendships outside work. The following quotation illustrates.

Employee-centered

»*So I think [employers] should really focus on their employees and on their families because many times I've seen so many colleagues leaving the company because their family was not happy. You wouldn't believe it. They were perfectly happy, but the family was not and they left. And sometimes they were the best people. That is an aspect that they should really fix.*« *(UNITECH alumnus)*

Most interviewees were open to new cultures and ways of working and found travelling for work, working abroad, and/or working in a multi-cultural environment appealing. Simultaneously, they were aware that international mobility might be difficult to reconcile with family responsibilities. The following quotation illustrates.

»Right now, I only see the positive aspects [in travelling and business trips] because I'm young and happy to move around and stuff. I don't know how it's going to be like later in life. If you want to have a family, you would probably not enjoy it that much. But for now, it definitely works as I'm a young graduate. It would be very attractive.« (UNITECH alumna)

Multi-cultural

IDEAL EMPLOYER

Interviewees were asked to *name their three main expectations for an ideal employer.* Most responses included team composition and/or relationships with co-workers. These responses were provided by both men and women in approximately equal proportions. The following quotation illustrates.

»What is important for me is the relationship between colleagues. Everybody has the will to improve, everybody has the will to do a good job and that we are also able to correct each other if that is needed. If the culture says that we want to be better, and if I correct you, you are not angry or something and then we also celebrate success together. So, maybe more than a collection of individuals.« (UNITECH alumnus)

Many interviewees, and more women than men, mentioned opportunities for professional development, international presence of their organization, and flexibility. The following quotation provides an example.

»The perfect one would you give you challenges that are adapted to what triggers kind of your motivation, so things that you find interesting. So that would be that it wouldn't be based on the functions. And what's needed for the company would be based on the people. And (…) there would be lots of opportunities for further development, like changing your positions or going abroad, if you want to do that. Opportunities for the person to develop, for the benefit of the company, but on the person's term, I guess that would be from a personal perspective the perfect company.« (UNITECH alumna)

Simultaneously, more male than female interviewees valued work-life balance and a high salary.

The responses described in this section show the importance of organizational culture for interviewed UNITECH alumni. Figure 5 shows the most mentioned workplace preferences of the 19 interviewees.

FIGURE 5

**THE IDEAL EMPLOYER
OF INTERVIEWED UNITECH ALUMNI
(N=19)**

Work-life
balance

Pays well

Flexible

Internationally
present

Creativity
and
innovation

Team composition and
relationships with co-workers

Professional
development

Autonomy
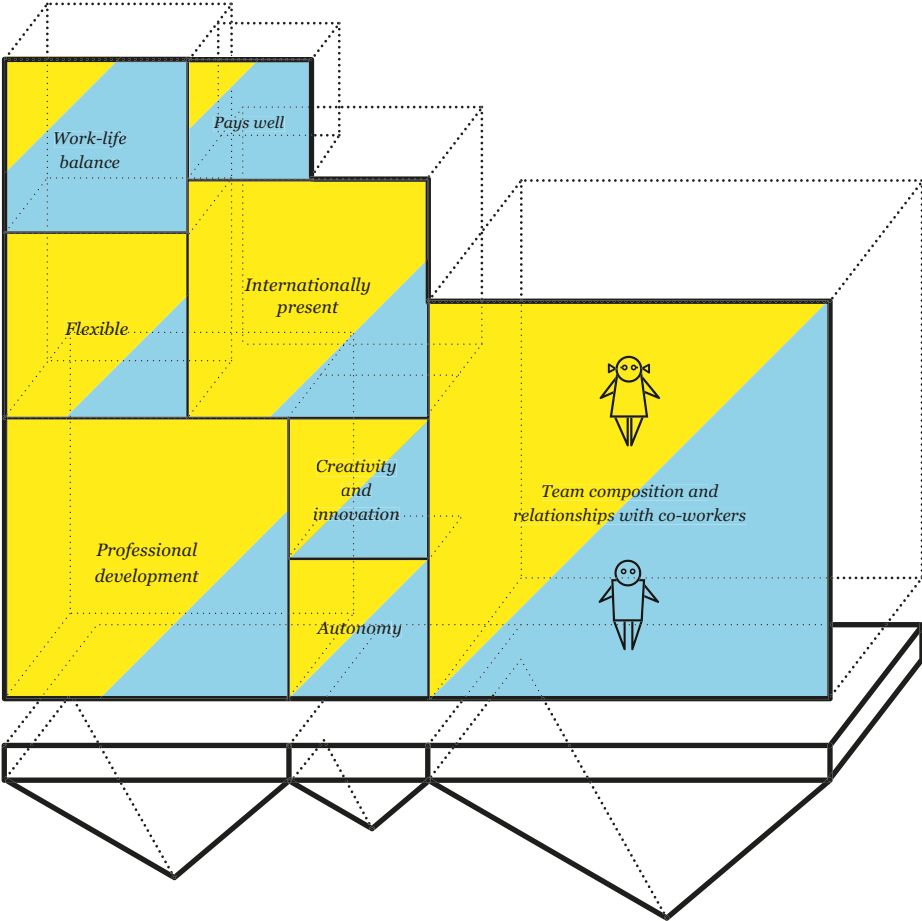
The size of each square is proportional to the number of interviewees who valued the designated trait. The size of the blue or yellow area is proportional to the number of men or women among these interviewees respectively.

Source: Fraunhofer, 2014

male   *female*

THE QUANTITATIVE STUDY

SAMPLE

All surveyed UNITECH alumni had a science and/or engineering background. At the same time, very few of them worked in those fields and most worked in management or consulting. Most had extensive international experience. On average, respondents had been working at their current organization for two years and had previously worked at another organization for two years. Figure 6 shows personal characteristics of the 172 surveyed UNITECH alumni.

FIGURE 6

Source: Fraunhofer, 2014

SEX (N=119)

male (N=88)

74 %

female (N=31)

26 %

— male — female

AGE (N=119)

26

Ø 30,5 years

Range : 23-38 years

DOMICILE (N=119)

14 different places of residence

NATIONALITY (N=117)

12 different nationalities
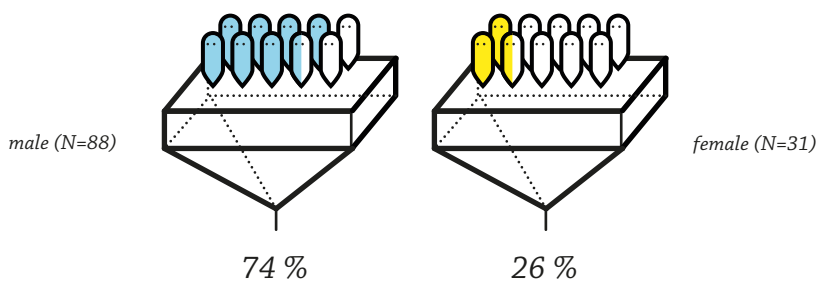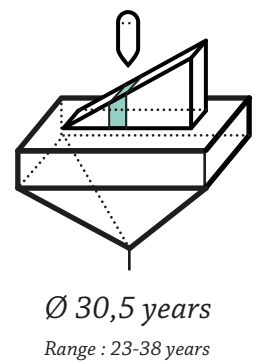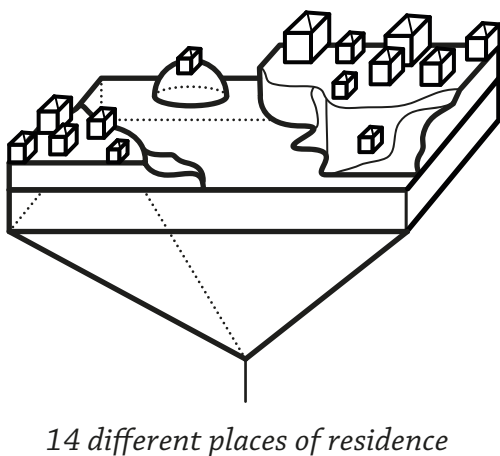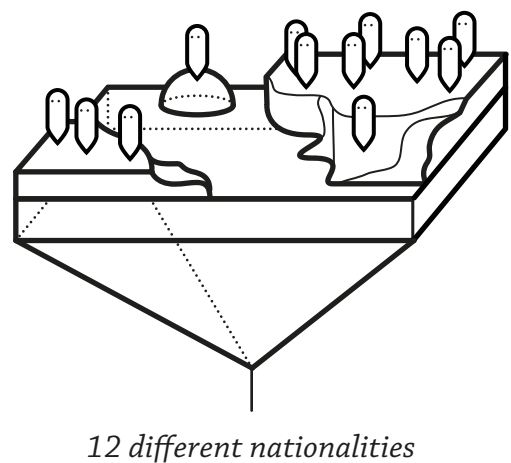
CARES FOR ILL, ELDERLY, AND/OR DISABLED FAMILY MEMBERS (N=122)

Yes

3 %

No

97 %
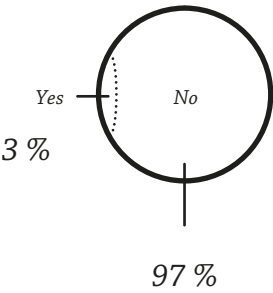
WORKLOAD, CURRENT JOB (N=124)

90%

6%

4%

full-time

unemployed

part-time
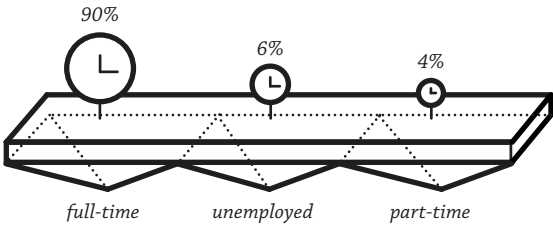
EDUCATION, TOP 4 (N=177)

Industrial engineering
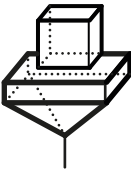
Mechanical engineering

Engineering management
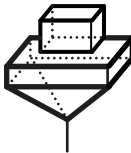
Civil engineering

15 %

12 %

8 %

7 %

EDUCATIONAL LEVEL (N=179)

MBA
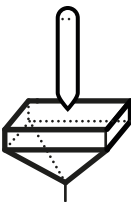
Master's (other than MBA)

Diploma

Bachelor's

PhD

71 %

12 %

6 %

4 %
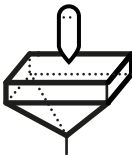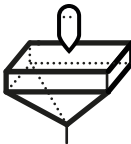
1 %

LIVING ABROAD (N=121)

Number of countries, in which at least one respondent had worked and/or studied for at least six months
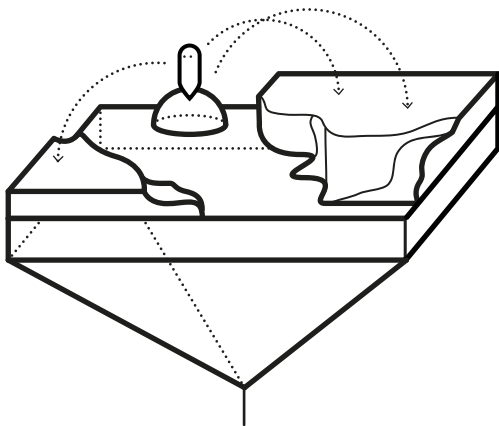
1-7
Ø has lived in 3,5 different countries
Range : 1-7 countries

WORK EXPERIENCE, IN YEARS (N=170)

29% 20% 15% 19% 15% 2%

≤ 1   > 1-2   > 2-3   > 3-6   > 6-10   > 10
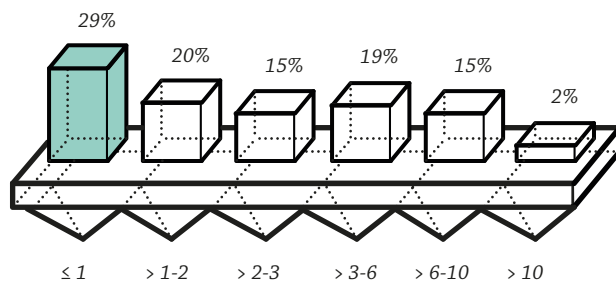
NUMBER OF EMPLOYERS AFTER GRADUATION (N=170)

9% 56% 22% 8% 4% 1%

0   1   2   3   4   6   *employers*
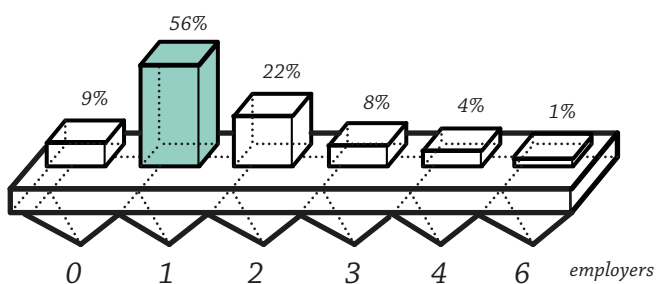
RELATIONSHIP STATUS (N=122)
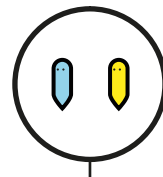
37 %
In a committed relationship and living together
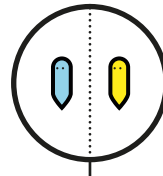
31 %
In a committed relationship and living separately
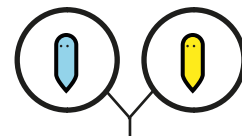
32 %
Not in a committed relationship

— *male*   — *female*

LEADERSHIP RESPONSIBILITIES (N=145)

45 %
Yes, I have leadership responsibilities
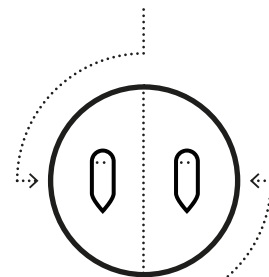
55 %
No, I do not have leadership responsibilities

28

CHILDREN (N=122)

No — 87 %
Yes — 13 %
1 Child — 68 %
2 Children — 32 %

EXTRA HOURS (N=109)

34% — I have worked extra hours over certain periods of time

61% — I usually work extra hours

5% — I have never worked extra hours

24% — 2-5h
41% — 6-10h
15% — 11-15h
20% — 20h+

29

BUSINESS TRIPS (N=108)

46 % — *Many and often*

20 % — *5 days / a month*

16 % — *3 days / a month*

18 % — *2 days / a month*

33 % — *few days / a year*

21 % — *None at the moment*

CURRENT POSITION (N=144)

Employee, unlimited-term — 78 %
Employee, limited-term — 10 %
Intern — 7 %
Self-employed — 4 %
PhD — 7 %
Professor — 1 %
Homemaker — 1 %

Multiple answers possible.
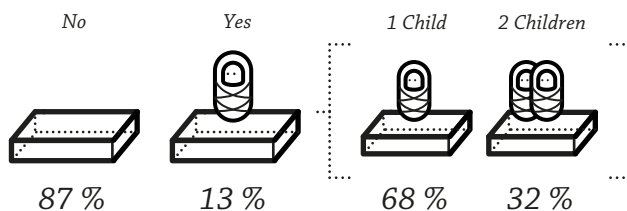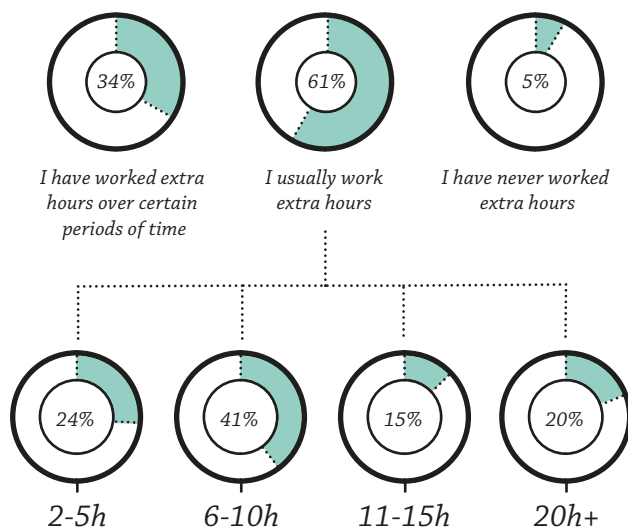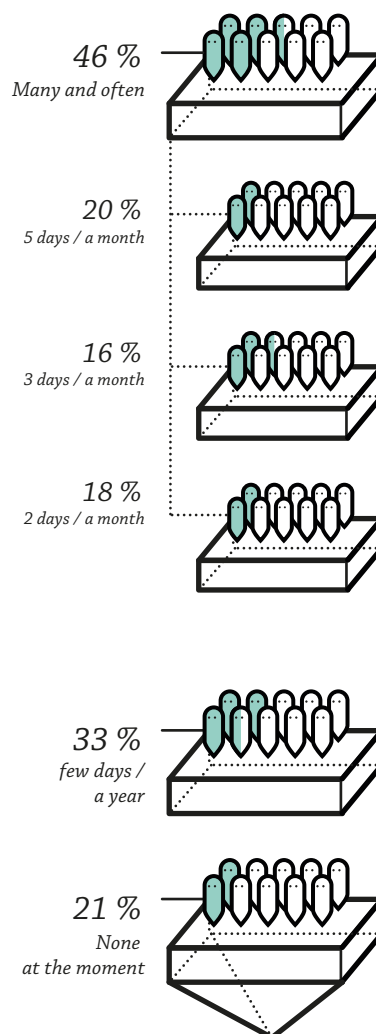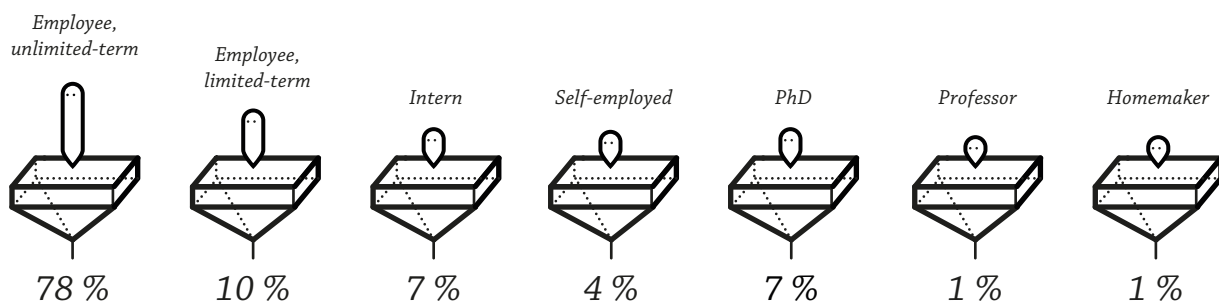
PERSONALITIES – THE BIG5

The *Personal traits* section of the questionnaire utilized the Big Five personality model developed by Kovaleva, Beierlein, Kemper, and Rammstedt (2013). This model contains »factors defined by groups of inter-correlated traits, which are referred to as facets« (McCrae & Costa, 1997). These five groups, also referred to as personality dimensions, are Conscientiousness, Extraversion, Neuroticism, Agreeableness, and Openness.

Figure 7 shows personality traits of surveyed UNITECH alumni. The length of each blue or yellow ray is proportional to the number of men or women respectively who considered themselves to exhibit the designated trait.

Most surveyed UNITECH alumni considered themselves to be sociable, curious, and capable of working thoroughly and efficiently. In particular, most respondents considered themselves to exhibit traits that were characteristic of Conscientiousness, which was primarily associated with »self-control and the active process of planning, organizing and carrying out tasks« (Barrick, Mount & Strauss, 1993).

We found certain significant differences between responses of men and women. While male respondents, on average, considered themselves to be quiet and reserved significantly more often than female respondents, female respondents, on average, considered themselves to be capable of working efficiently and valuing artistic and aesthetic experiences significantly more often than male respondents. As compared to male respondents, female respondents, on average, more often considered themselves to exhibit traits that were characteristic of Neuroticism such as tendencies to get nervous easily and to worry much.

FIGURE 7

THE BIG5 TRAITS OF SURVEYED UNITECH ALUMNI
(N=122)

AGREEABLENESS

CONSCIENTIOUSNESS

can sometimes be rude to others

is generally trusting

tends to be lazy

makes plans and follows them through

can be cold, an aloof

tends to find fault with others

does things efficiently

does a thorough job

generates a lot of enthusiasm

can feel blue or depressed

EXTRAVERSION

NEUROTICISM
*

is reserved

gets nervous easily

tends to be quiet

is relaxed, handles stress well

outgoing, sociable

worries a lot

has few artistic interests

is ingenious, a deep thinker

values artistic, aesthetic experiences

is curious about many different things

has an active imagination

OPENESS

FIGURE 8

TIME NEEDED TO FIND A JOB
(N=171)

I already found by job before the time of graduation

I found my first job after graduation

95% ≤ 6 Months

I am still searching

59%

34%

5% > 6 Months

7%

Source: Fraunhofer, 2014

FIGURE 9

REASONS FOR BEING OR POTENTIALLY BECOMING SELF-EMPLOYED,
MULTIPLE RESPONSES ALLOWED, BY GENDER
(N=34)

83%   *0%*   *67%*   *17%*   *17%*   *83%*

96%   *14%*   *57%*   *29%*   *18%*   *64%*

Opportunities to implement one's own ideas

Opportunities to make more money

Opportunities to take responsibility

Opportunities to work autonomously

Dissatisfaction with the current job

Opportunities to be one's own boss

Multiple answers possible.

Source: Fraunhofer, 2014

━ *male*   ━ *female*

FINDINGS

JOB SEARCHING STRATEGIES OF SURVEYED UNITECH ALUMNI

The conducted study might provide some insights into the job search strategies of highly skilled engineers and factors that influence their career decisions. Figure 8 shows how quickly respondents were able to find a job.

Fifty-nine percent of respondents had found their first job after graduation before the time of graduation, 34% had searched for a job between one and 18 months, and 7% were still searching. Most respondents and as many as 74% searched for a job through social contact – family, friends, and co-workers. In particular, 69% utilized the UNITECH network. Many respondents utilized the Internet, including online communities. Only 16% of respondents in particular utilized »conventional« job advertisements in printed media. We found significant differences between responses of men and women. In general, a larger proportion of female than male respondents utilized each of the options described above. In particular, 89% of the women and 70% of the men utilized social contact, 70% of the women and 52% of the men utilized the Internet, and 26% of the women and 13% of the men utilized printed media. Simultaneously, approximately equal proportions of male and female respondents utilized online communities.

SURVEYED UNITECH ALUMNI AND SELF-EMPLOYMENT

Among surveyed alumni, only 3,4% were self-employed. Most of them selected *self-determined work, be[ing] able to implement [one's] own ideas, and [the opportunity] to take responsibility* as their reasons for being self-employed. Simultaneously, none selected *sought a higher salary* and very few selected *flexible working hours*. Almost one third of respondents could imagine being self-employed and/or starting their own business at some point in the future. This group consisted of 35% of men among respondents and 22% of women respondents. Most respondents who chose to answer the question about reasons for potentially becoming self-employed (N = 34), appeared to be driven by intrinsic motivations. Among these respondents, 95% and 60% selected *be[ing] able to implement [one's] own ideas* and *[opportunities] to take responsibility* respectively. Simultaneously, only 19% and 11% of respondents selected *dissatisfaction with the current job and seeking a higher salary* respectively. Figure 9 shows reasons for being or potentially becoming self-employed.

MOTIVATORS AND SOURCES OF DISCOURAGEMENT OF SURVEYED UNITECH ALUMNI

Respondents who chose to answer the free-response question about factors that motivated them in their current job (N=110) mentioned, in the order of frequency, challenges and challenging work, opportunities for learning and professional development, atmosphere in the workplace and work relationships, opportunities to take responsibility and to be a leader, and being able to have an impact. While most men among respondents mentioned challenges, most women respondents mentioned opportunities for learning and professional development. Figure 10 shows most mentioned motivators. The font size is proportional to the number of respondents who mentioned the designated factor.

FIGURE 10

**MOTIVATORS OF SURVEYED UNITECH ALUMNI
(N=110)**

Source: Fraunhofer, 2014

Respondents who chose to answer the free-response question about factors that discouraged them in their current job (N=103), mentioned bureaucracy and administrative barriers and poor management. We found no statistically significant differences between the responses of men and women. Figure 11 shows all mentioned sources of discouragement. Sources of discouragement respectively. The font size is proportional to the number of respondents who mentioned the designated factor.

FIGURE 11

**SOURCES OF DISCOURAGEMENT OF SURVEYED UNITECH ALUMNI
(N=103)**

Source: Fraunhofer, 2014
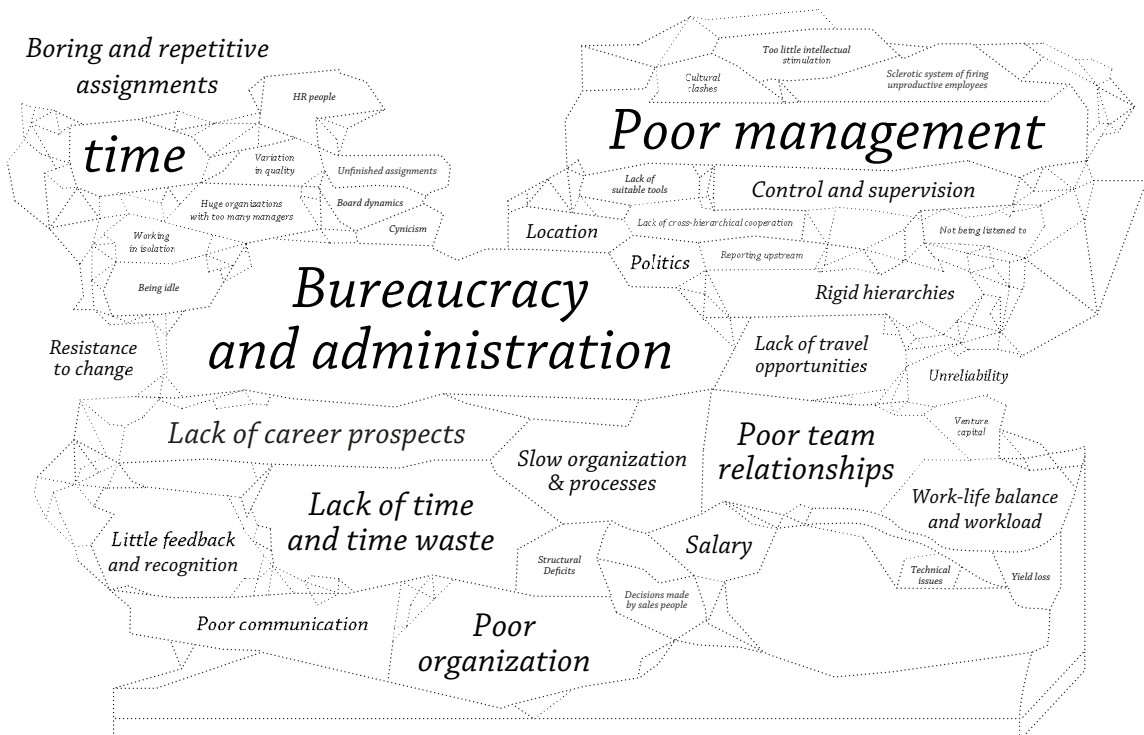
CORPORATE CULTURE – HOW ORGANIZATIONS CAN ATTRACT
AND RETAIN HIGHLY SKILLED EMPLOYEES

One major purpose of the presented study is to gain insights in how organizations can attract and retain highly skilled employees. To this end, the questionnaire included a question about the importance of certain factors when respondents first accepted their current position. This question was followed by a list of 17 factors.

When they first accepted their current position, respondents, on average, regarded *intellectual stimulation*, *opportunities for professional development*, and *diversity of assignments* as most important. At the time the survey was conducted, respondents, on average, regarded *good team atmosphere*, *intellectual stimulation*, and *opportunities for professional development* as most important. Figure 12 shows how important, on average, both male and female respondents found each of the listed factors when they first accepted their current position.

We conducted an independent samples t-test and found the following statistically significant differences between the responses of men and women. When they first accepted their current position, women among respondents, on average, found *job security* and *work-life balance* significantly more important than men. At the time the survey was conducted, women among respondents, on average, found *job security* and *workplace location* significantly more important than men.

On average, respondents who were younger than 30 years of age found opportunities for international travel significantly more important than respondents who were older than 30 years of age, both when they were surveyed and when they first accepted their current position. We found no statistically significant differences between the responses of those who had more than five years of professional experience and those who had less. Similarly, we found no statistically significant differences between the responses of those who had worked for only one employer and who had worked for multiple employers. Figure 13 shows how important, on average, both male and female respondents found certain factors both when they first accepted their current position and when the survey was conducted.

A paired samples t-test established that for both men and women among respondents, *work-life balance*, *work autonomy*, and *having leadership responsibilities* became significantly more important with time. For the men as compared to the women, *job security* and *having a high salary* became significantly more important with time.

FIGURE 12

WHAT SURVEYED UNITECH ALUMNI FOUND IMPORTANT
WHEN THEY FIRST ACCEPTED THEIR CURRENT POSITION
(N=130)

Working abroad (> 6 months)		2,8
Job security	***	3,01
Terms of contract		3,18
Leadership responsibilities		3,24
Workplace location		3,26
Work-life balance	**	3,27
Industrial sector		3,28
International travel		3,33
High salary		3,33
Company value		3,43
Autonomy		3,72
Diversity in team		3,74
Company's image		3,75
Innovative work environment		3,97
Diversity of assignments		4,18
Professional development		4,29
Intellectual stimulation		4,46

— all

— female

1   2   3   4   5

1 = not at all important   5 = very important   *Source: Fraunhofer, 2014* $** \ p < 0,05$ $*** \ p < 0,001$

FIGURE 13

THE IMPORTANCE OF CERTAIN ASPECTS OF ORGANIZATIONAL CULTURE,
BY GENDER, AT PRESENT AND IN THE PAST
(N$_{male}$=79, N$_{female}$=27)

Leadership responsibilities	***
Autonomy	***
Work-life balance	***
High salary	**
Job security	***

— male (present)

— male (past)

Leadership responsibilities	**
Autonomy	**
Work-life balance	**

— female (present)

— female (past)

1   2   3   4   5

1 = not at all important   5 = very important   *Source: Fraunhofer, 2014* $** \ p < 0,05$ $*** \ p < 0,001$

Both for those respondents who were younger than 30 years of age and for those who were older, *job security*, *work-life balance*, *having leadership responsibilities*, and *having a high salary* became significantly more important with time. *Work autonomy* became significantly more important with time only for respondents who were younger than 30 years of age. *Innovative* and *creative work* environment became significantly more important with time only for respondents who were older than 30 years of age.

Retaining highly skilled employees might be even more important than attracting them. As many as 61% of respondents agreed that they considered changing jobs in the next three years. Among these respondents, 54%, 47%, and 44% had these considerations because they wished to have more opportunities for professional development, greater managerial responsibilities, and a higher income respectively. While 49% of men among these respondents wished to have greater managerial responsibilities, 75% of women wished to have more opportunities for professional development. Simultaneously, 45% of the men and 44% of the women wished to make more money. A larger proportion of female than male respondents and as many as 44% of them found that processes in their current organization including decision-making lasted too long. Figure 14 shows the three most often selected reasons for considering a job change.

Thirty-nine percent of respondents agreed that they intended to stay in their current organization for at least the next three years. As a reason, 80% among these respondents selected *My tasks challenge me*. Seventy-two percent of men among these respondents and 73% of women selected *They offer me good development opportunities*. Similarly, 63% of the men and 64% of the women selected *I have enough clearances for innovative and creative work* respectively. Larger proportions of female than male respondents and as many as 73%, 64%, 64%, and 64% selected, respectively, *They trust in me and my work*, *I feel that I and my work are appreciated*, *There is a good working environment in our team*, and *My employer offers long term career prospects*. Simultaneously, larger proportions of male than female respondents and as many as 63% and 63% selected, respectively, *I can work independently* and *I can work internationally*. Figure 15 shows the most often selected reasons for wanting to stay in the current workplace.

FIGURE 14

**WHY SURVEYED UNITECH ALUMNI WOULD CONSIDER
A JOB CHANGE – THE THREE MOST OFTEN SELECTED REASONS
(N=71)**

54%

47%

44%

*I would like to have
more opportunities
for professional development*

*I would like to have
greater managerial
responsibilities*

*I would like to make
more money*
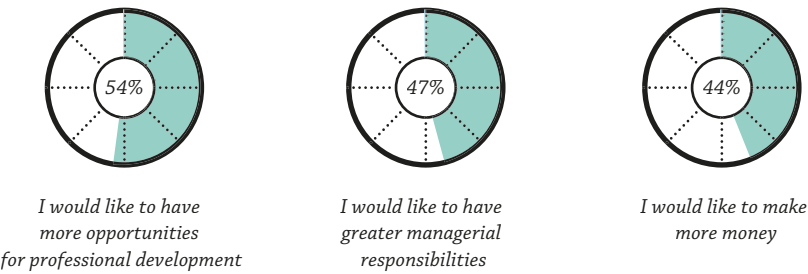
Multiple answers possible.

Source: Fraunhofer, 2014

FIGURE 15

**WHY SURVEYED UNITECH ALUMNI INTEND TO STAY
IN THEIR CURRENT WORKPLACE – THE MOST OFTEN SELECTED REASONS
(N=45)**

	male	female
My assignments are diverse	44 %	64 %
I can initiate and change things	63 %	64 %
My organization offers long-term career prospects	47 %	64 %
I receive both personal and professional recognition	38 %	64 %
It is a good working environment	56 %	64 %
My supervisors and co-workers trust in me and in the work I do	44 %	73 %
My work here provides extensive opportunities for professional development	72 %	73 %
My assignment stimulate me intellectually	81 %	82 %

Multiple answers possible.

Source: Fraunhofer, 2014

● male ● female

FIGURE 16

PRIORITIES CAN CHANGE WITH TIME
(N=41)

Flexible ⬇

Mobile

Needs professional development ⬆

Has high career aspirations ⬆

Has a strong entrepreneurial spirit ⬆

Career doubts ⬇

Needs job security ♀

less experienced

more experienced

⬇⬆

A vertical arrow points either up or down - at least 1/3 of respondents now exhibits this trait either more or less than in the past respectively

— male — female
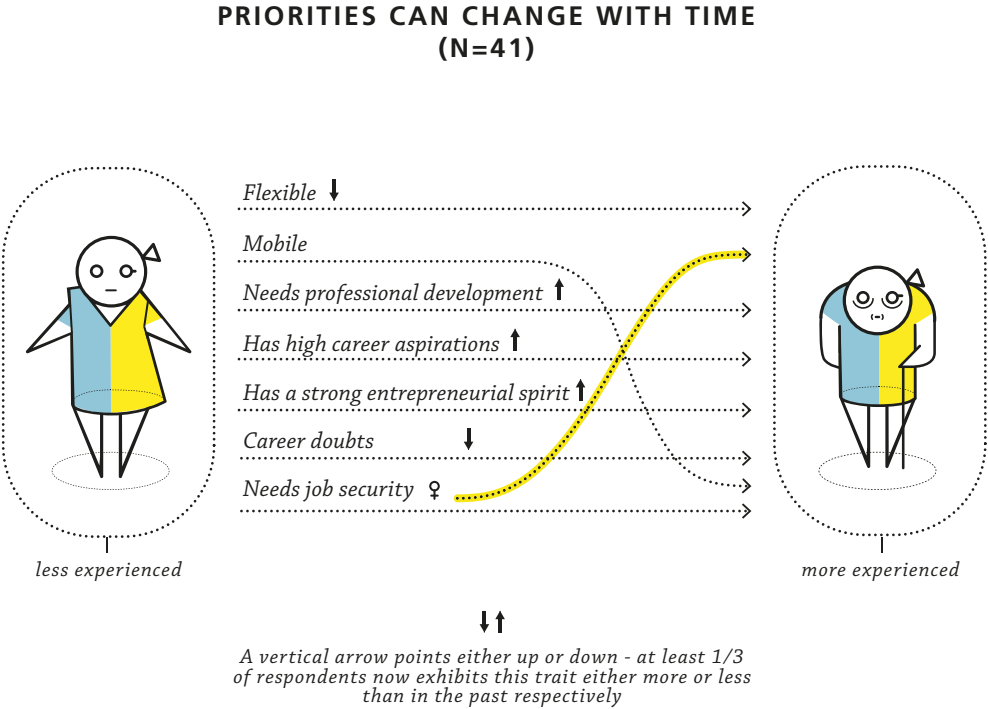
PRIORITIES CAN CHANGE WITH TIME

Significant life changes such as starting a family can considerably influence where a person sets his or her priorities. Seeking to examine how priorities of surveyed UNITECH alumni might change with time, we compared responses of those who had more than five years of professional experience and those who had less.

Slightly more than a half of **respondents** who had **at least five years of professional experience** (N=41) agreed that they were now less mobile than when they first accepted their current position. While 55% of women among these 41 respondents agreed that they now valued job security more than when they first accepted their current position, 77% of the men agreed that they now valued job security as much as then. Figure 16 shows how the priorities of respondents who had at least five years of professional experience had changed over time. A vertical arrow beside a particular trait points either up or down if at least one third of respondents valued this trait either more than in the past or less respectively.

Among **respondents** who had **less than five years of professional experience**, 40% and 31% agreed that, in the future, they expected to value job security more and to be less mobile respectively. These findings can help organizations sensitize their HR management to life cycles.

UNITECH ALUMNI AND ACADEMIC CAREERS

Universities and other research organizations can provide appealing employment options to highly skilled engineers. Among respondents, 7% had a PhD degree, 7% were pursuing a PhD degree, 41% considered pursuing a PhD degree at some point but never had, and 45% never conside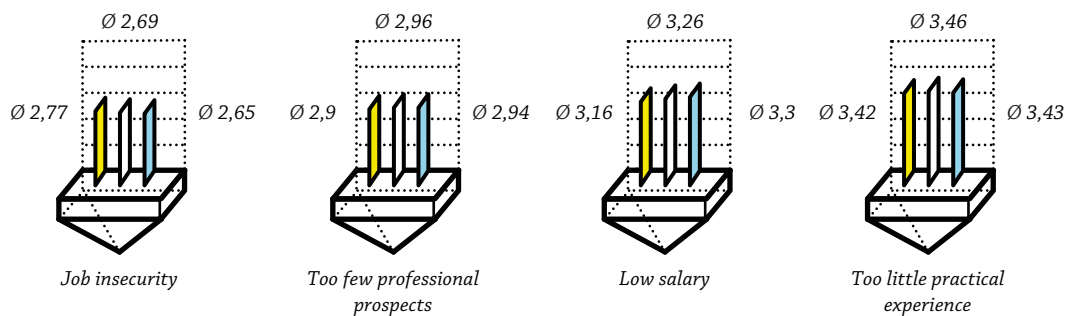red pursuing a PhD degree. We found no statistically significant differences between the academic qualifications of male and female respondents.

Among those respondents who found a career in academia unappealing, approximately 45%, 33%, and 25% selected, respectively, as a reason *the low salary in academia*, *Academia offers [few] prospects*, and *A career in academia is linked to job insecurity*. We found no statistically significant differences between responses of men and women who found an academic career unappealing.

Even though most respondents neither pursued nor ever considered pursuing a PhD degree, many still found a scientific career appealing. As reasons, most selected *Academia allows you to pursue your own scientific curiosity*, *Academia gives the chance to give lessons and to pass over knowledge to students*, and *Academia gives you the chance to work independently*. Respondents who had a PhD degree selected *Academia gives the chance to give lessons and to pass over knowledge to students* significantly more often than respondents who never considered pursuing a PhD degree. Approximately 40% of respondents associated a job in science with prestige. A conducted independent samples t-test established that on average, women among respondents agreed that an academic career both would provide work autonomy and was prestigious to a significantly greater degree than men.

Figures 17 and 18 show which aspects of academia respondents found unappealing and appealing respectively.

FIGURE 17

ASPECTS OF ACADEMIA
THAT SURVEYED UNITECH ALUMNI FOUND UNAPPEALING
(N=122)

Ø 2,69

Ø 2,77   Ø 2,65

Job insecurity

Ø 2,96

Ø 2,9   Ø 2,94

Too few professional
prospects

Ø 3,26

Ø 3,16   Ø 3,3

Low salary

Ø 3,46

Ø 3,42   Ø 3,43

Too little practical
experience

Ø arithmetic mean (5 = highest value)

1 = totaly disagree   5 = totally agree

Source: Fraunhofer, 2014

— male   — female   ⊂⊃ all

FIGURE 18

ASPECTS OF ACADEMIA
THAT SURVEYED UNITECH ALUMNI FOUND APPEALING
(N=122)
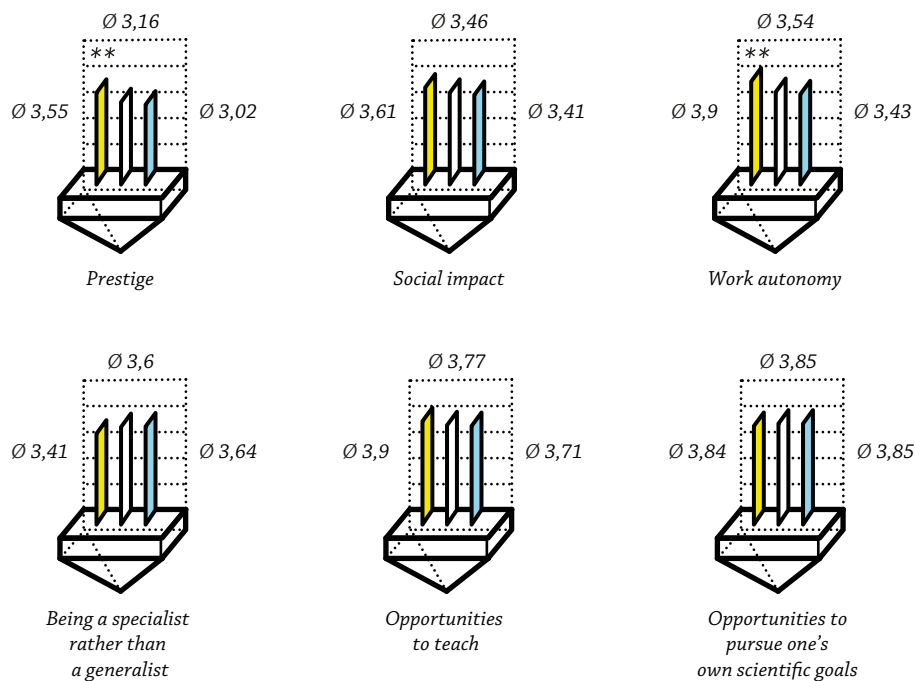
Ø 3,16
**

Ø 3,55   Ø 3,02

Prestige

Ø 3,46

Ø 3,61   Ø 3,41

Social impact

Ø 3,54
**

Ø 3,9   Ø 3,43

Work autonomy

Ø 3,6

Ø 3,41   Ø 3,64

Being a specialist
rather than
a generalist

Ø 3,77

Ø 3,9   Ø 3,71

Opportunities
to teach

Ø 3,85

Ø 3,84   Ø 3,85

Opportunities to
pursue one's
own scientific goals

Ø arithmetic mean (5 = highest value)

1 = totaly disagree   5 = totally agree

Source: Fraunhofer, 2014

** $p < 0,05$ — male   — female   ⊂⊃ all

FIGURE 19

HOW THE UNITECH PROGRAM
HELPED SURVEYED UNITECH ALUMNI
(N=131)

The UNITECH International Program helped me …

… meet interesting people

70 %

… advance my career

44 %

… develop skills necessary for confronting daily challenges at work

38 %

… get to know existing Corporate Partners

32 %

… make useful contacts

31 %

… develop or improve managerial skills

25 %

… find a job sooner

25 %

0 %　　　　　　　　　　　　　　　　　　*100 %*

■ *completely disagree*　　■ *mostly disagree*

■ *agree to some degree*　　■ *mostly agree*　　■ *completely agree*
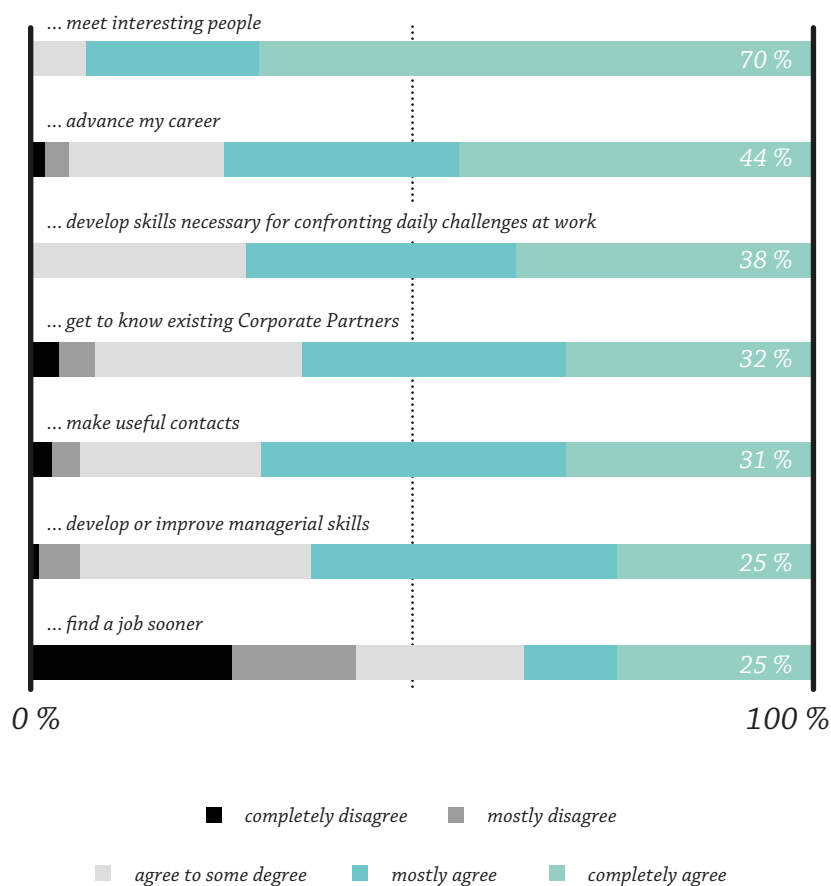
THE UNITECH INTERNATIONAL PROGRAM

The questionnaire contained a range of questions regarding the UNITECH International Program and UNITECH alumni network. Ninety-eight percent of respondents agreed that they would recommend this program to a friend. More than 90% completely or mostly agreed that they had met interesting people through the UNITECH network. The majority of respondents completely or mostly agreed that their participation at the UNITECH program helped them advance their careers, make useful contacts, and get to know UNITECH Corporate Partners. Simultaneously, more than three quarters did not agree that participation in the UNITECH program had helped them find a job sooner. Respondents highly rated the opportunity provided by the program to improve their managerial skills. We did not found any statistically significant differences between the responses of men and women, of those who were younger than 30 years of age and those who were older, and of those who had more than five years of professional experience and those who had less. Figure 19 shows how surveyed alumni perceived the UNITECH program.

One hundred fifteen respondents chose to answer about the most helpful aspects of the program and together provided 173 responses. Thirty-six percent, 24%, and 21% of these responses included, respectively, *International and intercultural experiences/internships*, *Networking/Contacts with Corporate Partners and students*, *and Workshops/Coaching/Teamwork*. Eight and eight percent were, respectively, *the given opportunity to improve my social skills* and *soft skills and the given opportunity to improve my leadership and management skills*. The remaining 24% of responses were individual. Eighty-eight respondents chose to answer the free-response question of how the program could be improved and together provided 106 responses. Twenty-two percent of these responses could be summarized as *Corporate Partners could be more involved and there could be more Corporate Partners*. Sixteen percent suggested that UNITECH intensify its marketing activities, for example, by improving its website, in order to be able to leave a more professional impression on its audience and to reach wider audiences. The website was actually changed during the summer of 2014, after the survey was conducted. Fifteen percent suggested that workshops and seminars address a wider range of subjects, last longer, and provided participants with a better opportunity to give feedback. Ten, six, and five percent suggested, respectively, the improvement of *post-graduate activities*, *hiring procedures*, and *activities that support one's search for an internship position*. The other 26% of responses were individual suggestions.

THE UNITECH ALUMNI NETWORK

The vast majority of respondents (N=131) paid membership dues to the alumni network. Fifteen percent of respondents neither paid dues nor participated in network activities. Twenty-five percent paid dues but did not participate. Forty-three percent both paid dues and participated from time to time. Finally, 16% both paid the fee and regularly participated in network events.

Seventy-seven respondents chose to answer the free-response question about ways in which the network was able to help them. Thirty-one percent mentioned participation in events and activities. Twenty-nine percent mentioned contacts they had made and relationships they had developed. Twenty-two percent mentioned the opportunity to stay in contact with other alumni. Fourteen percent mentioned opportunities to be informed about job openings and an increased chance to find a job with a Corporate Partner.

Respondents who chose to answer the free-response question about what could potentially improve the network together provided 59 answers. Thirty-four of them were suggestions to intensify alumni communication, for example, through an online platform, a higher frequency of events, or localisation of events. Fourteen, ten, and eight responses were suggestions, respectively, to focus more on career development, to reduce the membership fee, and to increase participation of Corporate Partners. The other 34% of responses were unique suggestions.

SUMMARY OF FINDINGS

1 — **The culture and climate of a workplace can substantially contribute to it's appeal.** By establishing an atmosphere of trust and personal and professional recognition and by ensuring intellectually stimulating work and opportunities for learning, organizations can more effectively attract and retain high potentials.

2 — **Workplace preferences could vary among men and women.** A significantly larger proportion of surveyed UNITECH alumnae than alumni valued job security and work-life balance. Simultaneously, a larger proportion of alumni than alumnae who had more than five years of professional experience valued a high income more than when they first accepted their current position.

3 — **Working conditions can substantially influence the level of motivation and commitment of highly skilled employees.** The degree to which their work was intellectually stimulating, allowed them to take responsibility, and contained opportunities for professional development, directly influenced respondents' level of motivation and commitment to their current employer.

4 — **High potentials consistently prioritize certain aspects. Work-life balance, opportunities to work autonomously, and leadership responsibilities continued to appeal to the respondents over time.** Similarly, opportunities to work autonomously, to realize one's own ideas, and to take responsibility were the reasons why the respondents either were already self-employed or could find self-employment appealing.

5 — **Priorities can change with time.** Respondents who had at least five years of professional experience agreed that they were now less mobile than in the past and a larger proportion of women than men among them now valued job security more than in the past. Respondents with less professional experience expected for their priorities to change in a similar way in the future.

Our findings indicate that by deliberately shaping their cultures, organizations can more effectively attract and retain highly skilled employees and, ultimately, secure competitive advantage. Kaiser et al. (2012) evaluated cultures of nine large organizations and identified four major culture types and their impact on employees and women among them in

particular. In general, this project examined how particular cultural attributes can influence women's career decisions and how organizations can potentially retain female managers by accommodating their preferences (Kaiser et al., 2012).

Organizational cultures consist of a range of interwoven elements and the connections between these elements can be extremely complex and difficult to discern (Sackmann, 2009). After having settled into their working environment, many employees begin to take for granted and reinforce its existing ways. By consistently, actively managing all their major elements, organizations can nevertheless effectively re-shape their cultures (Sackmann, 2009) – in a way that accommodates their complex dynamics.

Intentionally or otherwise, senior managers always set the standard for other employees. By consistently re-evaluating and, if necessary, re-adjusting both the culture and their own conduct, senior managers can effectively steer the organization and help it achieve its goals.

ACKNOWLEDGMENTS

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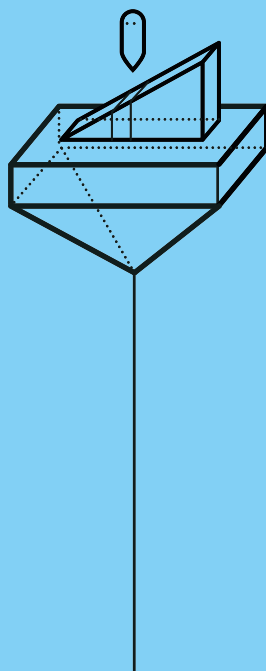
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