

**Survey report
on the professional
integration of EPFL
graduates**

Class of 2022

Philippe Ory

**Transversal Skills
and Career Center
May 2024**

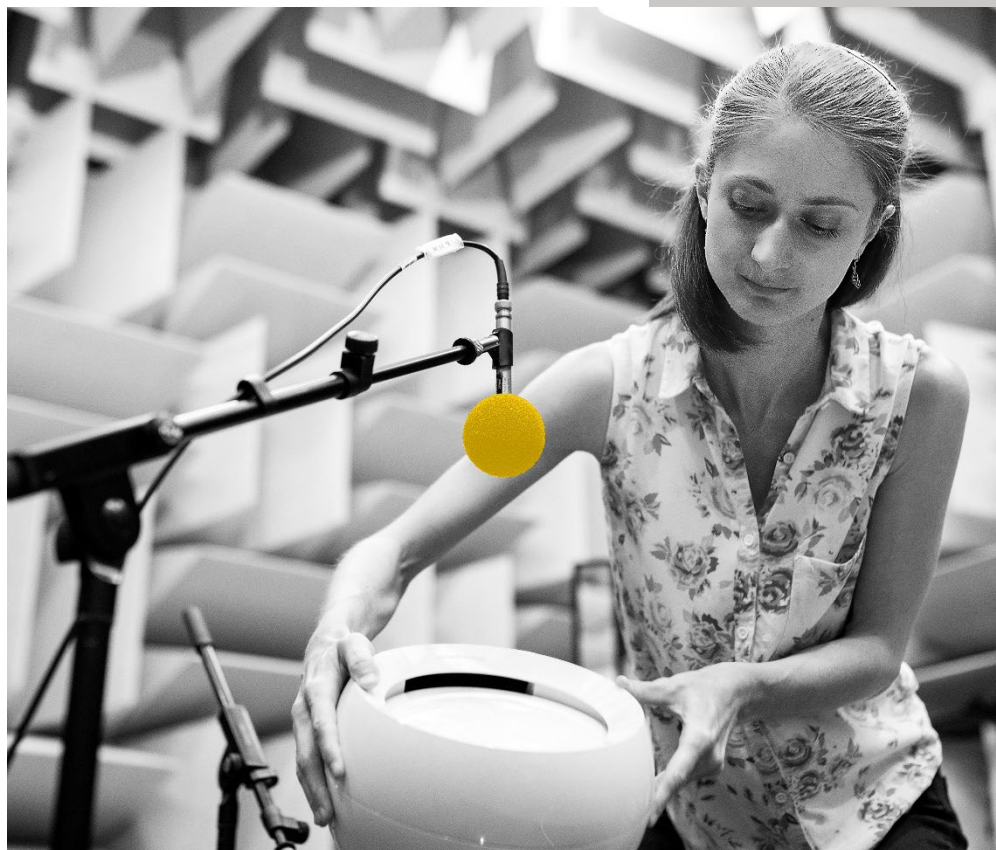


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Survey report on the professional integration of EPFL graduates of the class of 2022

I. Preamble

This report is the result of the analysis of data collected by the EPFL Transversal Skills and Career Center regarding the professional integration of graduates who obtained their Master's degree or their PhD at EPFL in 2022.

Graduates of this class were surveyed between mid-August and mid-September 2023, *i.e.* between 9 and 18 months after their exmatriculation.

The data were collected through an online questionnaire, which globally repeats the questions of the questionnaire used for the previous classes. However, for the sake of simplification and clarification, some questions may have been deleted, others added and others reworded from one year to the next.

The graduates of 2022 were invited to participate by e-mail. To invite them, we used their private e-mail addresses stored in IS-Academia, EPFL's academic database.

We present most of our results by separating the Master's graduates from the PhDs.

II. Summary of the main results

- One year after graduation, the net employment rate of **Master's** graduates in Switzerland (proportion of graduates not pursuing a doctorate who are employed or self-employed) was **91.9%**, up slightly from 2021's rate of 90.9%. The net employment rate for all countries combined, at **91.1%**, was also slightly up on the previous year (2021: 90.5%). All countries combined, it took our graduates an average of **9.2 weeks** and **13 applications** to find a job, a job search effort comparable to that of the class of 2021 (2021: 8.8 weeks and 13 applications). Their salary at the time of the survey (in Switzerland) averaged **CHF 88'753 in the private sector** (down from CHF 89'139 in 2021) and **CHF 84'026 in the public sector** (up from CHF 80'732 in 2021).
- One year (on average) after their thesis, **93.5%** of recent **PhDs** based in Switzerland were employed or self-employed (all countries combined: **90.7%**), a stable rate for Switzerland but a significant decrease abroad compared to the previous class (2021: Switzerland: 94.3%, all countries combined: 96.6%). All countries combined, young PhDs found a job in **15.2 weeks**, after an average of **18 applications**, a similar search effort to that of the previous class (2021: 15.5 weeks and 19 applications). The average salary in Switzerland at the time of the survey was **CHF 117'450 in the private sector** (up from CHF 106'172 in 2021), reaching a new high thanks to a few high-paying multinational IT companies. By contrast, it decreased to **CHF 90,573 in the public sector** (from CHF 92'011 in 2021).
- Switzerland remains the number one job-hunting destination for both Master's graduates and PhDs. The rate of departure from Switzerland remained stable for Masters (24.3% vs. 24.7% in 2021). By contrast, the rate for PhDs was slightly down to 38.4% (40.4% in 2021). Readers should keep in mind that this last rate is measured with a relatively large margin of error (see next page for error margin calculations).
- Our graduates were generally satisfied with their first job, and in particular with the interest of the tasks they performed. As in the previous eight surveys, PhDs were the most satisfied with the adequacy between their education and the requirements of the job they held. For all graduates, the least satisfactory point remained the salary, with no difference on this between Masters and PhDs although it is particularly true for PhDs working abroad. This last finding confirms that of all previous surveys.
- Post-graduation entrepreneurship has been marking time again with this class. The proportion of entrepreneurs among Master's graduates was the lowest ever measured, while there were only a handful of entrepreneurs or self-employed PhDs among those who responded. This is still an improvement from 2021, though, when there were none among PhD respondents.

III. Survey methodology

Our survey aimed at surveying all graduates, living in Switzerland and abroad. Nevertheless, we have separated the answers of graduates working in Switzerland (but not necessarily residing there) from those working abroad, as national situations may vary greatly from one country to another. The results for graduates working in Switzerland appear on a light blue background, those for graduates working abroad on a lilac background. Results encompassing all graduates appear in yellow.

Responses validation

We analyzed the quality and consistency of the responses to exclude the outliers. The electronic questionnaire was designed to minimize the risk of errors and blatant outliers. However, 11 Master's responses and 10 PhD responses had to be eliminated due to lack of data or inconsistent responses.

Response rates

	EPFL graduate population 2022	Total valid responses	Margin of error at p=50 for a 95% confidence level
Master's	1248	559 (45%)	3.1%
PhDs	453	151 (33%)	6.5%

Compared to previous years, the response rate increased slightly for Master's graduates (from 43% for the class of 2021) and remained identical for PhD graduates. The margin of error for the latter remains below the minimum quality criteria commonly accepted for surveys (*i.e.* a margin of error of max. 5% at 95% confidence). **The results concerning PhDs must therefore be interpreted with caution.**

WARNING:

As much as possible, we have compiled statistics that are representative of the overall situation of our graduates. However, as soon as we look at the situation of particular subgroups (*e.g.* average salary of female microengineering graduates), the statistical reliability of the results is potentially impaired by the small number of responses (due to a lack of responses and/or because the subgroup concerned is itself small). This is why we routinely mention the number of responses on which the results are based next to the results, in brackets, so that the reader can weigh the conclusions he or she might draw from the raw results. **This warning is particularly important when reading tables showing results by section.**

IV. Distribution of respondents by field of study

Master sections	Respondents	Graduates	R/G
Architecture	36	156	23%
Civil Engineering	25	63	40%
Environmental Sciences and Engineering	23	61	38%
Mathematics	36	66	55%
Physics	50	93	54%
Chemistry	25	72	35%
Electrical Engineering	32	61	52%
Mechanical Engineering	47	112	42%
Microengineering	84	157	54%
Materials Science and Engineering	19	28	68%
Computer Science	56	115	49%
Communication Systems	51	103	50%
Life Sciences	43	88	49%
Management of Technology and Entrepreneurship	17	35	49%
Financial Engineering	8	24	33%
Energy Management and Sustainability (EME)	1	1	100%
Digital Humanities	6	13	46%
TOTAL	559	1248	45%

Doctoral programs	Respondents	Graduates	R/G
Architecture and Sciences of the City (EDAR)	1	10	10%
Civil and Environmental Engineering (EDCE)	9	27	33%
Mathematics (EDMA)	9	24	38%
Physics (EDPY)	18	38	47%
Chemistry and Chemical Engineering (EDCH)	25	60	42%
Electrical Engineering (EDEE)	14	42	33%
Mechanics (EDME)	5	14	36%
Microsystems and Microelectronics (EDMI)	7	22	32%
Advanced Manufacturing (EDAM)	3	3	100%
Photonics (EDPO)	5	17	29%
Robotics, Control and Intelligent Systems (EDRS)	7	20	35%
Materials Science and Engineering (EDMX)	10	42	24%
Energy (EDEY)	3	20	15%
Biotechnology and Bioengineering (EDBB)	5	20	25%
Neuroscience (EDNE)	7	20	35%
Molecular Life Sciences (EDMS)	5	18	28%
Computational and Quantitative Biology (EDCB)	1	2	50%
Management of Technology (EDMT)	3	5	60%
Finance (EDFI)	2	5	40%
Computer and Communication Sciences (EDIC)	12	44	27%
Digital Humanities (EDDH)	-	0	-
TOTAL	151	453	33%

V. Demographic indicators

Citizenship

Respondents	Master's		PhDs	
Swiss citizens	237	42.4%	25	16.6%
Foreigners with C permit (residents)	16	2.9%	0	-
Non-resident foreigners	306	54.7%	126	83.4%
Total	559	100.0%	151	100.0%

Note: dual nationals with Swiss citizenship are counted as Swiss.

Non-resident foreign graduates represent 50.0% of the 1248 Master's graduates of the class of 2022 (source: Registrar's office) and constitute 54.7% of the respondents. They are therefore slightly over-represented in the sample.

Concerning PhDs, non-resident foreigners represent 80.4% of the 453 graduates of this class (source: Registrar's office) and constitute 83.4% of the respondents. They are therefore slightly over-represented in the sample.

Gender

Respondents	Master's		PhDs	
Men	409	73.2%	108	71.5%
Women	150	26.8%	43	28.5%
Total	559	100.0%	151	100.0%

Women represent 28.0% of all Master's 2022 graduates 30.2% of all PhDs of this class (source: Registrar's office). They are therefore adequately represented in the Masters and Doctoral samples.

1. Master's survey

As their status is specific, we systematically separate PhD students and self-employed / entrepreneurs from employed Master's graduates (except in 1.1.1 and 1.1.2). PhD Students and self-employed / entrepreneurs were the subject of specific questionnaires, the answers to which appear in 1.10 and 1.11 respectively.

1.1 Professional integration main indicators

1.1.1 Place of establishment by origin	Master's living in Switzerland	Master's living outside Switzerland	Inside / Outside Switzerland Class of 2021
Swiss and foreigners with C permit (residents)	231	22	207 / 22
Non-resident foreigners	192	114	171 / 102
Total	423 (75.7%)	136 (24.3%)	75% / 25%

1.1.2 Activity at time of survey	Master's living in Switzerland	Master's living outside Switzerland	Master's living in Switzerland Class of 2021
Professionally active (employed + <u>entrepreneurs</u>)	80.4% (335 + 5)	60.3% (79 + 3)	76.5%
PhD candidates	12.5% (53)	31.6% (43)	15.9%
Job seekers	5.0% (21)	6.6% (9)	5.0%
Not working / not seeking	2.1% (9)	1.5% (2)	2.6%
Total	100% (423)	100% (136)	100%

Note: among the 335 employed graduates living in Switzerland, 2 worked remotely for foreign companies among the 79 employed graduates living outside Switzerland, 4 lived in France and worked in Switzerland (cross-border workers) and one worked remotely from the UAE for a Swiss company

1.1.3 Salary at the time of survey	Master's working in Switzerland*	Master's working outside Switzerland	Master's working in Switzerland Class of 2021
Private for-profit sector - average salary	CHF 88'753	(not relevant)	CHF 89'139
Private for-profit sector - median salary	CHF 87'250	(not relevant)	CHF 85'000
Public sector and related - average salary	CHF 84'026	(not relevant)	CHF 80'732
Public sector and related - median salary	CHF 83'000	(not relevant)	CHF 84'000

*Includes graduates employed in Switzerland, whether living in Switzerland or abroad. Does not include graduates working remotely from Switzerland for foreign companies

PhD students and entrepreneurs/self-employed were not asked about their salary. Public sector salaries therefore do not include PhD students

1.1.4 Job search efforts (employed graduates)	Master's working in Switzerland	Master's working outside Switzerland	Master's working in Switzerland Class of 2021
Average number of applications before landing a job	11.4	17.7	12.0
Average number of jobs for which at least an interview was obtained	2.7	4.8	3.0
Average number of jobs obtained	1.4	1.8	1.5
Average time to land a job, in weeks	8.7	11.6	8.5

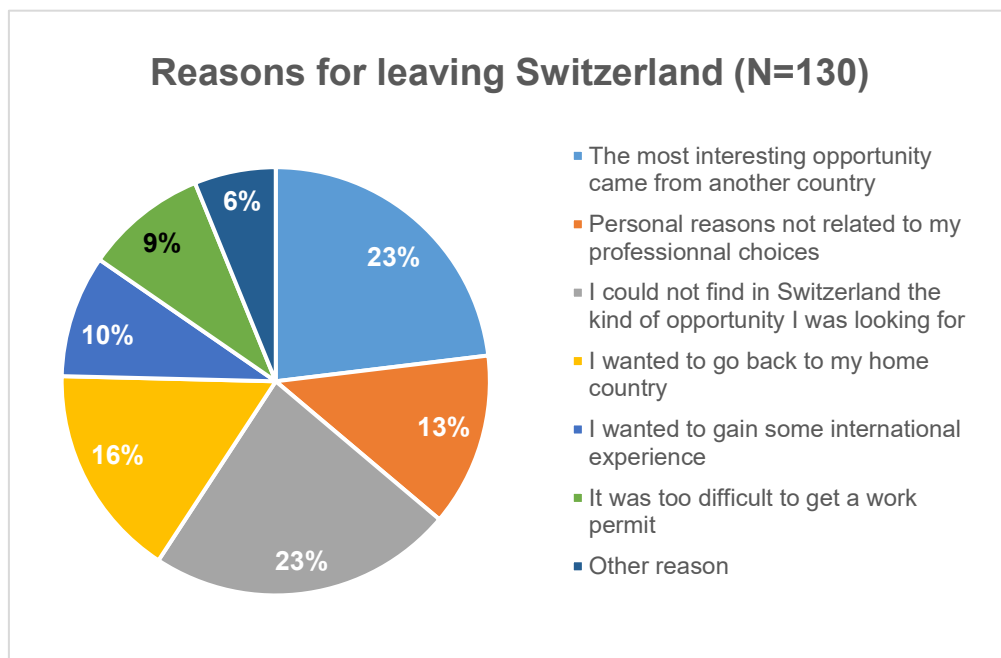
PhD students and entrepreneurs/self-employed were not asked about their job search efforts

Regarding the **place of residence**, we see that

- **Graduates residing outside Switzerland:** 24.3% of the class of 2022 left Switzerland, a stable rate compared to the three previous classes. It was around 30% in 2016-2018, around 25% for the classes of 2012-2015 and between 15% and 18% until 2011. It looks like the growing trend to leave Switzerland after graduation, which had begun to reverse with the class of 2020, has now stabilized around the rate we observed back in the years 2012-2015.

Those who left Switzerland did so more often to work abroad (74+3 respondents¹) than to study for a PhD (42 respondents¹). They chose France first (42¹ respondents), followed by the USA (12), the UK (10), Germany (10), China (9), Belgium (5), the Netherlands, Italy and Spain (4), the same destinations in roughly the same order as in the previous year. Incidentally, none of those who went to Germany were of German nationality, but all those who went to China were Chinese.

The reasons why these graduates left Switzerland are as follows (only one possible answer):



Answers are not ranked in order of importance to allow for year-to-year comparisons. 6 graduates did not answer the question.

84% of Master's graduates who left Switzerland are non-resident foreigners, a fairly stable rate (2021: 82%, 2020: 82%, 2019: 78%, 2018: 80%, and 2017: 75%).

- **Graduates residing in Switzerland:** Of all respondents who stayed in Switzerland to work as employees (335) or to pursue a PhD (52), 96 employees and 15 PhD students are based in German-speaking Switzerland, a rate of 28.7% (stable). Only 2 respondents live in Italian-speaking Switzerland.
- **Non-resident foreign population:** 192 graduates out of 306 non-resident respondents (63%) remained in Switzerland, a stable rate compared to previous classes (2021: 63%, 2020: 62%, 2019: 59%, 2018: 46%, 2017: 53%). At the time of the survey, these 192 graduates were distributed as follows: 156 were employed², 1 was self-employed, 28 were PhD students (including 16 at EPFL), 5 were job seekers and 2 were professionally inactive.

Regarding the **conditions of insertion in the workplace** (job search efforts and salaries), we see a stable situation compared to that of the class of 2021, both in terms of search efforts and salaries.

- The average time to find a job in Switzerland (8.7 weeks) is very close to that of the class of 2021 (8.5 weeks), while the median time remained the same at 6 weeks.
- The average salary in Switzerland in the private sector remained stable compared to the previous year, while the median salary increased gently (+2.9%). In the public sector, the average salary rose (+3.8%) and the median salary decreased slightly (-1.2%), but the small number of respondents working in this sector (around 40 in Switzerland) means that there is a great deal of variability, making it difficult to compare one class with another.

¹ Cross-border commuters and individuals living abroad but working in Switzerland (5) or doing a PhD there (1) are not counted in these figures, hence the difference with the figures shown in 1.1.2

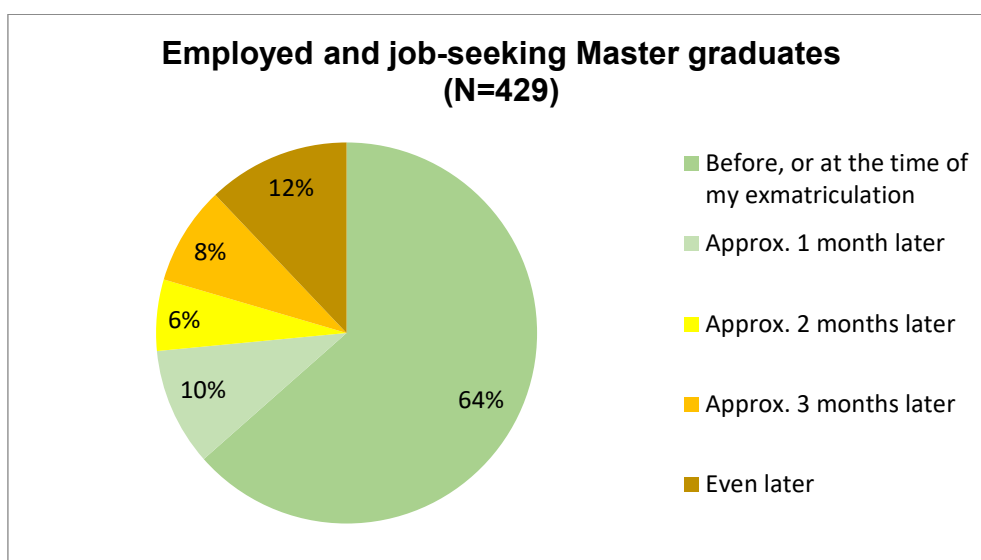
² The 5 foreign graduates living abroad and working in Switzerland either commuting or remotely are not included in this figure.

- The net employment rate in Switzerland (proportion of Master's graduates living in Switzerland who are not pursuing a doctorate and who are employed or self-employed) was, at 91.9% (340/370), slightly higher than that of the previous class (90.9%). The net employment rate for respondents from all countries combined was 91.1% (422/463), close to that of the class of 2021. A tracking curve for these measures is presented in chapter 1.9.1.
- All countries combined, 30 graduates (5.4% of respondents) were seeking employment at the time of the survey (compared to 4.6% for the class of 2021).
- 11 graduates were not employed and not looking for a job, either because they were pursuing studies other than a doctorate (5) or doing their military/civilian service (3), or because they had taken a sabbatical (2). Another one had found a job and was waiting to start.

1.2 Job search

- Starting period of the search

We are interested to know when our graduates actually start looking for work and whether some postpone their job search because they are involved in activities (language stay, sabbatical year, civil service, illness etc.) that prevent them from doing so. This is because the time lag between graduation and the start of the job search can have a direct impact on the employment rate of graduates at the time of the survey. The results are as follows:

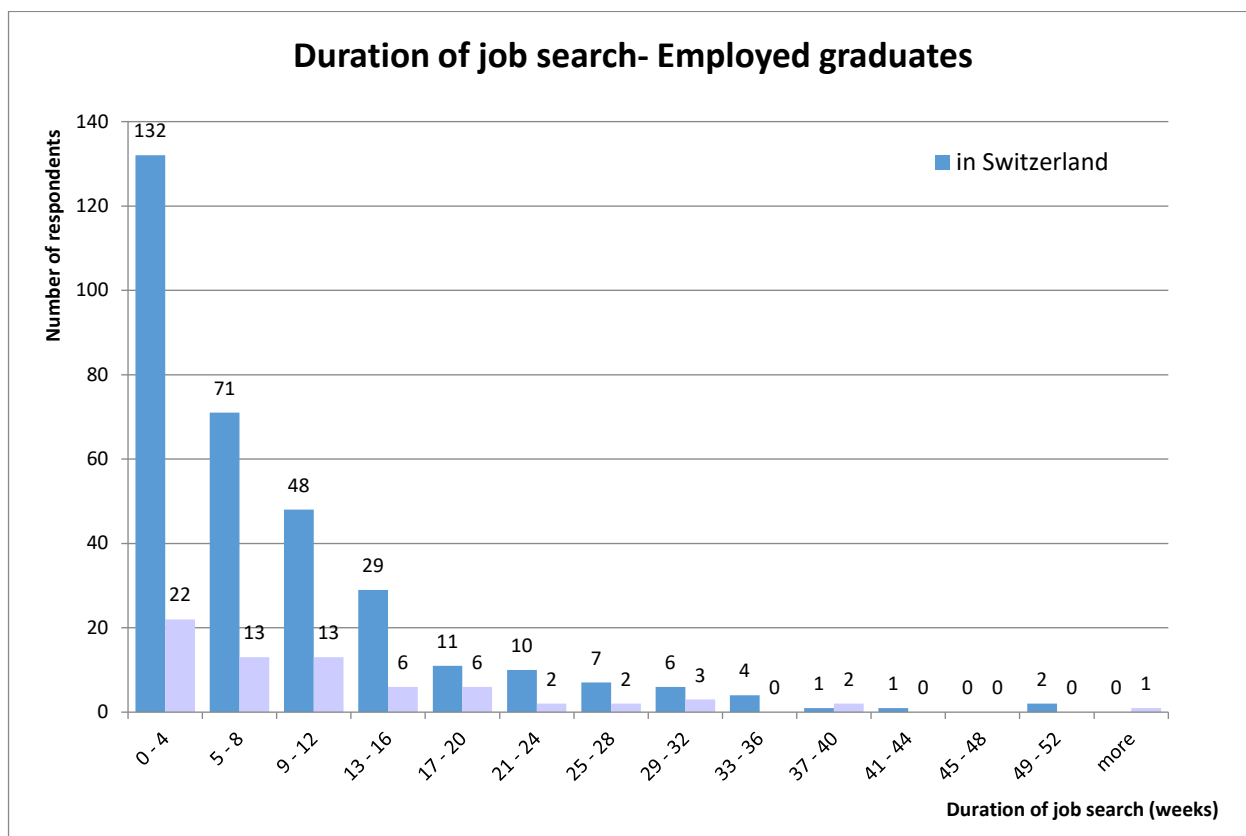


Historically, about half of our graduates started their job search before or at the time of graduation. This year, as in 2021 and 2020, this rate is higher again (64% vs. 66% in 2021 and 60% in 2020). However, the share of graduates who waited more than three months to do so remains stable (12% vs. 13% in 2021 and 11% in 2020). The reasons given for postponing their entry in the workplace are usually linked to long post-graduation commitments (see below), which have a subsequent impact on the time elapsed between graduation and the start of a real professional activity.

The 52 respondents who replied that they had started their job search "even later" were asked what activity, if any, they had engaged in between the end of their studies and the start of their search. The answers were as follows:

- Sabbatical, travel	27
- Military or civilian service	8
- Unpaid work, part-time (<50%) paid work, continuation of Master thesis	7
- Other (short studies, personal projects, illness, etc.)	10

- Duration of job search



The average duration of a successful job search in Switzerland was 8.7 weeks (almost identical to 2021), and the median duration was 6 weeks (same as 2021). 78.0% of our 2022 graduates employed in Switzerland found work within the first 12 weeks (78.8% in the previous year).

Abroad, the average search duration was slightly up to 11.6 weeks (10.2 weeks in 2021), while the median value slightly decreased at 8.5 weeks. 68.6% of our graduates working abroad found work within the first 12 weeks (71.9% last year).

- Job search area (employed graduates)

Job search area	Master's working in Switzerland	Master's working outside Switzerland	Master's (all)	PhDs working in Switzerland	PhDs working outside Switzerland	PhDs (all)
French-speaking Switzerland	87.8%	39.7%	78.8% ↗	78.3%	34.7%	62.1% ↘
Rest of Switzerland	49.8%	24.7%	45.3% ↘	72.3%	38.8%	59.8% ↗
One or several European countries	15.3%	75.3%	26.3% ↘	25.3%	77.6%	44.7% ↗
North America	3.1%	23.3%	6.8% →	10.8%	42.9%	22.7% ↘
Other regions	2.1%	23.3%	6.0% →	2.4%	8.2%	4.5% ↘

As multiple answers were possible, the total is greater than 100%. Arrows indicate the variation with regards to the class of 2021 (stable (→) means a variation lower than, or equal to +/-2.5 percentage points from the previous year).

We include information on PhDs' job search areas for comparison. For comments on PhDs' figures, see 2.2

French-speaking Switzerland remained the preferred job search area for our Master's graduates. The rest of Switzerland was nevertheless also attractive to our graduates: 45.3% looked for work there, and 28.7% (97/338) of graduates employed in Switzerland ended up working there (almost all in the German-speaking area) compared to 30.4% of the class of 2021.

The attractiveness of Europe as a place to work for Master's graduates declined once again, as in 2021, after an exceptional spurt in 2020 which itself followed two years of decline. Of the 105 graduates who said they

looked for work in Europe, 50 were actually working there, while 50 ended up working in Switzerland (the remaining 5 worked in other regions).

As for North America, whose attractiveness remained stable, only a minority of the 24 graduates who said they sought employment there worked there (8), while 10 ended up staying in Switzerland.

Looking specifically at Master's graduates working abroad, 39.5% (30/76) also looked for work in Switzerland (compared to 47% in 2021, 56% in 2020, 41% in 2019, 53% in 2018, and 40% for the class of 2017).

- Initial step leading to the first job

Initial step leading to the first job	Master's working in Switzerland (N=326)	Master's working abroad (N=73)	Master's all (N=399)
a. I answered a job advertisement	34%	45%	36%
b. I sent a spontaneous application to my employer	17%	16%	17%
c. I spontaneously sent my CV to a recruitment agency which contacted me	1%	1%	1%
d. I met my employer at Forum EPFL	6%	0%	5%
e. I was offered a position further to a joint project between EPFL and my employer, in which I had participated	3%	4%	4%
f. My employer offered me a job after I did my Master thesis with them (includes EPFL if employed there after graduation)	21%	3%	17%
g. I was recommended to my employer (by a friend, a family member, a colleague, etc.)	7%	21%	9%
h. I was contacted / recontacted without having taken any specific steps towards this particular position	10%	5%	9%
i. Other	3%	4%	3%
Total	100.0%	100.0%	100.0%

15 employed graduates did not answer this question

It is worth noting the importance of in-company Master thesis in the professional integration of our graduates. If we consider that only 487 of the 1'248 graduates, *i.e.* 39%, did their Master's thesis in a company (source: EPFL Academic Data group), by applying the survey response rate of 45% to these particular graduates, we come to the conclusion that 31.4% of them eventually stayed in the company where they did their thesis.

The initial steps leading to employment are varied and are distributed in the same proportions from one year to the next. It can be seen that

- In 59% of cases (steps a. to d.), recent graduates found their position by actively approaching the employer. The proportion of graduates who found their first job through an active approach has remained stable over time, hovering around 60% since we began measuring this figure (2009).
- In 21% of cases (steps e. and f.), EPFL helped establish a link with the employer (typically through a Master's thesis in industry, but also through projects carried out at EPFL in partnership with industry).
- In 9% of cases (step g.), the initial contact was made through the graduate's network, either inside or outside EPFL.

In addition, **33.8% of employed graduates (135/399) said they had already worked for their current employer.** This was mostly because they carried out an internship or their Master's thesis with them (130/135), but also, in a few cases, because they had a side job there during their studies (5/135). This high rate confirms that a previous professional relationship facilitates professional integration in many cases.

- Minor's role in the job search

We asked our 142 respondents who were employed and had completed a Minor at EPFL to what extent their Minor had influenced their professional integration.

- 94 of them (66%) considered that having done the Minor was useful in the recruitment process (independently of its usefulness for their day-to-day work). However, 62 of these 94 graduates felt that they could have landed their current position without having done it.
- 69 of them (49%) considered that the field of activity in which they work is related to their Minor (this proportion has traditionally fluctuated between 45% and 54% since we started measuring it, except in 2021). See the table below for details.

Minor	Field of activity is not related	Field of activity is related	Total
Biocomputing		1	1
Biotechnology	1	1	2
Materials science and engineering	1	1	2
Data science	2	9	11
Integrated design, architecture and sustainability	2	2	4
Urban planning and territorial development	1		1
Energy	4	5	9
Civil engineering	2		2
Electrical Engineering		1	1
Mechanical engineering	2	1	3
Computer science		4	4
Financial engineering	1	4	5
Management, technology and entrepreneurship	28	17	45
Microengineering	2		2
Neuroprosthetics	1		1
Computational neurosciences	3	3	6
Photonics	1	1	2
Physics	3		3
Computational science and engineering		2	2
Science, technology and area studies (China)	3	2	5
Life science and technology	1	1	2
Systems engineering		2	2
Biomedical technologies	7	5	12
Space technologies	8	7	15
Total	73	69	142

1.3 Type of positions held

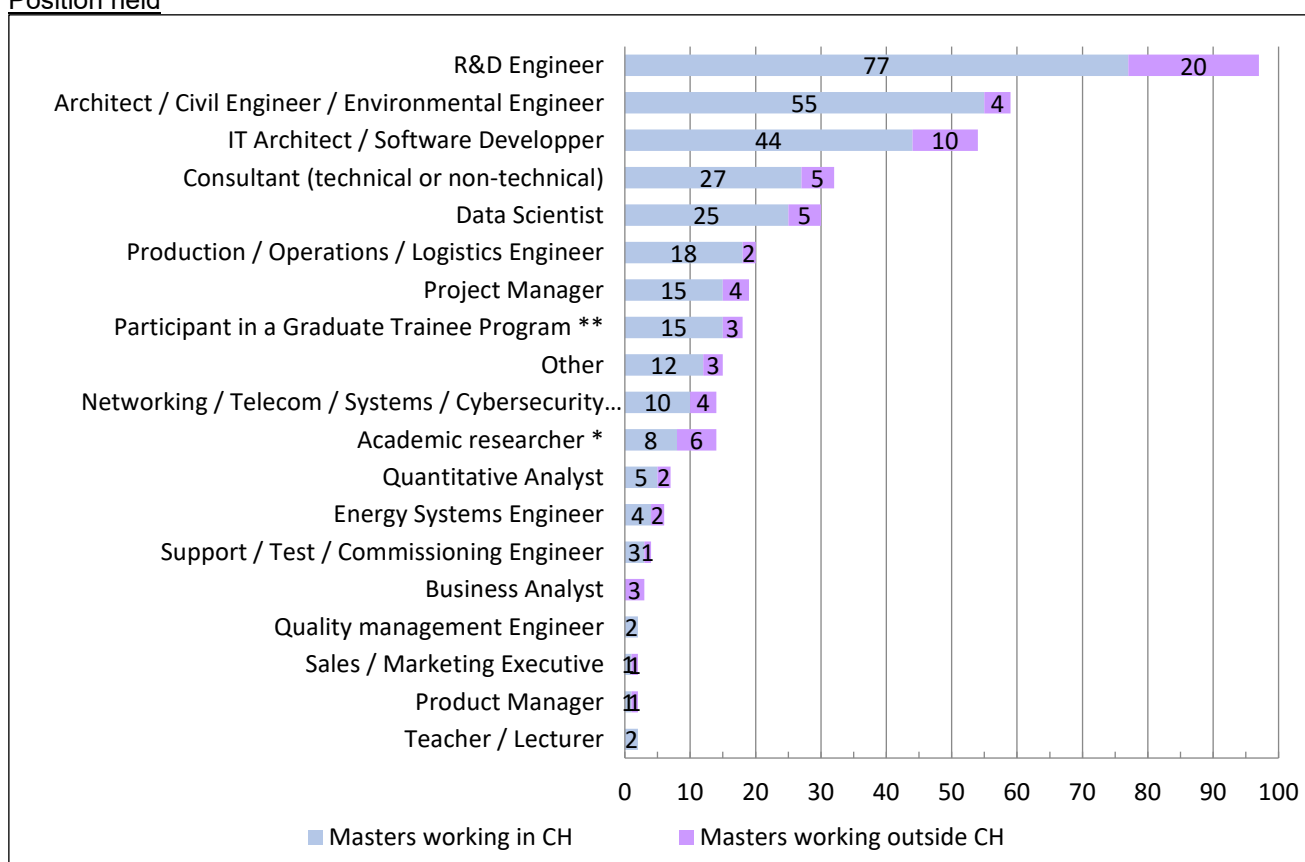
- Public and private sectors

We count NGOs and other non-profit organizations alongside public sector ones.

Sector	Master's Working in Switzerland		Master's Working outside Switzerland		Master's Working in Switzerland Class of 2021
	Count	Percentage	Count	Percentage	
Private, for-profit sector	280	86.2%	58	76.3%	88.9%
Public, non-profit and related	45	13.8%	18	23.7%	11.1%
All	325	100.0%	76	100.0%	100.0%

The vast majority of our Master's graduates chose the private sector. This is a recurring observation, and the split between the public and private sectors is historically stable from one year to the next.

- Position held



One graduate did not respond.

- Employer size

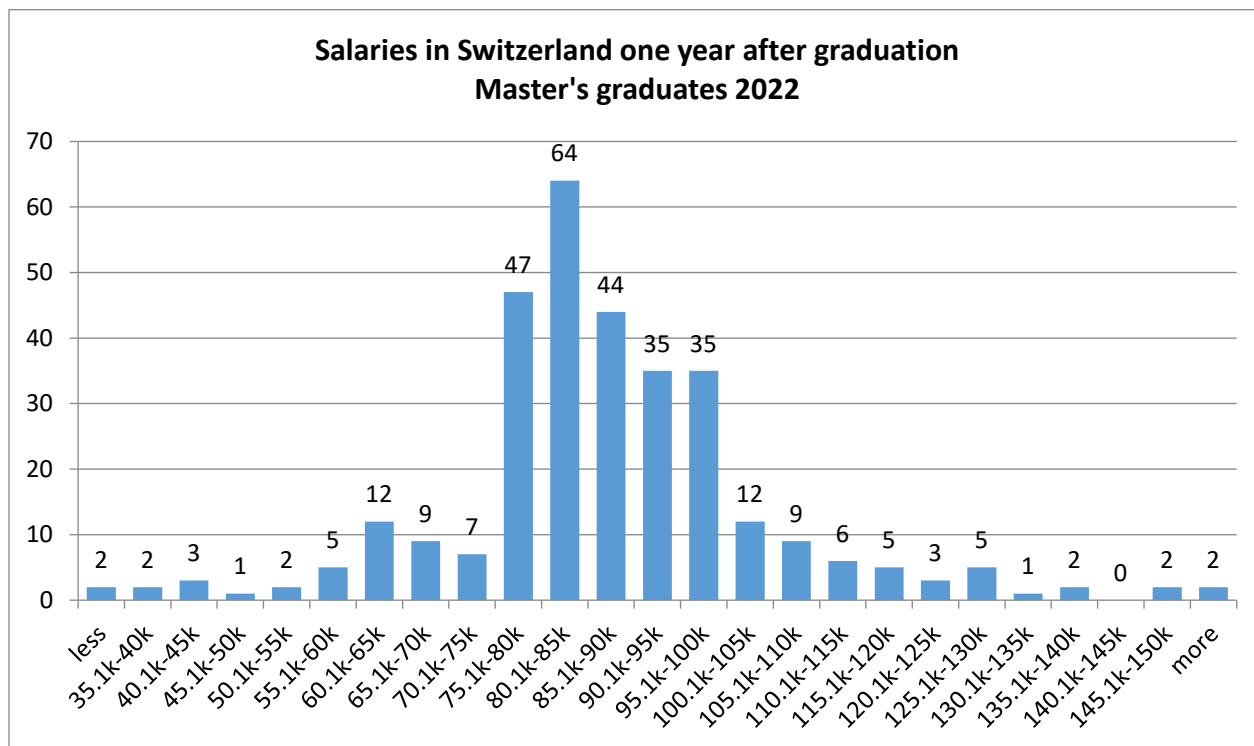
Overall (in Switzerland and abroad), 60.6% of Master's graduates chose to work for large companies. This proportion is similar to that of last year (see 1.9.3 for the evolution of this rate over time). There is usually a recurring difference between the situation in Switzerland and abroad with Swiss-based graduates being proportionately more likely to work in SMEs than graduates abroad, but this is not the case this year.

Employer size	Master's Working in Switzerland		Master's Working outside Switzerland		Master's Working in Switzerland Class of 2021
	Count	Percentage	Count	Percentage	
< 250 employees	129	39.7%	29	38.2%	40.4%
> 250 employees	196	60.3%	47	61.8%	59.6%
All	325	100.0%	76	100.0%	100.0%

1.4 Salaries

Our graduates were asked about their salaries at the time of the survey, *i.e.* approx. one year after graduation. For obvious reasons of salary disparities between countries, we have limited our analysis to the salaries of graduates working in Switzerland. These are standardized salaries (annualized, employment rate extrapolated to 100%). **Please note that the salaries of doctoral students are not included in the following figures.**

The distribution of salaries for the Master's class of 2022 is as follows:



Average salaries at time of survey	Master's Working in Switzerland	Standard deviation	Master's Working in Switzerland Class of 2021	Standard deviation Class of 2021
Private, for-profit sector	CHF 88'753 (272)	-	CHF 89'139	-
Public sector and related	CHF 84'026 (43)	-	CHF 80'732	-
Combined	CHF 88'108 (315)	CHF 18'879	CHF 88'285	CHF 21'846

The number of graduates who responded is shown in brackets. 10 employed respondents did not disclose their salary.

The **average** salary of Master's graduates rose significantly in the public sector, while remaining stable in the private sector. The **median** salary was up significantly in the private sector (CHF 87'250 vs. 85'000 in 2021) but decreased slightly in the public sector (CHF 83'000 vs. CHF 84'000 in 2021).

As in the past, we noted salary disparities according to employer size, graduate gender, employer origin and between Sections.

- By employer size:

Average salaries at time of survey	< 250 employees	> 250 employees	Combined
Private, for-profit sector	CHF 79'735 (122)	CHF 96'088 (150)	CHF 88'753 (272)
Public sector and related	CHF 63'667* (3)	CHF 85'552 (40)	CHF 84'026 (43)
Combined	CHF 79'355 (125)	CHF 93'943 (190)	CHF 88'108 (315)

The number of graduates who responded is shown in brackets. 10 employed respondents did not disclose their salary.

* one respondent reported his civilian service compensation, which, being very low (CHF 24'000), brings the average down

Unsurprisingly, large companies paid higher salaries than small ones - a recurring finding.

- By employer's origin:

Average salaries at time of survey	< 250 employees	> 250 employees	Combined
Headquartered abroad	CHF 93'964 (7)	CHF 108'154 (45)	CHF 106'244 (52)
Headquartered in CH	CHF 78'483 (118)	CHF 89'437 (145)	CHF 84'522 (263)
Combined	CHF 79'350 (125)	CHF 93'870 (190)	CHF 88'108 (315)

The number of graduates who responded is shown in brackets. 10 employed respondents did not disclose their salary.

The gap between the average salaries paid by large Swiss and foreign companies remains wide, with a difference of +25.7% for this class (+30.9% in 2021, +23.8% in 2020, +23.4% in 2019; the gap was usually between +10% and +20% for previous promotions). This gap remains wide thanks to a few large IT multinationals and management consulting firms that pay very high wages (of the 15 highest salaries reported, 13 were paid by 5 such companies).

For small companies, no real comparison is possible given the low number of graduates working for foreign SMEs.

- By gender:

Average salaries at time of survey	Women	Men	Combined
Architects	CHF 63'234 (12)	CHF 66'899 (13)	CHF 65'139 (25)
Engineers	CHF 89'109 (75)	CHF 90'429 (215)	CHF 90'088 (290)
Combined	CHF 85'540 (87)	CHF 89'087 (228)	CHF 88'108 (315)

The number of graduates who responded is shown in brackets. 10 employed respondents did not disclose their salary.

The average pay gap between men and women, across all Master's graduates is down again at 4.0% vs. last year's class (2021: -5.6%). Meanwhile, the gap has remained stable between median salaries (women: CHF 84'240; men: CHF 87'450, gap: -3.7% vs. -3.3% last year).

As in previous years, a significant part of the difference can be explained by the over-representation of female architects among female respondents since architects as a whole are traditionally paid less than engineers. Noticeably, the average pay gap between female and male engineers is only -1.5%, the same as in 2021.

- Between Sections:

Section		Women	Men
Architecture	CHF 65'139 → (25)	63'234 (12)	66'899 (13)
Civil Engineering	CHF 83'729 → (20)	85'420 (5)	83'165 (15)
Environmental Sciences and Engineering	CHF 82'654 ↗ (19)	84'299 (9)	81'173 (10)
Mathematics	CHF 91'275 ↗ (16)	90'982 (6)	91'451 (10)
Physics	CHF 83'725 ↗ (14)	94'975 (2)	81'850 (12)
Chemistry	CHF 85'112 → (6)	84'135 (5)	90'000 (1)
Electrical Engineering	CHF 88'106 ↘ (17)	85'821 (3)	88'596 (14)
Mechanical Engineering	CHF 85'881 → (34)	86'353 (5)	85'800 (29)
Microengineering	CHF 84'383 → (50)	82'166 (12)	85'084 (38)
Materials Science and Engineering	CHF 88'564 ↗ (11)	72'000 (1)	90'221 (10)
Computer Science	CHF 99'388 ↘ (37)	108'000 (4)	98'344 (33)
Communication Systems	CHF 102'361 ↘ (33)	101'123 (11)	102'980 (22)
Life Sciences	CHF 89'767 ↗ (14)	81'927 (7)	97'607 (7)
Management of Technology and Entrepreneurship	CHF 95'894 ↗ (12)	99'460 (4)	94'111 (8)
Financial Engineering	CHF 98'000 ↘ (4)	- (0)	98'000 (4)
Energy Management and Sustainability	CHF 110'000 ↗ (1)	- (0)	110'000 (1)
Digital Humanities	CHF 80'667 - (2)	78'000 (1)	83'333 (1)
All sections combined	CHF 88'108 → (315)	CHF 85'540 (87)	CHF 89'087 (228)

The number of graduates who responded is shown in brackets. 10 employed respondents did not disclose their salary.

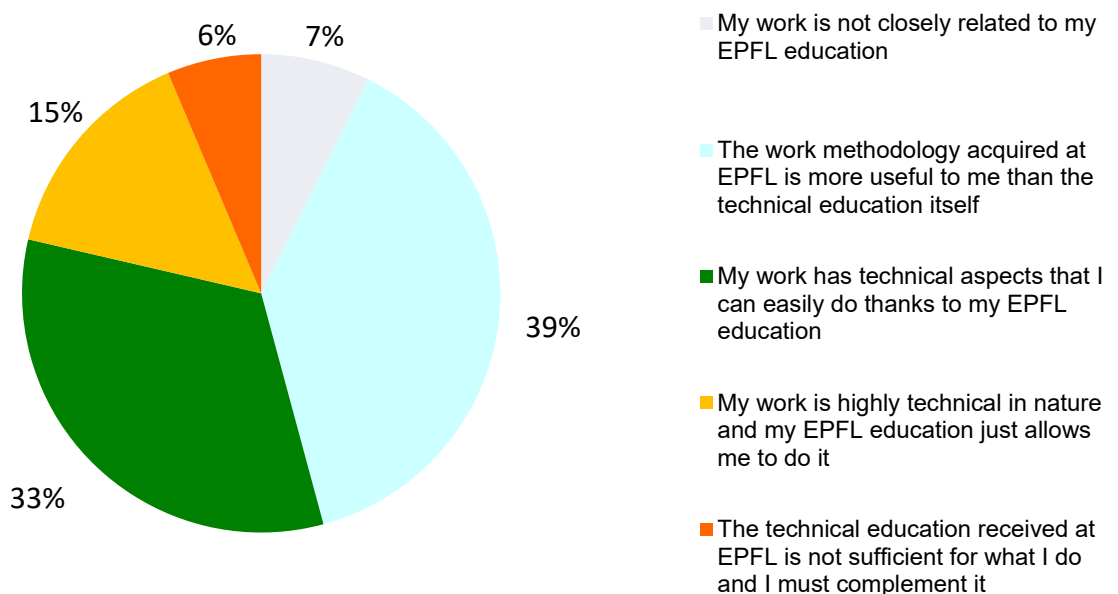
Arrows indicate the variation with regards to the class of 2021. An average salary that has not varied by more than +/- 2.5% is considered stable (→).

It should be remembered that the number of respondents is too low in many sections to draw any firm conclusions about salaries and that this does not allow for truly fair comparisons between the different programs.

1.5 Skills acquired at EPFL in relation to the position (N=393)

Since 2009, we have been looking at the relevance of the technical education acquired at EPFL to our graduates' work, by offering them a scale of responses enabling them to choose the degree of relevance of their technical training to their position. The statistics below include Master's graduates working in Switzerland and abroad.

For the class of 2022, the results remained very similar to those of previous years. 21% of graduates felt that their technical education was "barely sufficient" or "not sufficient" (23% in 2021), while 33% felt that it enabled them to easily meet the technical requirements of their job (39% in 2021).



The 25 graduates who felt that the technical education they received at EPFL is not sufficient and needs to be complemented are spread across 10 sections, the most represented one - with regards to the number of respondents - being Architecture (9 out of 29 architects who answered the question picked that response).

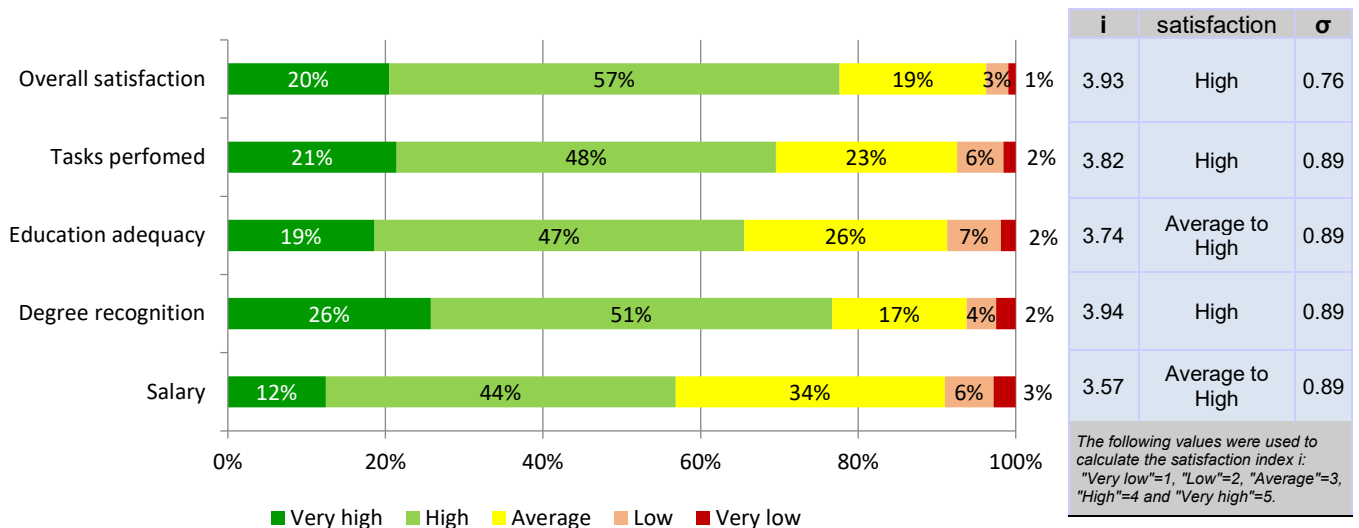
It should also be noted that the 59 graduates who felt that their technical training barely enables them to do their job (yellow slice) come from 14 different sections, none of which being significantly over-represented.

1.6 Job satisfaction

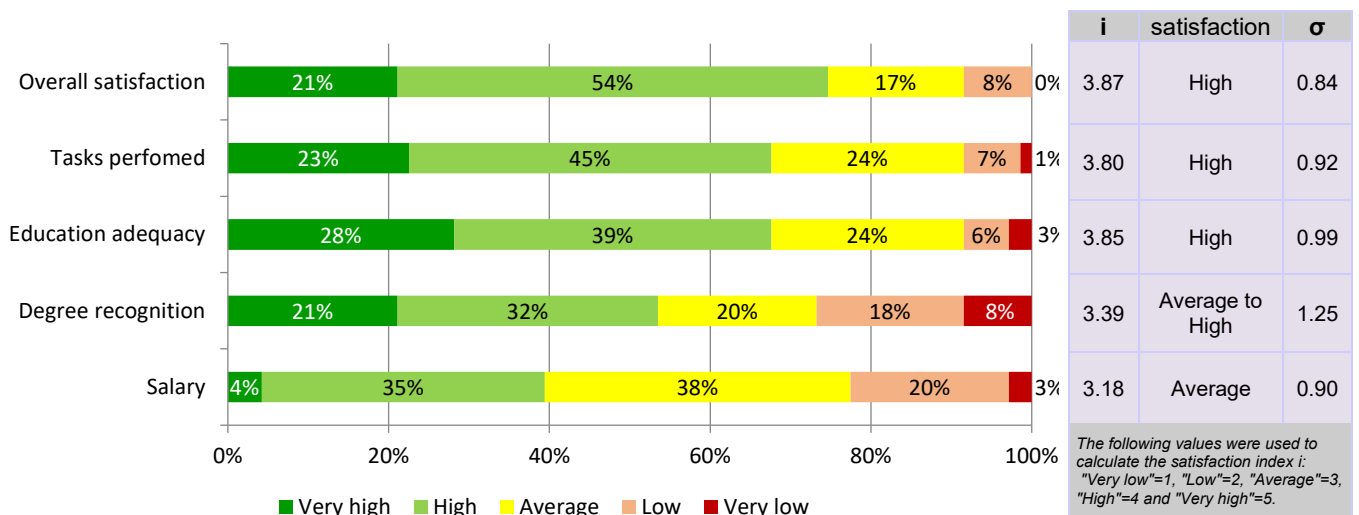
We asked Master's graduates how satisfied they were with their work at the time of the survey, according to 5 criteria:

- **Overall** satisfaction
- Interest in the **tasks** performed
- **Adequacy** of their EPFL education with the job requirements
- EPFL degree **recognition**
- Satisfaction with the **salary**

Master's working in Switzerland (N=322):



Master's working outside Switzerland (N=71):



For Master's graduates working in Switzerland, responses continued to be very similar to those of previous classes, with all indices remaining stable. The main areas of (relative) dissatisfaction remained salary and, to a lesser extent, the adequacy of their EPFL education for the job.

Responses from graduates working abroad showed greater variability from one year to the next, due to their smaller numbers. Nonetheless, it is a recurring finding that salary and recognition of their EPFL degree remain the main reasons for dissatisfaction.

1.7 Graduates seeking employment

We looked at the situation of the 30 Master's graduates who were looking for work at the time of the survey, in an attempt to understand the reasons. It appears that 21 were based in Switzerland and 9 abroad. 15 were Swiss, 8 were EU nationals and 7 were third-country nationals.

At the time of the survey

- 13 had already had a first job with an activity rate of over 50%, which had ended at the time of the survey. They were therefore looking for their second job.
- Of the remaining 17,
 - 5 had obtained and declined at least one job offer and were continuing their job search.
 - 3 had only been actively looking for work for 4 weeks or less.
 - The last 9 seemed to have experienced real difficulties in their job search. All except one are Swiss nationals. While 5 of them started to look for work rather late (3 months or more after graduation), all 9 of them made a significant number of job applications (49 on average), with some success for most since 6 of them claim to have obtained interviews for at least one position (two even claimed to have obtained 10 - a bit odd!).
At the time of this writing, 3 of these 9 graduates have found work and another one is starting a PhD at EPFL. We were not able to track the last 5.

1.8 Summary of the main indicators by section (Masters working in Switzerland)

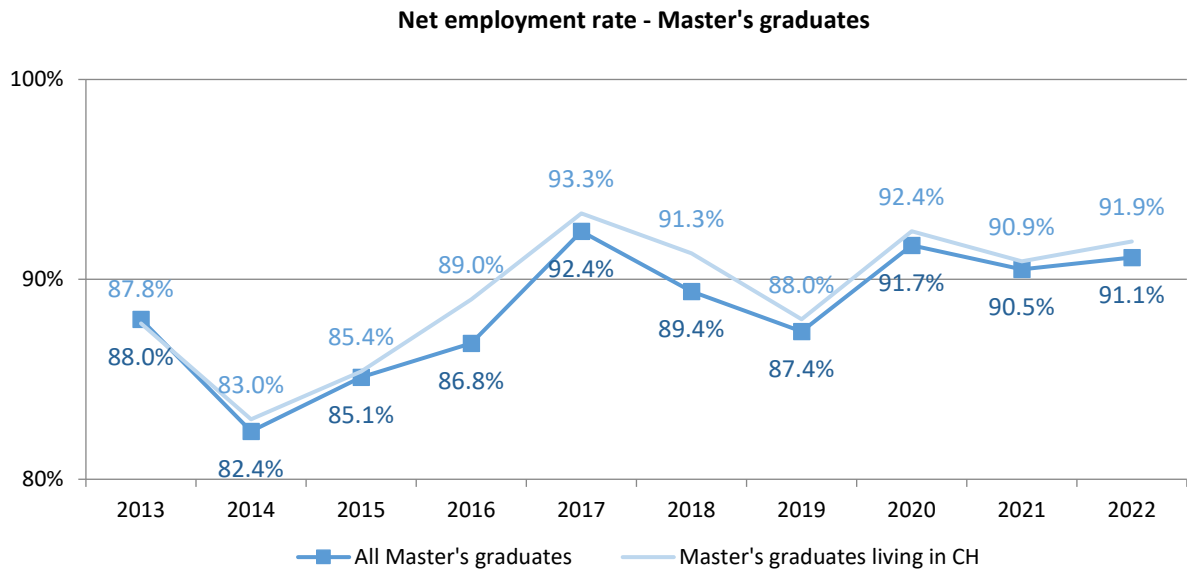
Section	Average number of applications	Average time to land a job in weeks	Average number of jobs obtained	Average salary at the time of survey excluding PhD candidates and entrepreneurs
Architecture	17 (26)	7.9 (26)	1.5 (26)	CHF 65'139 → (25)
Civil Engineering	6 (20)	4.8 (20)	1.7 (20)	CHF 83'729 → (20)
Environmental Sciences and Engineering	5 (19)	6.5 (19)	1.5 (19)	CHF 82'654 ↗ (19)
Mathematics	17 (17)	8.9 (16)	1.4 (17)	CHF 91'275 ↗ (16)
Physics	25 (14)	13.9 (15)	1.4 (14)	CHF 83'725 ↗ (14)
Chemistry	30 (6)	17.3 (6)	1.3 (6)	CHF 85'112 → (6)
Electrical Engineering	6 (16)	5.1 (17)	1.6 (17)	CHF 88'106 ↘ (17)
Mechanical Engineering	15 (33)	10.0 (34)	1.4 (34)	CHF 85'881 → (34)
Microengineering	12 (51)	10.2 (52)	1.3 (52)	CHF 84'383 → (50)
Materials Science and Engineering	9 (11)	8.1 (11)	1.4 (11)	CHF 88'564 ↗ (11)
Computer Science	6 (39)	5.7 (39)	1.4 (39)	CHF 99'388 ↘ (37)
Communication Systems	10 (35)	8.7 (34)	1.7 (35)	CHF 102'361 ↘ (33)
Life Sciences	15 (15)	11.4 (15)	1.1 (15)	CHF 89'767 ↗ (14)
Management of Technology and Entrepreneurship	13 (12)	11.5 (11)	1.4 (12)	CHF 95'894 ↗ (12)
Financial Engineering	17 (4)	7.0 (4)	1.8 (4)	CHF 98'000 ↘ (4)
Energy Management and Sustainability	N/A (1)	N/A (1)	N/A (1)	CHF 110'000 ↗ (1)
Digital Humanities	N/A (1)	N/A (2)	N/A (2)	CH 80'667 - (2)
All sections combined	11 (320)	8.7 (322)	1.4 (324)	CHF 88'108 → (315)

The number of graduates who responded is shown in brackets. 10 employed respondents did not disclose their salary. Arrows indicate the variation with regards to the class of 2020. An average salary that has not varied by more than +/- 2.5% is considered stable (→). The average number of applications has been rounded to the nearest whole number.

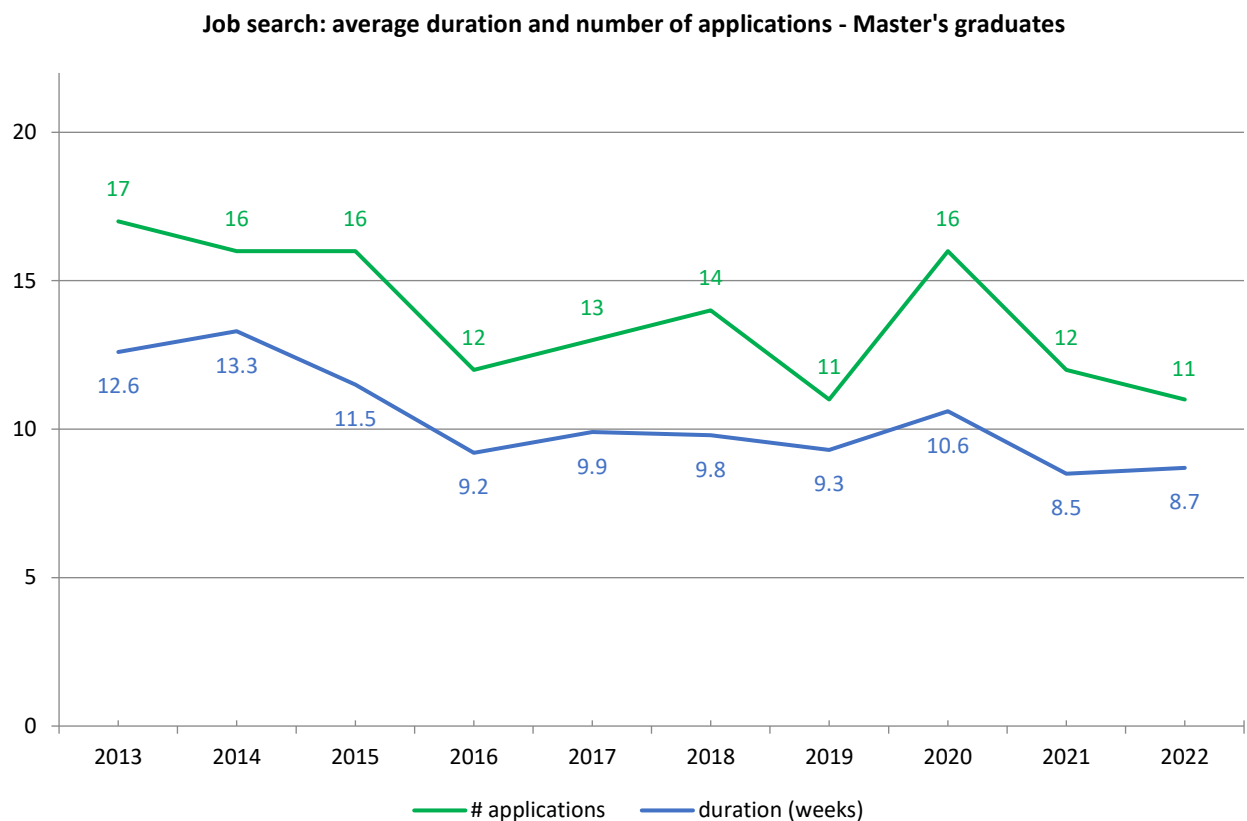
1.9 Evolution of the main indicators over time

1.9.1 Net employment rate

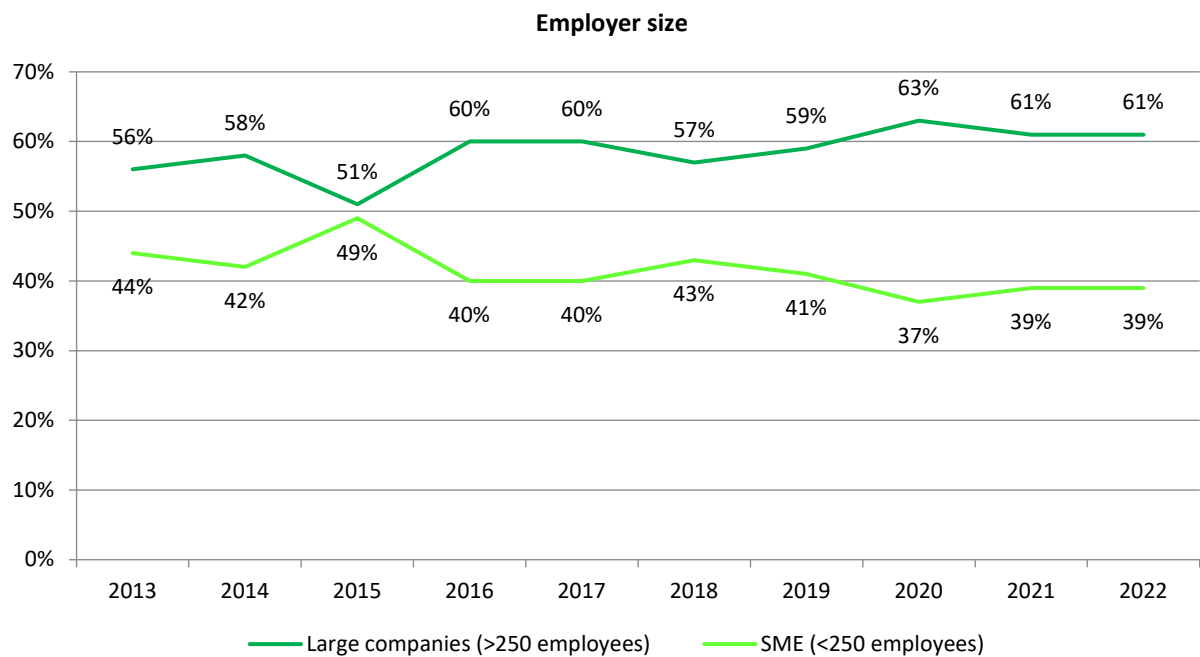
The net employment rate is the proportion of Master's graduates who are not pursuing a doctorate and who are employed or self-employed. For the class of 2022, it is 91.9% (340/370) for graduates based in Switzerland and 91.1% (422/463) for the entire class.



1.9.2 Job search (only Master's graduates working in Switzerland)

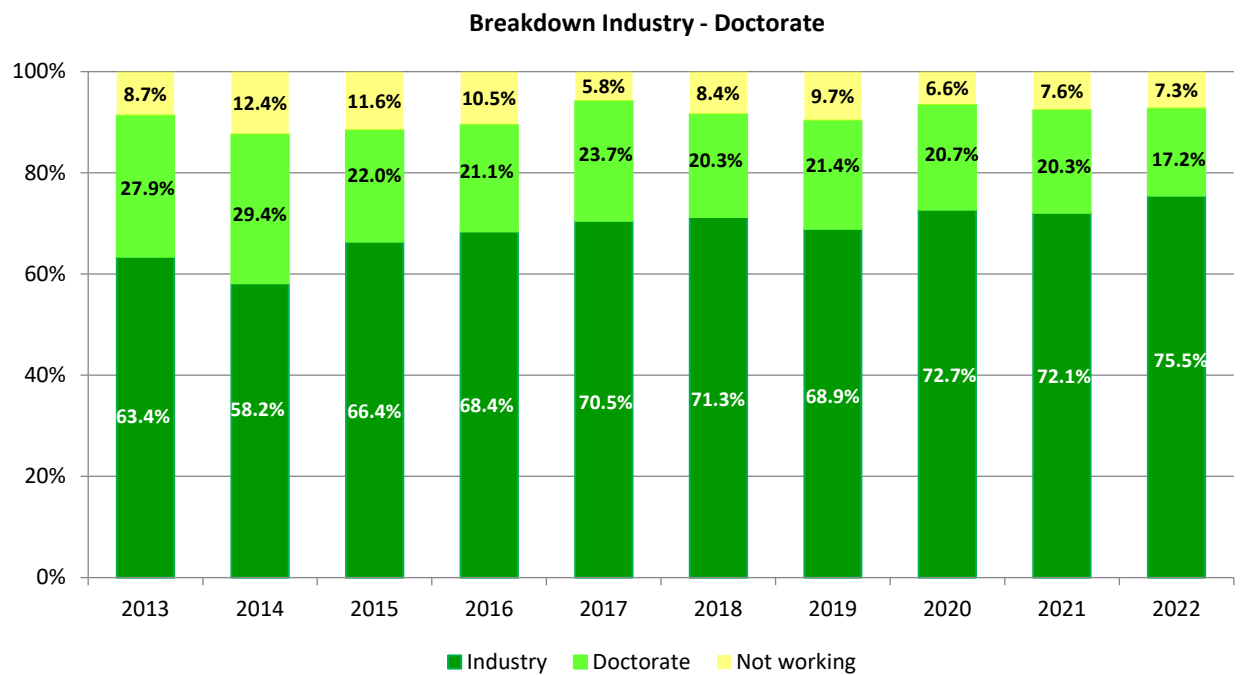


1.9.3 Breakdown SMEs - Large companies (Master's graduates working in Switzerland and abroad)



1.9.4 Breakdown Industry - doctorate (Master's graduates working in Switzerland and abroad)

Since the Class of 2009 survey, we have been looking at the breakdown between Master's graduates working in industry (taken in the broadest possible sense, *i.e.* including the public sector, NGOs, etc.) and those pursuing a doctorate. The "Not working" group includes graduates who are looking for work and those who are not.



1.10 Master's graduates pursuing a PhD

96 Master's graduates out of the 559 respondents from the class of 2022, or 17.2%, chose to pursue a PhD. As they were not considered to be employed in the usual sense of the term, they were asked to complete a different questionnaire, which did not focus on their integration into the workforce, but rather on their motivations and career expectations.

1.10.1 PhD candidates breakdown

Section of graduation	Pursuing a PhD at EPFL	Pursuing a PhD outside EPFL	Total Vs. respondents in the section	in % Vs. respondents in the section
Architecture	-	-	-	-
Civil Engineering	2	1	3/25	12%
Environmental Sciences and Engineering	-	1	1/23	4%
Mathematics	2	7	9/36	25%
Physics	9	15	24/50	48%
Chemistry	1	12	13/25	52%
Electrical Engineering	2	3	5/32	16%
Mechanical Engineering	2	2	4/47	9%
Microengineering	2	4	6/84	7%
Materials Science and Engineering	2	2	4/19	21%
Computer Science	1	6	7/56	13%
Communication Systems	1	3	4/51	8%
Life Sciences	3	12	15/43	35%
Management of Technology and Entrepreneurship	-	-	-	-
Financial Engineering	-	-	-	-
Energy Management and Sustainability	-	-	-	-
Digital Humanities	1		1	17%
All sections combined	28	68	96/559	17.2%

Respondents pursuing a PhD outside EPFL mainly chose the following universities: ETHZ (9), University of Lausanne (4), University of Geneva (4), KU Leuven (3), University of Bern (3), Ecole Normale Supérieure de Paris (2), Ecole Polytechnique de Paris (2), Imperial College London (2), University Paris-Saclay (2), University of Zürich (2), and University of Basel (2)

1.10.2 Main reason for choosing a PhD

When asked "*What was your main reason for starting a PhD?*", doctoral students answered as follows:

	# respondents	
a. I wanted to increase my knowledge in a particular field	29	30%
b. I intend to pursue an academic career	22	23%
c. A PhD will help on the job market	14	15%
d. I want to give myself some extra time before making career choices	4	4%
e. I could not find a job after my Master	-	-
f. The PhD title is important to me	5	5%
g. Reason related to my personal situation (family situation, opportunity to go to / to stay in a particular place, ...)	4	4%
h. No particular reason. It looked like a natural choice	13	14%
TOTAL	95	100%

1 respondent did not answer the question.

While proposed answers were not mutually exclusive, respondents could only pick one answer in order to encourage them to think about the primary motivation for their choice.

27% of PhD students (answers d. to h.) chose this path for reasons unrelated to a well-thought-out career plan. Bearing in mind that answers to this question were probably subject to a social desirability bias³, it is likely that this proportion is even higher.

1.10.3 Usefulness of a PhD for their future career

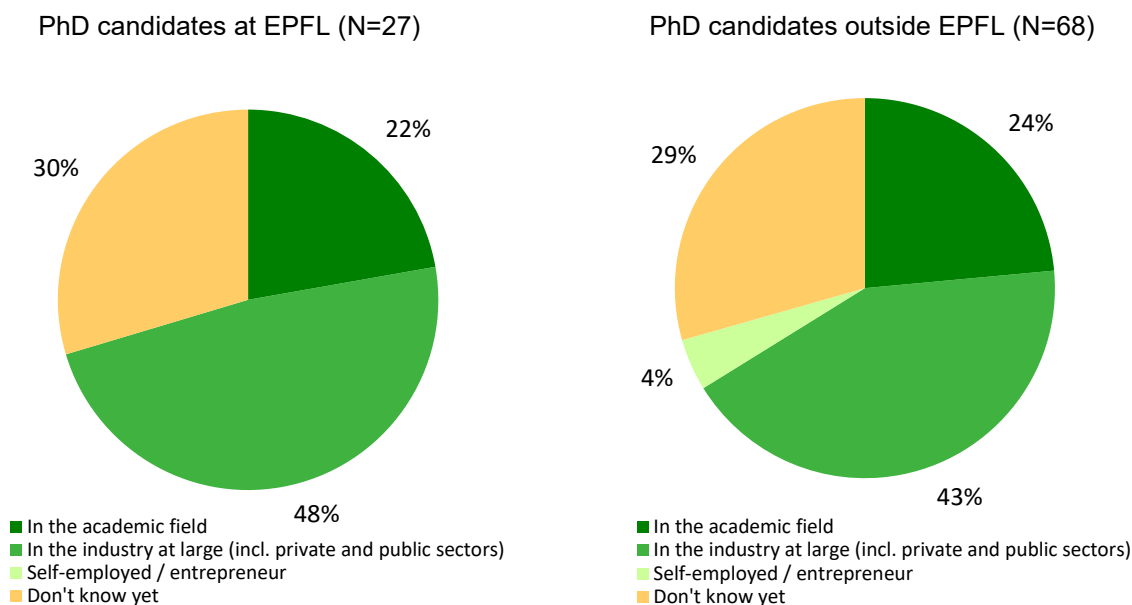
To the question "How useful do you think your PhD will be on the job market?", PhD students responded as follows:

	Total	en % des doctorants
It is a requirement for the kind of career I am considering	36	38%
The skills developed while doing a PhD are very much looked after by employers. This should give me an edge over non-PhDs	23	24%
It can be a plus with some employers, and a minus with others	23	24%
No particular advantage over a Master's degree.	3	3%
I do not know	10	11%
TOTAL	95	100%

1 respondent did not answer the question.

The distribution of responses remained broadly similar to that observed every year since 2011, but we noticed an evolution over time. This year, 62% of respondents considered a doctorate to be "a requirement" or "very much looked after" for their career. While this is less than in 2021, this rate has been gently rising since 2016 (69% in 2021, 62% in 2020, 55% in 2019, 52% in 2018, 53% in 2017, 44% in 2016).

1.10.4 Future professional sector



The majority of respondents already had an idea of their future sector of activity. However, it should be kept in mind that they are only in their first year of doctoral studies, and that their choice is likely to change, as shown by the high undecided rate.

Regardless of respondents studying at EPFL or at another university, there is little change from previous years, although there is traditionally a bit more variability from one year to the next among PhD students outside EPFL.

³ In a survey, the social desirability bias represents the unconscious tendency of some respondents to choose answers that correspond to the most socially acceptable situations, rather than to their own situation.

1.11 Entrepreneurs

Of the 559 Master's respondents, 120 had considered setting up their own business or becoming self-employed. However, 113 declared themselves "not ready yet" while 7 had actually taken steps in that direction but had finally given up. 5 were already self-employed and 3 others were ready to setup their own business within the next six months (which they did). 3 participants did not answer the question.

With only 8 respondents already or soon-to-be self-employed, or 1.4% of all respondents, the self-employment rate was the lowest ever measured among Master's graduates since we started these surveys. Historically, this rate has oscillated between 3.2% and 4.1%, but we already saw a first sharp decrease last year (2.6%).

We asked the 7 graduates who had planned to become self-employed, but then decided against it, to detail the steps they had nevertheless taken, and the reasons why they gave up. We normally publish the answers related to these questions in two tables, but it was deemed too anecdotal to do so for just 7 respondents.

Of these 7 graduates, 5 were employed and one had started a PhD at the time of the survey. The last one was looking for a job.

In the end, as was the case in 2020 and 2021, there were far fewer aspiring entrepreneurs in the class of 2022 than in older classes. By way of comparison, the rate of entrepreneurs among PhD graduates, although up on last year's zero, is also on the low side with regards to past years (see 2.8). With this year's figures, it appears that these recent low rates may not only be linked to the COVID pandemic (as we had considered the possibility last year). It is possible that, after several years of enthusiasm for start-ups, it has fizzled out and the next generation simply might not be there.

2. PhD survey

As their status is specific, we systematically separate self-employed / entrepreneurs from young employed PhDs (except in 2.1.1 and 2.1.2). Self-employed/entrepreneurs are the subject of a specific questionnaire, the answers to which are given in 2.8.

2.1 Professional integration main indicators

2.1.1 Place of establishment by origin	PhDs living in Switzerland	PhDs living outside Switzerland	Inside / Outside Switzerland Class of 2021
Swiss and foreigners with C permit (residents)	19	6	24 / 9
Non-resident foreigners	74	52	63 / 50
Total	61.6% (93)	38.4% (58)	60% / 40%

2.1.2 Activity at time of survey	PhDs living in Switzerland	PhDs living outside Switzerland	PhDs living in Switzerland Class of 2021
Professionally active (employed + entrepreneurs)	93.5% (83 + 4)	86.2% (49+ 1)	94.3%
Job seekers	5.4% (5)	6.9% (4)	4.6%
Not working / not seeking	1.1% (1)	6.9% (4)	1.1%
Total	100% (93)	100% (58)	100%

2.1.3 Salary at the time of survey	PhDs working in Switzerland*	PhDs working outside Switzerland	PhDs working in Switzerland Class of 2021
Private for-profit sector - average salary	CHF 117'450	(not relevant)	CHF 106'172
Private for-profit sector - median salary	CHF 102'500	(not relevant)	CHF 98'840
Public sector and related - average salary	CHF 90'573	(not relevant)	CHF 92'011
Public sector and related - median salary	CHF 90'000	(not relevant)	CHF 88'000

*Includes PhDs employed in Switzerland, whether living in Switzerland or abroad, if any. Does not include graduates working remotely for foreign companies, if any.

Entrepreneurs/self-employed were not asked about their salary

2.1.4 Job search efforts (employed graduates)	PhDs working in Switzerland	PhDs working outside Switzerland	PhDs working in Switzerland Class of 2021
Average number of applications (before landing a job)	20.5	12.3	24.2
Average number of interviews obtained	3.5	3.1	3.8
Average number of jobs obtained	1.6	1.9	1.8
Average time to land a job, in weeks	15.2	15.1	15.6

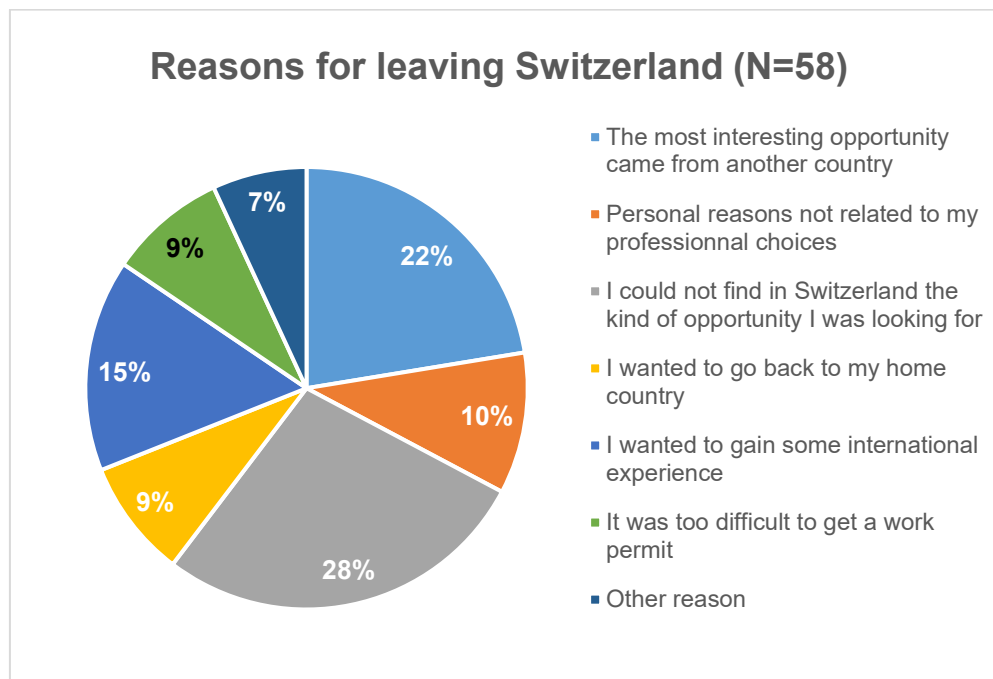
At 38.4%, the share of PhDs from the class of 2022 leaving Switzerland is close to that measured for the class of 2021 (40.4%) and remains stable over time.

The proportion of non-resident PhDs leaving Switzerland after their thesis decreased slightly after last year's highest (41%, compared to 44% in 2021, 33% in 2020, 40% in 2019 and 2018, 41% in 2017, 43% in 2016, 44% in 2015).

Regardless of citizenship, those who moved abroad chose primarily the USA (13 respondents), followed by the United Kingdom (11), Germany and France (6), Italy and Austria (4).

90% of PhDs leaving Switzerland were non-resident foreigners, a rate higher than usual, but not totally out of line (2021: 85%, 2020: 85%, 2019: 91%, 2018 and 2017: 84%).

The reasons why these graduates left Switzerland are as follows (only one possible answer):



The reasons why young PhDs leave the country are similar to those for Master's graduates, the main difference being that the desire to gain international experience is more frequent with PhDs while Master's graduates are more keen to want to go back to their home country.

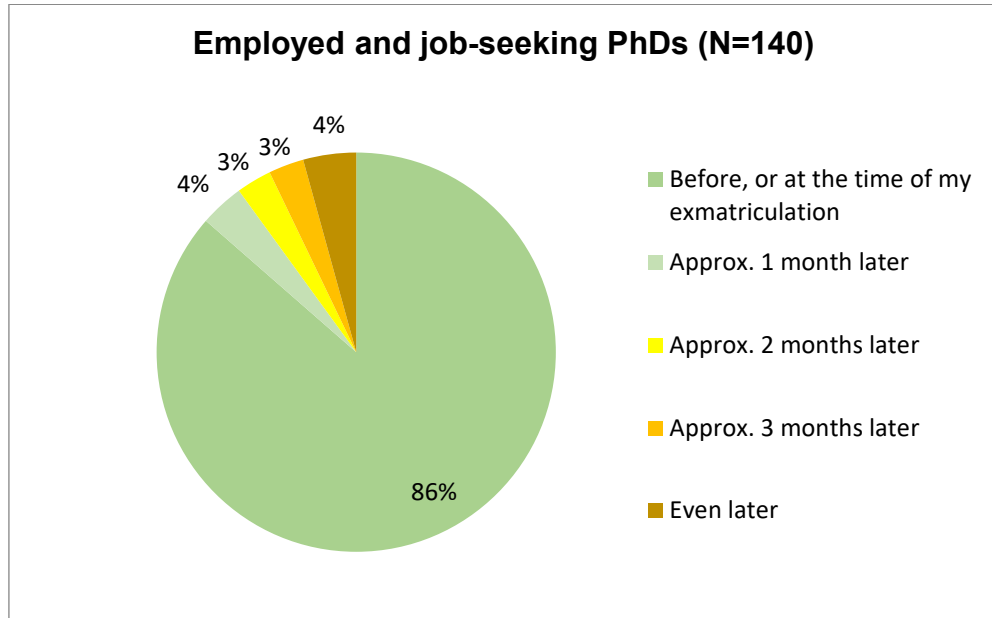
Only 5 respondents (out of 25 third-country nationals who left Switzerland) mentioned the difficulty to get a work permit as a reason for leaving Switzerland. On the other hand, 27 third-country nationals remained in Switzerland, 20 of them in industry (where work permits are considerably harder to obtain than in academia, and, moreover, subject to quotas).

Finally, the conditions of workplace insertion show a significant improvement in salaries in both the Swiss public and private sectors, while job search efforts (number of applications and job search duration) have remained stable. Overall, the workplace insertion conditions remain good in Switzerland, with a net employment rate of 93.5% for EPFL PhDs.

2.2 Job search

Starting period of the search

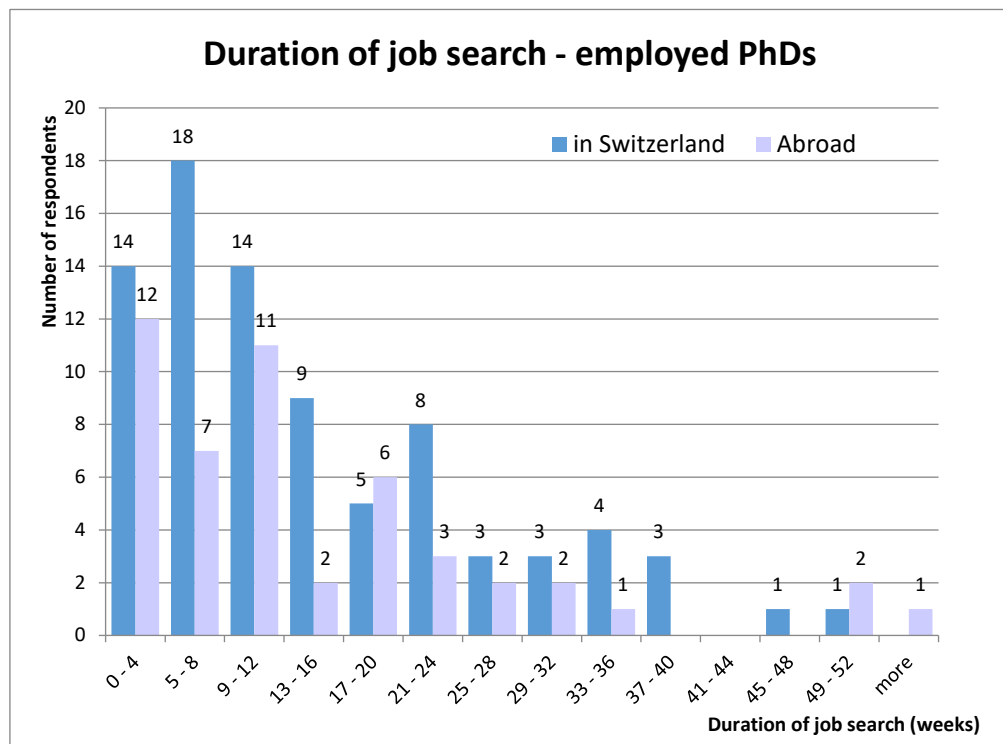
As with Master's graduates, we want to know when our recent PhDs began their job search. The results are as follows (6 respondents did not answer):



The vast majority of recent PhDs started their job search before completing their thesis. This was particularly true for the last 3 classes, the usual rate for previous ones being around 75%.

It seems clear that PhDs are in a greater hurry to join the workplace than Master's graduates (see page 7), which is hardly surprising given the different economic and social constraints they face. What's more, it is common for those destined for an academic career to start looking for their future postdoc several months before the end of their thesis.

- Duration of job search



The average duration of a successful job search in Switzerland was 15.2 weeks (vs. 15.6 in 2021), and the median duration was 12 weeks (the same as in 2021). 55% of young PhDs working in Switzerland found their job within the first 12 weeks, compared with 53% in 2021, 45% in 2020, 67% in 2019, and 62% in 2018 and 2017.

Abroad, the average search time remained stable, with an average job search time of 15.1 weeks (15.4 weeks in 2021), and a median search time of 12 weeks, the same as in the 4 previous years. 54% of young PhDs found work within the first 12 weeks (72% in 2021, 59% in 2020 and 2019).

- Search area (employed graduates)

We repeat below the table already stated above in the Master's survey.

Job search area	Master's working in Switzerland	Master's working outside Switzerland	Master's (all)	PhDs working in Switzerland	PhDs working outside Switzerland	PhDs (all)
French-speaking Switzerland	87.8%	39.7%	78.8% ↗	78.3%	34.7%	62.1% ↘
Rest of Switzerland	49.8%	24.7%	45.3% ↘	72.3%	38.8%	59.8% ↗
One or several European countries	15.3%	75.3%	26.3% ↘	25.3%	77.6%	44.7% ↗
North America	3.1%	23.3%	6.8% →	10.8%	42.9%	22.7% ↘
Other regions	2.1%	23.3%	6.0% →	2.4%	8.2%	4.5% ↘

As multiple answers were possible, the total is greater than 100%. Arrows indicate the variation with regards to the class of 2021 (stable (→) means a variation lower than or equal to +/-2.5 percentage points from the previous year).

We include information on Master's' job search areas for comparison. For comments on Master's figures, see 1.2.

Overall, Switzerland kept its attractiveness for 2022 PhD graduates compared to the class of 2021 with differences in trend between the French-speaking part and the rest of the country.

At first glance, Europe seems to be becoming more attractive every year since 2019. However, of the 59 PhDs who said they looked for work in Europe, just over half (32) ended up working there (the UK being their #1 destination), while 21 stayed in Switzerland. Likewise, of the 30 PhDs who said they looked for work in North America, less than half (13) ended up there, while 9 stayed in Switzerland.

Looking specifically at the 49 respondents working abroad, less than half (22/49, or 45%) also looked for work in Switzerland. This rate is the same as in 2021 and higher than in 2020 and 2019 (35%), but in previous years, the proportion was around 50%.

- Initial step leading to the first job

Initial step leading to the first job	PhDs working in Switzerland (N=83)	PhDs working outside Switzerland (N=49)	PhDs all (N=132)
a. I answered a job advertisement	54.2%	49.0%	52.3%
b. I sent a spontaneous application to my employer	9.6%	22.4%	14.4%
c. I spontaneously sent my CV to a recruitment agency which contacted me	2.4%	2.0%	2.3%
d. I met my employer at Forum EPFL	1.2%	-	0.8%
e. I was offered a position further to a joint project between EPFL and my employer, in which I had participated	1.2%	4.1%	2.3%
f. My employer offered me a job after I did my PhD thesis with them (incl. EPFL)	3.6%	4.1%	3.8%
g. I was recommended to my employer (by a friend, a family member, a colleague, etc.)	16.9%	10.2%	14.4%
h. I was contacted / recontacted without having taken any specific steps towards this particular position	9.6%	4.1%	7.6%
i. Other	1.2%	4.1%	2.3%
Total	100.0%	100.0%	100.0%

As for Master's graduates, the initial steps leading to employment are varied and are distributed in roughly the same proportions from one year to the next. It can be seen that

- In 70% of cases (steps a. to d.), PhDs found a position by actively approaching their employer, with whom they had no prior relationship.
- In 6% of cases (steps e. and f.), EPFL helped establish a link with the employer.
- In 14% of cases (step g.), the initial contact was made through the graduate's network, either inside or outside EPFL.

As observed repeatedly in our surveys, responding to job advertisements is still the best way for young PhDs to land a job, whatever the type of position they will occupy. This is even the case for those intending to become academic researchers (postdocs) who were traditionally more likely to obtain their position through a spontaneous application than by responding to a job advertisement in the past.

2.3 Type of positions held

- Public and private sectors

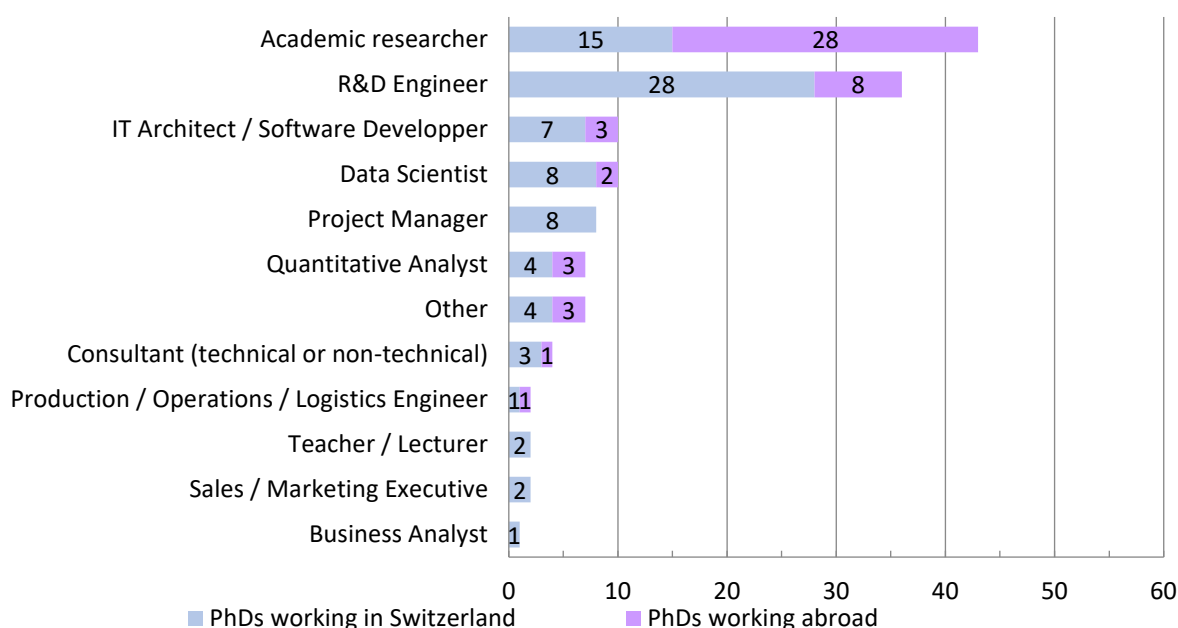
We count private universities operating on a not-for-profit basis, NGOs and other non-profit organizations alongside public sector ones.

Sector	PhDs Working in Switzerland		PhDs Working outside Switzerland		PhDs Working in Switzerland Class of 2021
	Count	Percentage	Count	Percentage	
Private, for-profit sector	59	71.1%	18	36.7%	76.5%
Public, non-profit and related	24	28.9%	31	63.3%	23.5%
All	83	100.0%	49	100%	100.0%

In Switzerland, the private sector still accounted for the majority of PhD graduates from one year to the next, albeit in a smaller proportion than that of Master's graduates.

Abroad, the public/private distribution has remained largely in favor of the public sector since 2011, as a direct consequence of the choice of many PhDs to pursue an academic career abroad (27 of the 31 young PhDs working in the public sector abroad are academic researchers in a university or a research center).

- Position held



15 PhDs in Switzerland and 28 abroad worked as academic researchers (“postdocs”) in universities, research centers (CERN, Max-Planck, CNRS, etc.) and public or private research institutions, representing only 32% of all employed respondents in the class of 2022, a relatively low rate compared to those measured previously (33% in 2021, 39% in 2020, 38% in 2019 and 2018, 34% in 2017, 38% in 2016, 44% in 2015, 43% in 2014). The drop in this rate in the last two years compared with previous years is mainly due to a decline in the number of PhD graduates who became academic researchers in Switzerland.

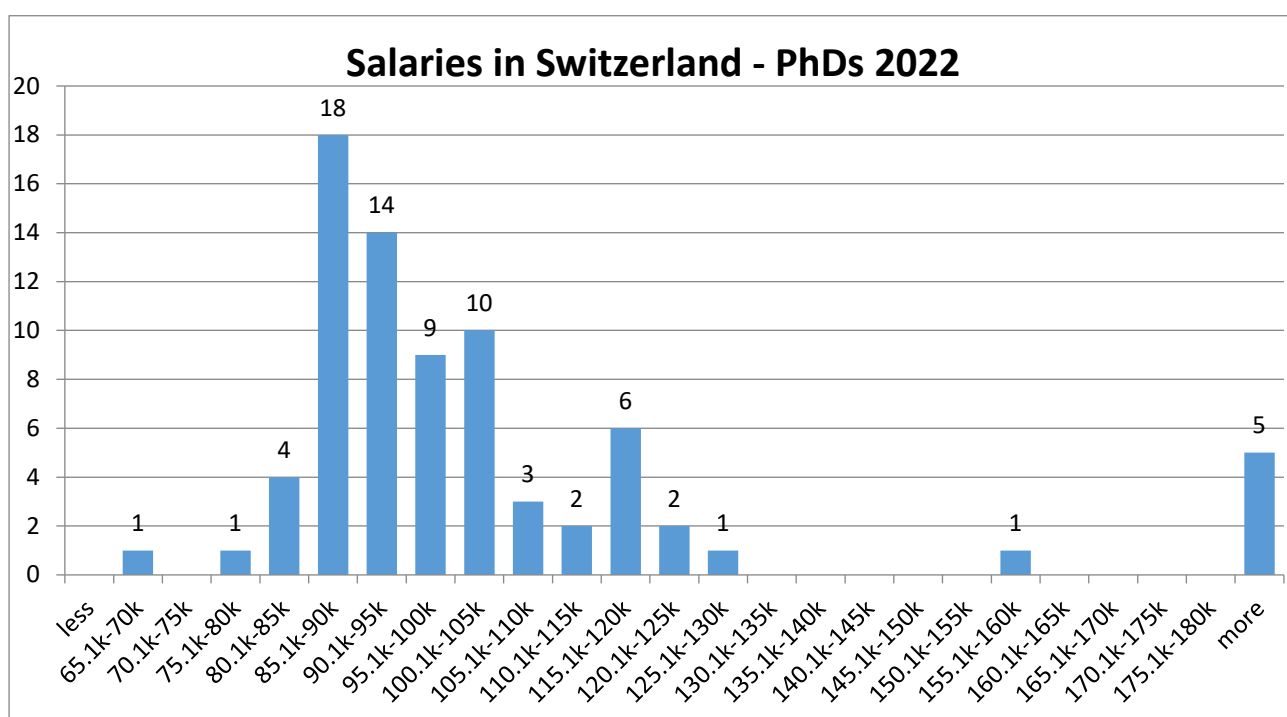
- Employer size

Employer size	PhDs Working in Switzerland		PhDs Working outside Switzerland		PhDs Working in Switzerland Class of 2021
< 250 employees	27	32.5%	6	12.2%	39.5%
> 250 employees	56	67.5%	43	87.8%	60.5%
All	83	100.0%	49	100.0%	39.5%

2 graduates did not answer the question

While in Switzerland, the distribution between large and small employers is similar to that observed for Master's graduates, it remains heavily skewed in favor of large employers abroad, mostly because many PhDs based abroad work in universities.

2.4 Salaries



Average salaries at time of survey	PhDs Working in Switzerland	Standard deviation	PhDs Working in Switzerland Class of 2021	Standard deviation Class of 2021
Private, for-profit sector	CHF 117'450 (55)	-	CHF 106'172 (59)	-
Public sector and related	CHF 90'573 (22)	-	CHF 92'011 (16)	-
Combined	CHF 109'771 (77)	CHF 29'315	CHF 103'151 (75)	CHF 29'315

In brackets, the number of PhDs who responded. 6 respondents did not indicate their salary.

The average salary increased after a 2-year stagnation in the private sector while decreasing slightly in the public sector. The latter has remained virtually unchanged over the past 13 years.

As with Master's graduates, there were salary differences according to company size and origin, but also according to the gender of the respondents.

- By employer size:

	< 250 employees	> 250 employees	Combined
Average salaries at time of survey	CHF 105'670 (26)	CHF 111'861 (51)	CHF 109'771 (77)

In brackets, the number of PhDs who responded. 6 respondents did not disclose their salary.

- By employer's origin

	Headquartered in Switzerland	Headquartered abroad	Combined
Average salaries at time of survey	CHF 96'965 (62)	CHF 162'702 (15)	CHF 109'771 (77)

In brackets, the number of PhDs who responded. 6 respondents did not disclose their salary.

The large gap already observed between salaries paid by foreign employers (traditionally more generous) and Swiss employers literally exploded in 2022 compared to the class of 2021. The size of this gap depends traditionally on the proportion of graduates working in the public sector (mainly universities) or in small companies, which pull down the average. However, this year the salary gap between large private Swiss and foreign companies dramatically widened (CHF 100,480 vs. CHF 162'702), influenced by the high salaries paid by foreign IT multinationals (4 of the 5 highest salaries in the chart on page 27 are paid by such companies).

- By gender

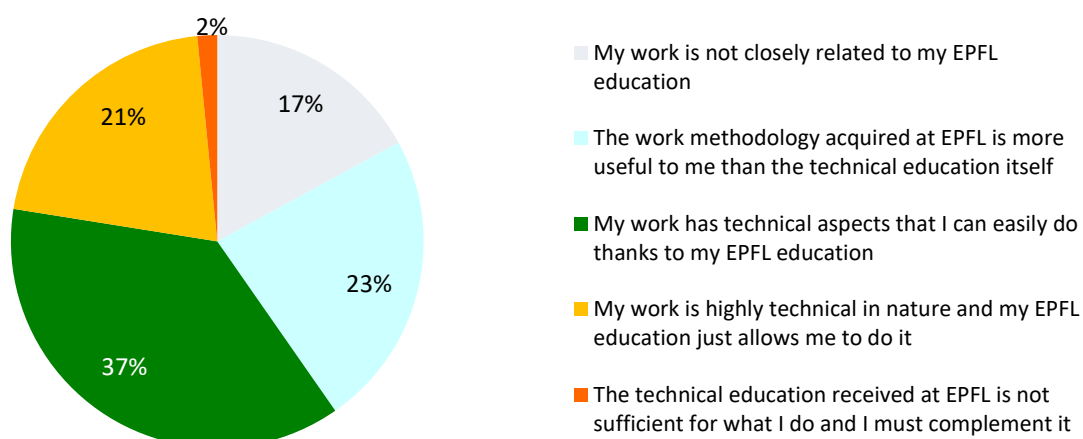
	Women	Men	Combined
Average salaries at time of survey	CHF 97'724 (23)	CHF 114'902 (54)	CHF 109'771 (77)

In brackets, the number of PhDs who responded. 6 respondents did not disclose their salary.

The gap in average salaries between men and women (-15.0%) was considerably wider than the gap measured between Master's graduates (-4.0%). The explanation for this difference lies in the fact that men are largely over-represented in the highest salaries paid by the IT multinationals mentioned above. It should also be noted that the gap for PhDs is quite variable from one year to the next, due to the low number of female responses: since 2008, it has fluctuated between 0 and -15%. When comparing median salaries, which are much less affected by this over-representation, the gap between men and women is down to -2.9% (women: CHF 93'600, men: CHF 96'390)

2.5 Skills acquired at EPFL in relation to the position

These results include PhDs working in Switzerland and abroad (N=129).



3 employed respondents did not answer this question

The distribution of responses is roughly similar to that of previous years, with nevertheless a higher-than-usual proportion claiming that their work "is not closely related" to their EPFL education (ranging between 2% and 10% in recent years). Curiously, 8 of these 22 respondents are doing a university postdoc, where their PhD education should matter, so there are doubts to whether they understood this question correctly.

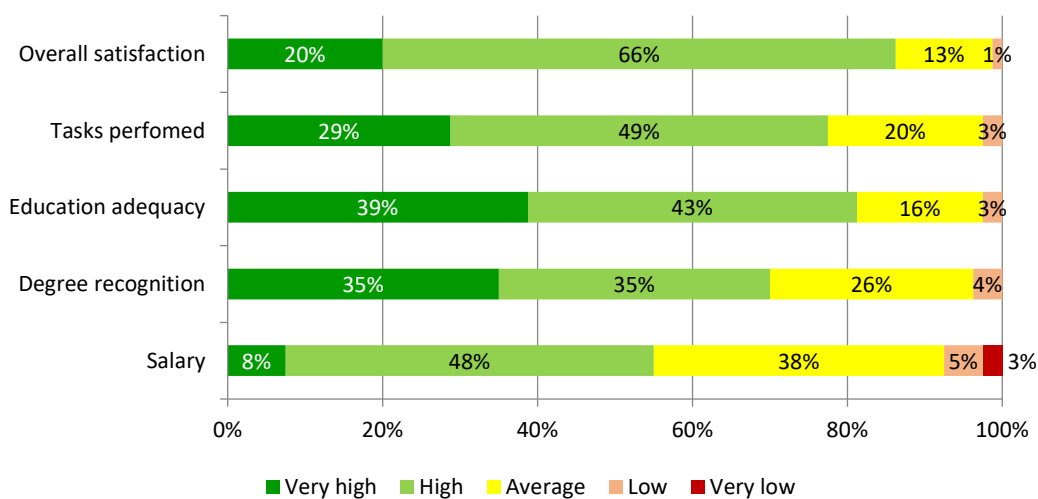
The proportion of respondents who felt that the technical training they received at EPFL "just allows them" or "is not sufficient" to perform their role is decreasing (24%) with regards to the previous 8 years (29% for the class of 2021, 28% in 2020, 26% in 2019, 25% in 2018, 28% in 2017, 30% in 2016, 32% in 2015, 28% in 2014, 33% in 2013), but this could be an indirect consequence of the anomaly mentioned above (i.e. fewer respondents selecting one of these responses because they picked "not closely related" instead).

2.6 Job satisfaction

We asked PhD graduates how satisfied they were with their work at the time of the survey, according to 5 criteria:

- **Overall** satisfaction
- Interest in the **tasks** performed
- **Adequacy** of their EPFL education with the job requirements
- EPFL degree **recognition**
- Satisfaction with the **salary**

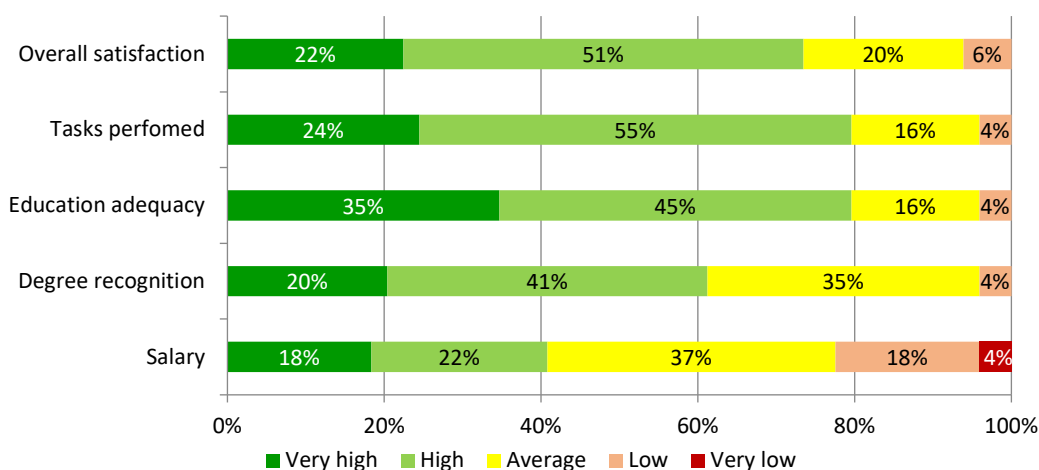
PhDs working in Switzerland (N=80):



i	satisfaction	σ
4.05	High	0.61
4.04	High	0.77
4.18	High	0.79
4.01	High	0.88
3.53	Average to High	0.81

The following values were used to calculate the satisfaction index i: "Very low"=1, "Low"=2, "Average"=3, "High"=4 and "Very high"=5.

PhDs working outside Switzerland (N=49):



i	satisfaction	σ
3.90	High	0.82
4.00	High	0.76
4.10	High	0.82
3.78	High	0.82
3.33	Average to high	1.11

The following values were used to calculate the satisfaction index i: "Very low"=1, "Low"=2, "Average"=3, "High"=4 and "Very high"=5.

Generally speaking, the satisfaction ratings of young PhDs working in Switzerland improved compared to those of 2021. Satisfaction ratings for PhDs working abroad have stabilized after rising steadily since 2012, and were comparable to, or even better than those of PhDs working in Switzerland (salaries aside). They are also consistently higher than those of young Master's graduates working abroad.

2.7 Graduates seeking employment

9 PhDs out of 151 were looking for work at the time of the survey. 5 were based in Switzerland and 4 abroad (these 4 in their home country).

- 5 of them had already had a first professional activity, which had ended at the time of the survey. This was therefore their second search. They had been looking for 23 weeks in average.
- 2 other ones had already landed and turned down at least one job since they started searching.
- Another one was in a more problematic situation: at the time of the survey, he claimed he had been looking for work for 48 weeks (but only had submitted 49 applications in that time).
- The last one did not give any further information

As of this writing, 7 of them have found a job and one is self-employed. We were not able to track the last one.

2.8 Entrepreneurs

Of the 151 respondents, 41 had considered setting up their own business or becoming self-employed. 32 had merely considered it but declared themselves "not ready yet". 4 had taken the first steps, but had finally given up. In the end, 5 of them said they had become an entrepreneur/self-employed or were in the process of becoming one in the next 6 months (for the record, none did in 2021).

With 5 declared self-employed, or 3.3%, the self-employment rate is lower than those measured in 2020 and before (it usually oscillates between 4.5 and 6.0% among young doctors). By way of comparison, the rate of entrepreneurs among Master's graduates is also on the low side with regards to past years (see 1.11). With this year's figures, it appears that these recent low rates may not only be linked to the COVID pandemic (as we had considered the possibility last year). It is possible that, after several years of enthusiasm for start-ups, it has fizzled out and the next generation simply might not be interested in starting their own business.

As for the 4 graduates who gave up, 2 said they found a more interesting career alternative, one gave up because their business model was deemed unviable and the risks too high, and the last one said he was discouraged by the difficulty to obtain a work permit for self-employment as a foreigner.

2.9 Summary of main indicators by Doctoral School

Due to the very small size of the sub-groups concerned and the low response rate, we have decided, as in previous years, not to publish a summary table of indicators by Doctoral School for the class of 2022.