

WOMEN
PROFESSORS
MONITOR
2022



A publication of the
Dutch Network of Women Professors

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ABOUT THE MONITOR

This is the 2022 Women Professors Monitor. In a fixed number of annually recurring chapters, this Monitor provides insight into the current male-female distribution in science in the Netherlands and the percentages of women scientists and administrators at Dutch universities, university medical centres and other scientific organisations.

In the previous Monitor we reflected on the fact that for the first time in the history of academia in the Netherlands the percentage of women full professors had passed the 25% mark. The percentage of women associate professors also passed the 30% mark for the first time. We celebrated these milestones. In this Monitor, however, we have replaced the milestone icon 🏆 with that of an alarm bell 🚨.

While there has certainly been progress – the share of women associate professors has increased significantly and there is an increase in the share of women in academic management – there is stagnation – and even decrease - to be seen in the growth of the proportion of women in a number of areas. Increasingly, people are inclined to observe 'that we've reached our goals as far as women in academia is concerned'. The figures show that this is not the case. The vigilance LNVH calls for every year remains necessary, especially in view of the lingering pandemic and important developments in academia such as a broader vision on diversity and inclusion and the implementation of Recognition & Rewards.

In this Monitor, LNVH also takes a deeper look into the way we view the composition and the in-, through- and outflow of academic staff. Therefore, a new element of this Monitor is the section about the composition of academic staff with respect to origin. This allows us to give details of the gender distribution amongst academic staff with an international background. Relevant information is provided that can help to focus policy in the domain of gender equality.

Another new element in this Monitor is the inclusion of data regarding the UNL WOPI variable 'Gender', and more specifically the value 'Other'. Although this term is objectionable in many respects, it does allow us to abandon the customary binary registration and presentation of data. Read more about this in this Monitor.

We invite you all to read the Monitor and to make others aware of it. Open discussions about the current situation, about what can be done better and about what everyone's role – be it small or big – could be in terms of creating equal opportunities, equal representation and a safe and inclusive academic culture in which equal pay is the norm.

We would like to take this opportunity to thank everyone – scientists, directors, policy makers, support staff, Diversity Officers, ambassadors or otherwise – who is engaged in talent retention and gender equality in academia, or who, after reading this publication, feels compelled to become engaged. We would also like to express our gratitude to SoFoKles, a social fund for the knowledge sector, without whose financial contribution this Monitor could not have been realised.

Dutch Network of Women Professors

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— 1 —

THE DISTRIBUTION OF MEN AND **WOMEN** SCIENTISTS IN THE NETHERLANDS

LOWER THAN AVERAGE GROWTH PERCENTAGE

At the end of 2021, on average, 26.7% of full professors at Dutch universities were women. This represents an increase of 1.0 percentage point compared to the end of 2020, when the average percentage was 25.7%. This means that the percentage of women full professors has continued to grow, and that we are again gradually approaching critical mass¹ (30%). The increase in the proportion of women full professors is below average. At 1.0 percentage point, it is the lowest it has been in five years 🚨.

Figure 1.1 shows the development in growth percentages in the past five years. It shows that between the end of 2017 and the end of 2021 the average growth was 1.5 percentage points per year. The current growth percentage of 1.0 percentage point is considerably lower than that.

The effect the Westerdijk Talent Impulse² had on the growth of the percentage of women full professors is clear from the above-average growth from the end of 2017 to the end of 2018.

The percentage of women full professors concerns regular full professors and professors holding a personal chair with paid employment contracts. At the end of 2021, there were 573 individual professors occupying endowed chairs at the universities in the Netherlands. Of these professors, 171 (29.8%) were women³. This is an increase of 3.7 percentage points compared to the previous Monitor.

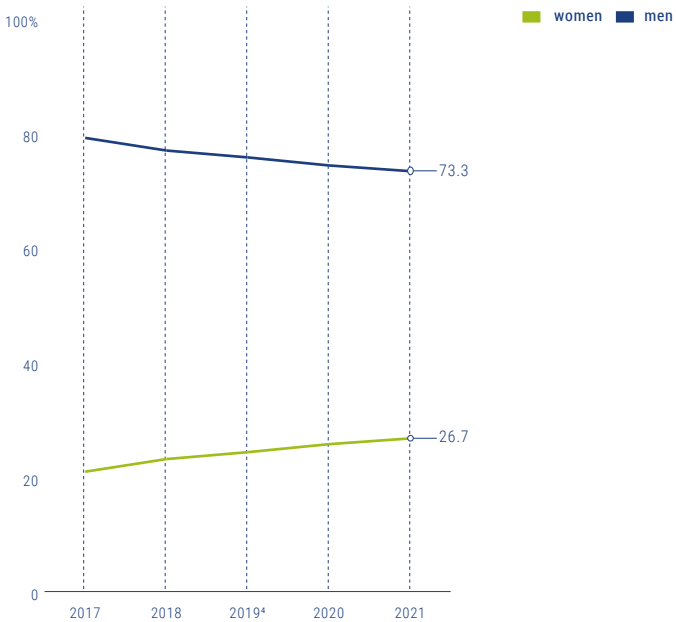
1. Within this context, 'critical mass' refers to a sufficient number of actors adopting a new idea, technology or innovation within a social system, such that the acceptance rate can maintain itself and, in the case of unequal representation, it will no longer lead to the isolation of the under-represented group.

2. See Chapter 2, p. 57 for further information about the Westerdijk Talent Impulse and its effects on the gender distribution in various job categories.

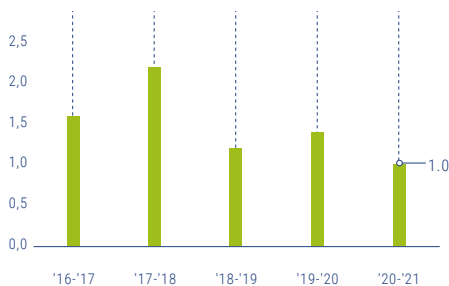
3. This refers to data from 13 of the 14 universities. Since 2017, Utrecht University has not provided the UNL with data on full professors occupying endowed chairs.

FIGURE 1.1

Proportional distribution of full professors by gender, and percentage of growth in percentage points relative to the previous year in the share of women full professors, end of 2017 through end of 2021, in FTE.



Growth in percentage points relative to the previous year



Source: UNL, WOPI⁶, reference date 31 December, in FTE. Excluding scientific field Healthcare.

4. At the end of 2021, the Open University corrected the WOPI data regarding full professors, associate professors, assistant professors and PhD candidates for the end of 2019 and the end of 2020. This correction has been processed in the data on which the 2022 Monitor is based. The correction by the Open University resulted in an increase in the percentage of women full professors at the end of 2019 from 24.2% to 24.3%.

5. UNL is short for Universities of the Netherlands (formerly VSNU). WOPI is the Dutch abbreviation of Scientific Education Personnel Information. See Appendix 1 for comprehensive information.

FULL PROFESSORS IN FTE

The total size of the population of full professors increased from 3,007.9 FTE at the end of 2020 to 3,060.3 FTE at the end of 2021. Of the total 3,060.3 FTE, 816.1 were filled by women, and 2,243.2 were filled by men. The total population increased by 52.4 FTE within the space of one year, of which 43.0 was for women and 8.5 for men. There was an increase of 1.0 FTE in the category 'Other'⁶. This means that 82% of the total increase went to women.

FULL PROFESSORS IN NUMBER OF PEOPLE

At the end of 2021, there were 3,578 full professors working at Dutch universities. This included 928 women, 2,649 men and 1 person belonged to the category 'Other'. In number of people, this puts the percentage of women full professors at 25.9%. This represents an increase of 0.9 percentage points compared to the end of 2020. From the end of 2020 to the end of 2021, on balance the population of full professors increased by 23 persons⁷. While the number of women increased by 39 and the category 'Other' increased by 1, the number of men declined by 17.

PROPORTION OF WOMEN BY SUCCESSIVE JOB CATEGORY

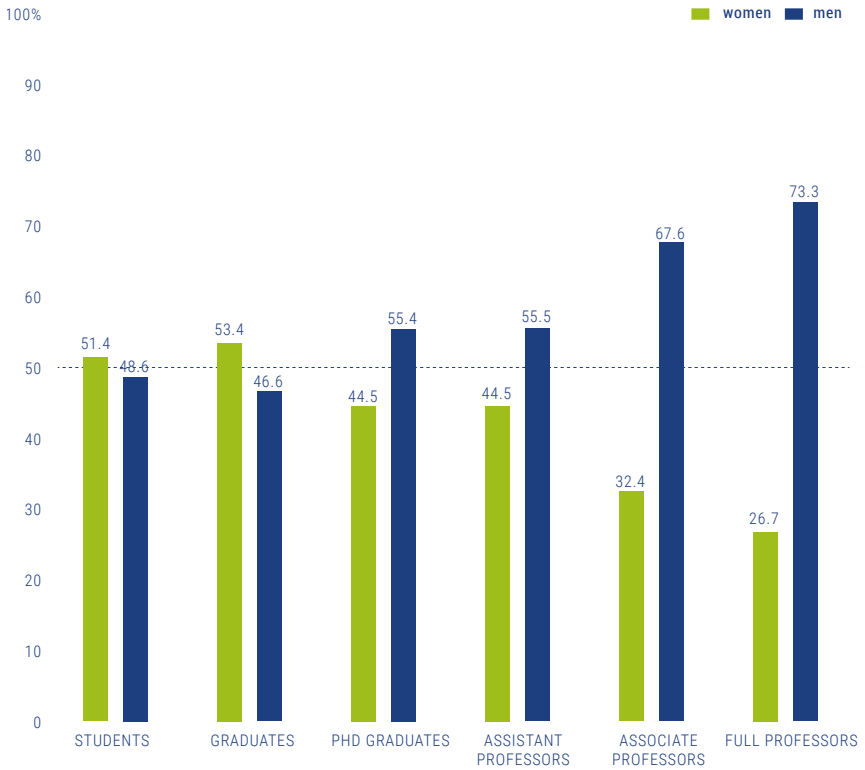
While the proportion of women students (51.4%) at the end of 2021 increased, the proportion of women graduates (53.4%) declined very slightly. This percentage is still higher than for men. The decline in the share of women in the job category of PhD graduate to 44.5% is striking 📉. For each successive job category, the share of women declined further, from 44.5% of assistant professors to 32.4% of associate professors and 26.7% of full professors.

6. Given the sector-wide presentation and slightly greater availability of data, the UNL WOPI category 'Other' is also included here. Due to possible traceability this was not done elsewhere in this Monitor. See Appendix 1 for further explanation regarding this category.

7. The total refers to the sum of incoming, advancing and out-going full professors.

FIGURE 1.2

Percentage of women and men from student to full professor, in FTE and in number of people, end of 2021.



Source of information on students and graduates: 1cHO2021, October 2021, in number of people. Excluding scientific field Healthcare.

Source of information on staff: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

INSIGHT INTO THE DEVELOPMENTS FOR EACH JOB CATEGORY

Developments in the percentages of women in the job categories of full professor, associate professor, assistant professor and PhD graduate are presented in Figure 1.3 for the period end of 2017 - end of 2021.

The proportion of women full professors increased from 20.9% at the end of 2017 to 26.7% at the end of 2021. As mentioned before, striking growth (2.2 percentage points) was observed in the year 2017/2018 due to the Westerdijk Talent Impulse. In the following year, however, we observed low average growth (1.2 percentage points). In 2019/2020, growth once again increased to 1.5 percentage points. The average increase in the percentage of women full professors has been 1.5 percentage points for the past five years. The increase in the percentage of women full professors from the end of 2020 to the end of 2021 is 1.0 percentage point, which is the lowest in five years 📉.

For women associate professors, on the other hand, there was above average growth in the same period, from 30.4% to 32.4%. The percentage of women associate professors thus remains well above the threshold of 30%. In 2017/2018 there was a decrease (-0.2 percentage points) in the share of women associate professors, which was due to the Westerdijk Talent Impulse. This incentive programme resulted in the appointment of an additional 100 women full professors in one year, consequently thinning the pool of women associate professors. Growth recovered in the years that followed.

For assistant professors, the percentage of women increased by a mere 0.9 percentage points from 43.5% to 44.5% in the 2021/2022 period 📈. In the 2019/2020 period the growth percentage was 1.6 percentage points.

After a number of years in which the percentage of women PhD graduates decreased, the period from the end of 2017 to the end of 2020 saw these percentages grow (albeit slightly) and ultimately recover. During the period from the end of 2020 to the end of 2021, this growth seems to have stagnated. At the end of 2021 the percentage of women PhD graduates was 44.5%, which is equal to the percentage of women assistant professors.

FIGURE 1.3.1

Proportional distribution of full professors and associate professors by gender and growth in the percentage of women full professors and associate professors, end of 2017 through end of 2021, in FTE.



Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

■ women ■ men

FIGURE 1.3.2

Proportional distribution of assistant professors and PhD graduates by gender and growth in the percentage of assistant professors and PhD graduates, end of 2017 through end of 2021, in FTE.



Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

8. Data presented in the Monitor are rounded down to the first decimal. This might lead to totals occasionally not seeming to tally. The unrounded totals do tally, however.

GLASS CEILING INDEX FOR MEN AND WOMEN

Since the publication of the first Monitor, we have included a section on the Glass Ceiling Index (GCI). See the text box for further explanation regarding this index.

With reference to GCIs at the end of 2021, at the sector level, the GCIs for transition to all next job levels remained unchanged for both men and women at sector level.

The GCI for the transition from assistant professor to associate professor and that from associate professor to full professor remains consistently above 1.0 for women and under 1.0 for men. This implies that the step from assistant professor to associate professor and from association professor to full professor is accompanied by more obstacles for women than for men.

The GCI for the transition from PhD graduate to assistant professor is 1.0 – a neutral GCI, in other words – for both men and women.

In this chapter we address the GCIs at the sector level; we notice that these have remained unchanged compared with the previous Monitor. Addressing the GCIs per university, however, results in a more diverse picture. Please refer to Chapter 2 in this regard.

The Glass Ceiling Index

The Glass Ceiling Index (GCI) is an indicator of the advancement, or lack thereof, of women to higher job categories. The GCI will be greater than 1.0 when there is less representation of women at the higher level, compared to the level below. If the proportion of women is the same in two consecutive job categories, the GCI is equal to 1.0. This is referred to as a neutral GCI.

GCI >1.0: impeded transition

GCI = 1.0: normal transition

GCI <1.0: easy transition

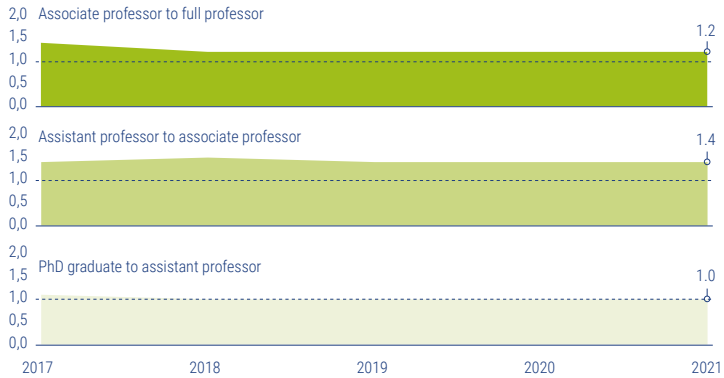
The GCI is calculated by dividing the percentage of women in Job Category x-1 by the percentage of women in Job Category x.

The GCI does not provide information about actual transitions, and it is not the same as the probability of transition. The GCI was developed by research agency SEOR in 2002 on behalf of the Ministry of Social Affairs and Employment, as part of the development of a benchmark for identifying the position of women in senior and management positions.

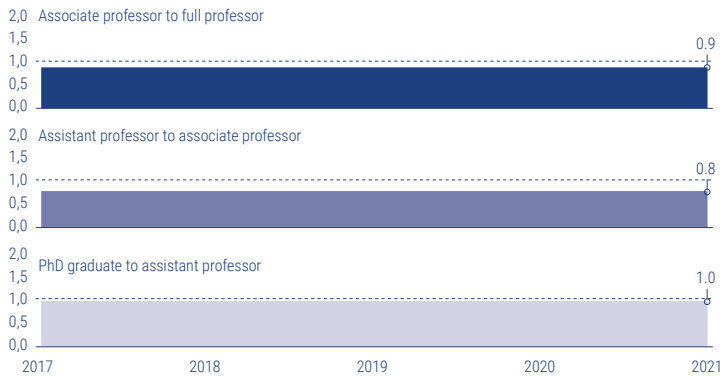
FIGURE 1.4

Glass Ceiling Index (GCI) women and men by job transition, in FTE, end of 2017 to end of 2021.

GCI for women



GCI for men



Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

AVERAGE CONTRACT SIZE INCREASES SLIGHTLY. CONTRACT SIZE FOR MEN SCIENTISTS IS SLIGHTLY LARGER, ON AVERAGE, EXCEPT FOR FULL PROFESSORS

To determine the contract size, we divide the number of FTE within a job category with the number of people in this job category. This shows that for full professors, associate professors and assistant professors, the contract size has increased slightly for both women and men between the end of 2020 and the end of 2021. The difference between contract size for women and men remained the same, however. For PhD graduates the average contract size for women and men remained the same as that reported in the previous Monitor.

This year the contract size for women was still slightly smaller than for men, except for full professors. Among women full professors, contract size was slightly larger than among men full professors.

TABLE 1.1

Average contract size by job category and gender, end of 2021 and end of 2020.

	2021		2020	
	W	M	W	M
FULL PROFESSOR	0.88	0.85	0.87	0.84
ASSOCIATE PROFESSOR	0.89	0.92	0.88	0.91
ASSISTANT PROFESSOR	0.90	0.92	0.89	0.91
PHD GRADUATE	0.96	0.98	0.96	0.98

Source: UNL, WOPI, reference date 31 December, in FTE and number of people. Excluding scientific field Healthcare.

WOMEN SCIENTISTS STILL MORE LIKELY TO HAVE TEMPORARY CONTRACTS

The 2021 Monitor was the first to include data on the ratio of men to women in permanent and temporary employment contracts. Table 1.2 shows that women assistant professors, associate professors and full professors are still somewhat more likely to have temporary contracts than men 📍.

The difference between the percentage of permanent contracts is largest for assistant professors: at 67.2% for women assistant professors and 71.6% for men assistant professors, the difference is 4.4 percentage points.

The percentage of permanent contracts among assistant professors at the end of 2021 was smaller than it was at the end of 2020 for women as well as for men. The reduction for women was from 68.3% to 67.2% while for men it was from 73.2% to 71.6%.

TABLE 1.2

Proportional distribution of permanent and temporary employment contract by job category and gender, in FTE, end of 2021.

	W		M	
	Permanent	Temporary	Permanent	Temporary
FULL PROFESSOR	95.0	5.0	96.8	3.2
ASSOCIATE PROFESSOR	95.8	4.2	96.6	3.4
ASSISTANT PROFESSOR	67.2	32.8	71.6	28.4

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

The Monitor mainly focuses on the categories of PhD graduates, assistant professors, associate professors and full professors. We would also like to provide more insight into the category of post-doctoral researchers as, in many respects, this is a vulnerable group of researchers. Unfortunately the UNL⁹ WOPI data collection provides no information on this subject. This is because the category of post-doctoral researchers as such is not included in WOPI. They are included in the umbrella category of 'researchers' and cannot be selected from this category as a group. This makes it impossible for us to distil and present complete and unambiguous data about postdocs from the WOPI data. This Monitor does, however, include the available data in respect of the gender distribution and distribution of permanent and temporary contracts within the adjacent categories of 'lecturer' and 'researcher', which paints an interesting picture.

For lecturers, the percentage of temporary contracts is higher than that of permanent contracts. At the end of 2021, 66.3% of women lecturers had a temporary contract, as opposed to 55.6% of men lecturers.

Among researchers, the percentage of temporary contracts is even higher and by quite a bit. The percentage of permanent contracts at the end of 2021 was only 8.2% for women 🍌 and 10.7% for men.

9. UNL = Universities of the Netherlands (formerly VSNU)

TABLE 1.3

Proportional distribution of lecturers and researchers by employment contract and gender, end of 2020 and end of 2021, in FTE.

	Lecturers		Researchers	
	W	M	W	M
2020				
Temporary	62.8	52.7	92.2	88.5
Permanent	37.2	47.3	7.8	11.5
2021				
Temporary	66.3	55.6	91.8	89.3
Permanent	33.7	44.4	8.2	10.7

Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

In addition to what is mentioned above, for a number of years now there has not been sufficiently detailed information from a number of universities to allow us to get a good idea of postdocs as a category. In the past, UNL equated the category of postdoc with the group of 'researchers 3, 4 with temporary contracts'. From our enquiries to UNL, and using this approach, we have learnt that approximately 95% of the category of 'researcher with a temporary contract' are postdocs. With reference to the data available to the Monitor, the best approach therefore seems to be to consider only those researchers who have temporary contracts. In that case, about the same image emerges as for the total population of researchers: here too the percentage of women is smaller than the percentage of men, i.e. 40.5% vs. 59.4%. Moreover, we see that the percentage of women in the group of researchers with a temporary contract slightly increased between the end of 2020 and the end of 2021, and that of men has slightly decreased.

TABLE 1.4

Distribution of women and men among researchers with a temporary contract, end of 2017 through end of 2021, in FTE.

	2017	2018	2019	2020	2021
Women	39.9	39.7	38.8	39.6	40.5
Men	60.1	60.3	61.2	60.4	59.4

Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

DIFFERENCE BETWEEN MEN AND WOMEN IN SALARY SCALE CLASSIFICATION HAS INCREASED

As can be seen from Figure 1.5 on the next page, the salary classification of women full professors at the end of 2021 is still lower than that of men full professors. The difference in salary scale classification between women and men full professors has even increased when compared with the previous Monitor 📌.

It is still the case that a greater proportion of men than women full professors are in the highest scale category. For women, the percentage in the highest scale category decreased by 2.1 percentage points between the end of 2020 and the end of 2021.

In the lowest scale category, 15-16, the number of women full professors in terms of FTE increased by 48.9 and in the highest scale category fell by 7.9.

For men, the number of FTE in the lowest scale category increased by 26.6 and in the highest scale category the number fell by 14.4.

FIGURE 1.5

Percentage of women and men scientists by salary group, in FTE, end of 2021.



Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

■ women ■ men

For associate professors, it can be observed that the difference in distribution across scale categories between men and women is minimal. While in FTE there are more men than women associate professors in the highest scale category, 15-16, (i.e. 11.2 as opposed to 8.6 FTE), the percentage of women associate professors in this scale category is still somewhat higher than for men, i.e. 1.0% as opposed to 0.6%.

At the end of 2021, the distribution across salary scale categories for women and men assistant professors was approximately equal and approximately the same as the distribution at the end of 2020.

For PhD graduates, for both women and men a slightly higher percentage was allocated to salary scale category 10-12 at the end of 2021 compared to the end of 2020. Still a larger part of women PhD graduates are allocated to the lower salary scale group 6-9 than men PhD graduates.

LNVH would like to be able to further zoom into the differences in allocation to salary scales, but unfortunately this is not possible as we do not have access to more detailed data than mere allocation to a certain salary scale category.

NOTICEABLE INCREASE IN NUMBER OF WOMEN ASSOCIATE PROFESSORS. WOMEN FULL PROFESSORS AND ASSOCIATE PROFESSORS ARE YOUNGER, ON AVERAGE, THAN THEIR MEN COLLEAGUES

The number of men associate professors increased by the end of 2021 by 90 persons (88 FTE). The number of women associate professors increased by 122 persons (118.2 FTE). The increase in associate professors of 213 persons in total¹⁰ (206.7 FTE) is a conspicuously large one. Figure 1.6 and Table 1.5 give more background regarding the gender distribution within this increase.

FIGURE 1.6

Increase in FTE by position and gender from end of 2020 through end of 2021.



Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

10. Observant readers will have noticed that 90 and 122 equals 212. Additionally, there is an increase of 1 person in the category 'Other', which brings the total to 213. Given these very limited numbers, this category has not been included in the figure.

As is evident from Table 1.5, women full professors are still younger than men full professors on average.

If we consider the distribution of women associate professors for all age categories, there was an increase for women across all age categories. The category of 65 years of age and older forms an exception; this shows a decrease of 10 persons.

For men, we also see an increase in almost all age categories except for the category of 50-55, where there is a decrease of 21 persons. For men associate professors the category of 65 years of age and older is growing, while for women associate professors this category is shrinking.

As shown in Table 1.5, there is a considerable pool of young women who could potentially replace the outgoing group of full professors now and in the future.

In Chapter 2 we consider the developments in the percentage of women associate professors within the various universities in more depth.

TABLE 1.5

Number of full professors and associate professors by age category and gender, end of 2020 and end of 2021, in number of people.

	2021		2020		2021		2020	
	<i>Full Professor</i>				<i>Associate Professor</i>			
	<i>W</i>	<i>M</i>	<i>W</i>	<i>M</i>	<i>W</i>	<i>M</i>	<i>W</i>	<i>M</i>
30-34		2		2	14	35	12	27
35-39	30	40	25	45	156	247	137	226
40-44	122	216	129	222	288	487	253	432
45-49	190	380	190	387	237	339	201	336
50-54	246	539	225	541	123	271	103	292
55-59	174	646	166	629	113	293	98	285
60-64	131	608	122	634	60	270	55	267
>=65	35	218	32	206	12	88	22	75
Total	928	2,649	889	2,666	1,003	2,030	881	1,940

Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

ENORMOUS INCREASE IN REPLACEMENT POTENTIAL

To determine the total replacement potential for associate professors, we focus on the age category up to 60 years: the 'pool'. Without distinguishing between scientific fields, more than 90% of the departing full professors can be replaced by women associate professors. The huge increase in the number of women associate professors means that the replacement potential has increased in the course of one year by as much as 13 percentage points, from 80.9% to 93.9%.

TABLE 1.6

Potential of women associate professors who could replace full professors aged 60 and over.

Full professors >= 60		Total full professors >=60	Associate professors up to 60 years of age		Percentage of the total outflow that could be replaced by women associate professors
women	men		women	men	
166	826	992	931	1,672	93.9

Source: UNL, WOPI, end of 2021, in number of people. Excluding scientific field Healthcare.

PERCENTAGES OF WOMEN FULL PROFESSORS AND WOMEN STUDENTS IN EACH SCIENTIFIC FIELD

In addition to the image for the sector as a whole, it is interesting to consider the distribution across various scientific fields. The following section shows the ratio between the percentage of women full professors and the percentage of women students for each scientific field. This could be an indication of the probabilities of advancement within a scientific field. In Chapter 2 we give more information about the percentage of women in each scientific field at the various institutions.

A ratio of 1.0 indicates that the share of women full professors is the same as the share of women students. At the end of 2021, this ratio was greater than 1.0 for each scientific field.

Between the end of 2020 and the end of 2021, the ratio of the percentage of women students to that of women full professors improved for the scientific fields of Agriculture, Natural Sciences, Economics and Law. This ratio became less favourable for the scientific field of Technology. If we consider the scientific fields of Behavioural & Social Sciences, and Language & Culture, there is no change compared to the previous year. The difference between the percentage of women full professors and the percentage of women students is greatest at 35.1 percentage points in the scientific field of Agriculture, followed by the scientific field of Behavioural & Social Sciences at 33.8 percentage points. The difference between the percentage of women students and the percentage of women full professors is the smallest in the scientific discipline of Technology: 9.7 percentage points.

Please note: while this difference is slight, it isn't a significant indicator of the likelihood of equal representation for women students and for women full professors being reached. In fact, at 27.9% of women students and 17.8% of women full professors, a 50/50 gender distribution in the scientific discipline of Technology is still far from being reached. Increasing the percentage of women who are full professors will improve the male-female ratio, which in turn will reduce the difference vis-à-vis the percentage of women students. In the scientific discipline of Technology, an increase in the percentage of women full professors as well as that of women students remains necessary.

TABLE 1.7

Percentage of women students and women full professors by scientific field, and the ratio between the percentage of women students and the percentage of women full professors within a scientific field, end of 2020 and end of 2021.

	Women students 2021	Women full professors at end 2021	Ratio of women students / women full professors at end 2021	Ratio of women students / women full professors at end 2020
Agriculture	56.0	22.0	2.5	2.7
Natural Sciences	40.9	19.8	2.1	2.2
Technology	27.9	17.8	1.6	1.5
Economics	36.3	16.0	2.3	2.4
Law	62.9	32.9	1.9	2.0
Behavioural & Social Sciences	71.8	38.5	1.9	1.9
Language & Culture	63.0	37.4	1.7	1.7

Source: UNL, WOPI, end of 2020 and end of 2021, in FTE.

Source of information on students: 1cHO2021, October 2020 and 1cHO2020, October 2021, in number of people.

COMPOSITION OF ACADEMIC STAFF BY ORIGIN

The 2022 Monitor is the first in which we can present information on the gender distribution in the composition of academic staff with reference to the UNL WOPI variable known as 'Origin'¹¹. The general picture is the following:

TABLE 1.8.1

Number of FTE by job category and origin at end of 2021.

	Full Professor	Associate Professor	Assistant Professor	PhD candidate
Dutch	2,372.4	1,849.7	3,289.1	4,648.1
EEA excl. Dutch	515.9	628.2	1,756.6	2,469.8
European non-EEA	74.0	90.7	294.6	537.4
Non-European	98.0	181.5	788.2	2,468.8
Unknown			3.0	4.0
TOTAL	3,060.3	2,750.1	6,131.5	10,128.1

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

TABLE 1.8.2

Proportional distribution by job category and origin, in FTE, at end of 2021.

	Full Professor	Associate Professor	Assistant Professor	PhD candidate
Dutch	77.5	67.3	53.6	45.9
EEA excl. Dutch	16.9	22.8	28.6	24.4
European non-EEA	2.4	3.3	4.8	5.3
Non-European	3.2	6.6	12.9	24.4
Unknown	0.0	0.0	0.0	0.0

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

Per consecutive job category the percentage of academics of Dutch origin increases. Among PhD graduates the proportion of academics of non-Dutch origin (international origin) is 54.1% and among full professors this was only 22.5%.

The percentage of academics of non-European origin decreased from 24.4% of PhD graduates to 12.9% of assistant professors, 6.6% of associate professors and 3.2% of full professors.

11. 'Origin' refers to the variable used in UNL WOPI. This variable pertains to the nationality as per passport. Further details about this variable are given in Appendix 1.

The following can be observed with regard to gender distribution:

FIGURE 1.7

Proportional distribution of women and men, by job category and origin, in FTE, at end of 2021.

women

FULL PROFESSORS



ASSOCIATE PROFESSORS



ASSISTANT PROFESSORS



PHD GRADUATES



men

FULL PROFESSORS



ASSOCIATE PROFESSORS



ASSISTANT PROFESSORS



PHD GRADUATES



- Dutch
- EEA excl. Dutch
- European non-EEA
- Non-European
- Unknown

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

In all job categories there was a larger proportion of women than men of international (non-Dutch) origin. The difference between women and men was greatest among full professors: 29.5% of the women full professors as opposed to 20% of the men. This is surprising, given that the difference between women and men PhD graduates was minimal: 54.2% of the women PhD graduates and 54% of the men PhD graduates. In each successive job category the proportion of international origin decreased, among both women and men.

About a quarter of the PhD graduates were of non-European origin. For women this was 23.2%, and for men it was 25.3%. For full professors this was only 4.2% for women and 2.8% for men. What was noticeable is that 22.8% of women full professors were from the EEA¹² (excluding the Netherlands) while this figure was 14.7% for the men.

Looking more broadly at developments of the past five years, the following picture emerges:

TABLE 1.9.1

Percentage of full professors, associate professors, assistant professors and PhD graduates of international origin (= non-Dutch) by job category, end of 2017 through end of 2021, in FTE.

	Full Professor	Associate Professor	Assistant Professor	PhD graduate
2017	18.4	24.6	36.9	48.8
2018	19.2	26.3	38.8	50.1
2019	20.3	29.3	40.5	51.5
2020	21.5	31.0	43.4	52.6
2021	22.5	32.7	46.4	54.1

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

12. EEA stands for European Economic Area. The European Economic Area (EEA) comprises all the EU Member States plus Liechtenstein, Norway and Iceland (source: Dutch Government).

TABLE 1.9.2

Percentage of full professors, associate professors, assistant professors and PhD graduates of international origin (= not Dutch) by job category, end of 2017 through end of 2021, in number of people.

	Full Professor	Associate Professor	Assistant Professor	PhD graduate
2017	17.7	24.1	34.9	48.1
2018	18.7	25.5	36.8	49.4
2019	19.9	28.4	38.4	50.8
2020	21.0	30.2	41.2	51.9
2021	21.9	31.7	44.1	53.5

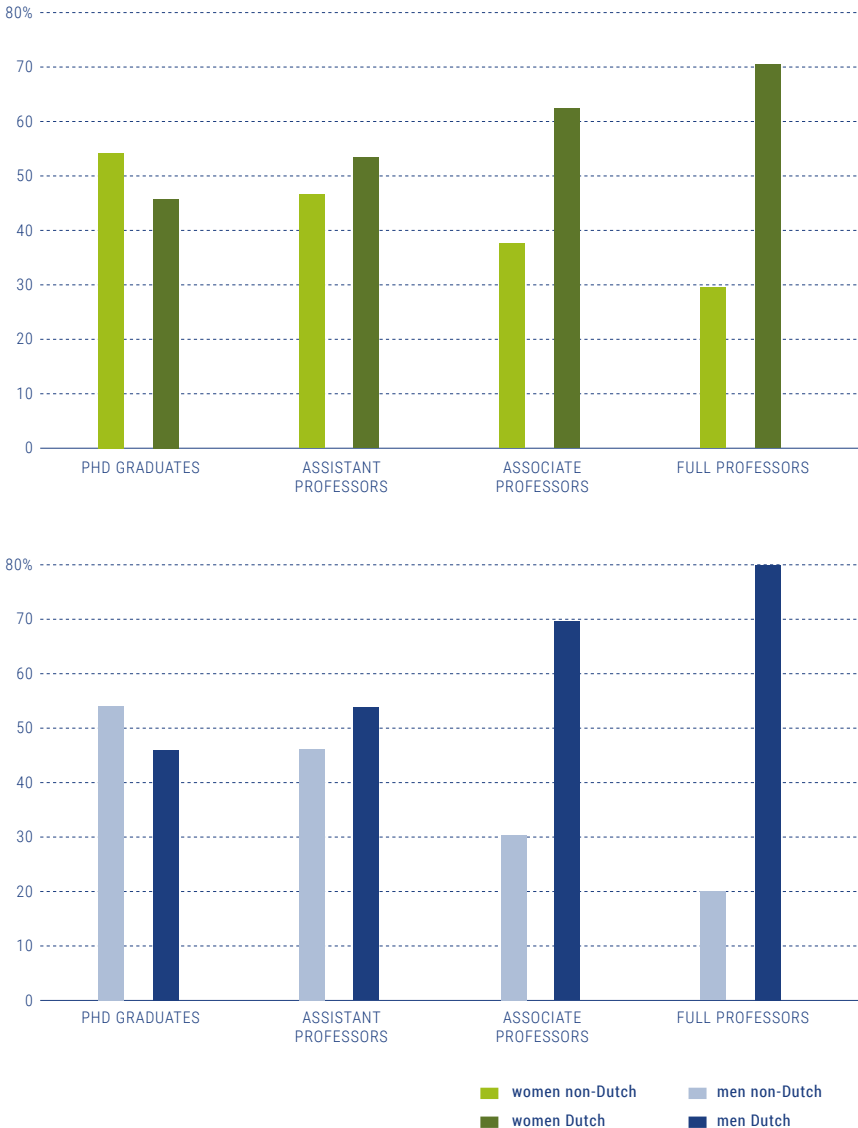
Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

In the past five years, the percentage of full professors, associate professors, assistant professors and PhD graduates of international origin has increased. This percentage is somewhat higher when measured in FTE than when measured in number of people, which suggests that the average scope of the employment contract of full professors, associate professors, assistant professors and PhD graduates of international origin is slightly higher than that of full professors, associate professors, assistant professors and PhD graduates of Dutch origin.

Figures 1.8.1 and 1.8.2 on the next page present the gender distribution that applies.

FIGURE 1.8.1

Proportional distribution of Dutch and non-Dutch origin, by job category and origin, at end of 2021, in FTE.



Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

FIGURE 1.8.2

Percentage of full professors, associate professors, assistant professors and PhD graduates of international origin, by gender, end of 2017 through end of 2021, in FTE.



Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

For women as well as for men, the proportion of full professors, associate professors, assistant professors and PhD graduates of international origin increased between the end of 2017 and the end of 2021. At the end of 2021, in all job categories a larger proportion of women than men academics were of international origin.

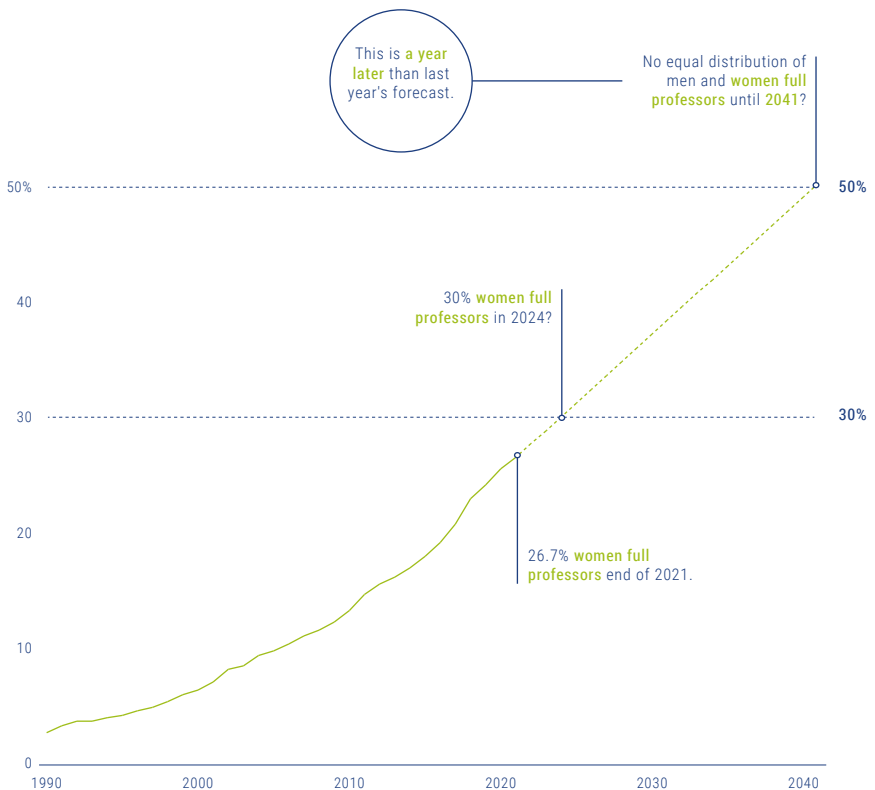
For PhD graduates, the increase in the proportion of academics of international origin from the end of 2017 to the end of 2021 was greater for women than for men: for women PhD graduates this increased from 46.8% at the end of 2017 to 54.2% at the end of 2021, and for men PhD graduates the proportion increased from 50.3% at the end of 2017 to 54.0% at the end of 2021.

WORSENING PROGNOSIS. WILL WE HAVE TO WAIT UNTIL 2041?

At the end of 2021, 26.7% of full professors were women. At 1.0, the growth in the percentage of women full professors from the end of 2020 to the end of 2021 was slightly below the average for the past 10 years 📉. According to this prognosis, which is based on the average growth of the past ten years, the 30% threshold, or critical mass, is expected to be reached in 2024, just as it was in the 2021 Monitor. However, the prognosis for reaching proportionality, i.e. the 50% threshold, has been moved back one year compared to the prognosis at the end of 2020, and will only be reached in 2041 📉.

FIGURE 1.9

Percentage of women full professors, in FTE (1990–2021) and prognosis for 2022–2041.



Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

— 2 —

THE PROPORTION OF WOMEN SCIENTISTS AT UNIVERSITIES

DROP IN THE PERCENTAGE OF WOMEN PROFESSORS AT A NUMBER OF UNIVERSITIES

As described extensively in Chapter 1, at the end of 2021, the average percentage of women full professors was 26.7%. This translates to a growth rate of 1.0 percentage point relative to the end of 2020, when the percentage was 25.7%.

In the 2021 Monitor there was an increase in the percentage of women full professors at all universities. The 2022 Monitor, however, shows a decline in the percentage of women full professors at 3 of the 14 universities 📉. At 10 universities the percentage of women occupying full professorships increased (albeit slightly). At one university, the percentage remained unchanged.

The percentage growth varied from 0.2 percentage points at TU Eindhoven to 2.6 percentage points at the University of Amsterdam. At the Open University, Radboud University and TU Delft, there was a decline in the percentage of women full professors.

While, traditionally, the Open University was seen as a frontrunner, there was a decline in the percentage of women full professors at the Open University this year. The percentage of women full professors at the end of 2021 was 40.4%, a decline of 1.6 percentage points relative to the end of 2020. The Open University remained above the 40% threshold for women full professors nonetheless¹.

Whereas last year four universities crossed the threshold of 30% of women full professors, this number was only three this year. A decline from 30.2 to 29.2 per cent of women full professors meant that Radboud University Nijmegen was now under the 30% threshold again.

At TU Delft, the percentage of women full professors declined by 0.2 percentage points, from 17.9% to 17.7%, which means that it is in last place again. Consequently, for TU Delft the discrepancy between its percentage of women full professors and the average percentage of 26.7% of women full professors is greater than it was last year.

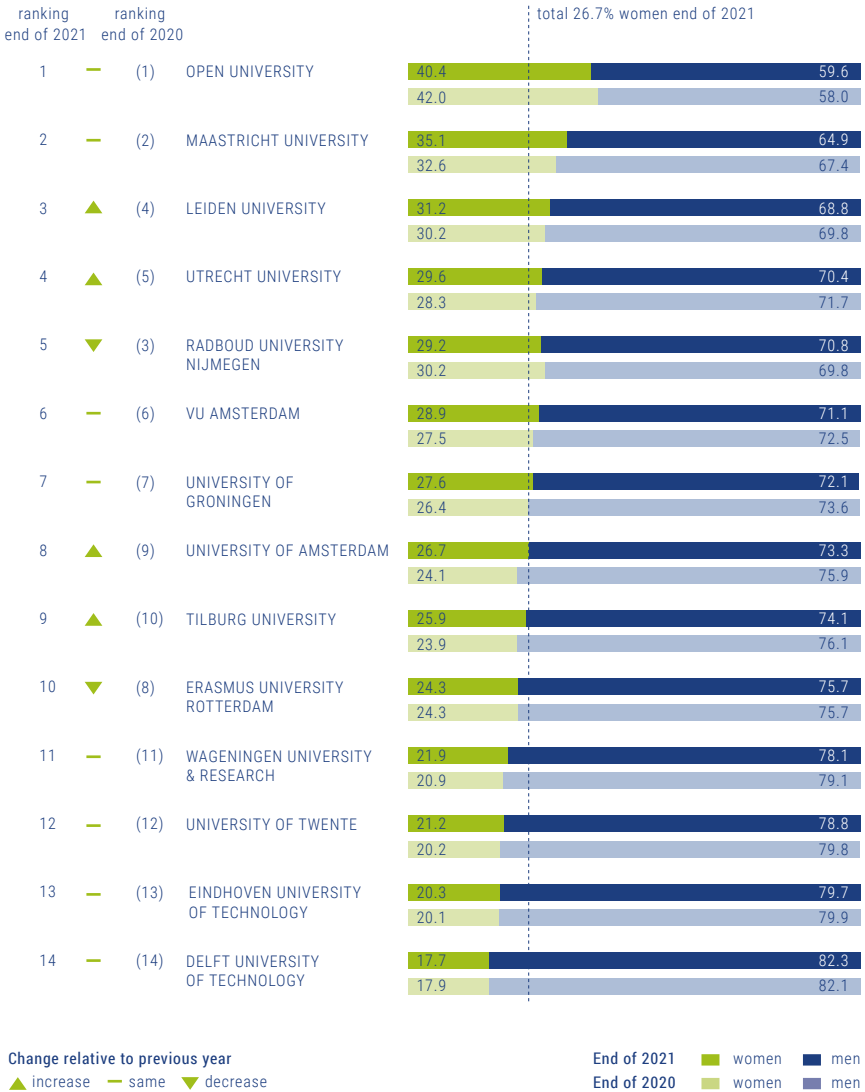
At the end of 2021, 9 full professors were employed at the University of Humanistic Studies: 8 women and 1 man. In terms of FTE, this is a total of 7.6, of which 6.8 were women and 0.8 were men. The University of Humanistic Studies had 89% women full professors (in FTE)².

1. It should be noted that the Open University's staff numbers are very small in comparison with those of the other institutions. For this reason, even a small change in the numbers will result in a large change in the percentages. This is also true for the numbers relating to the University of Humanistic Studies.

2. **Source:** requested from the Executive Board of the University of Humanistic Studies, October 2022, reference date 31 December 2021. The personnel data of the University of Humanistic Studies are not included in the WOPI data of UNL. Therefore, they cannot be included in the regular data analyses underlying the representations in this Monitor.

FIGURE 2.1

Percentage of men and women full professors at universities, in FTE, end of 2020 and end of 2021. From high to low, by percentage of women full professors, end of 2021.



Source: UNL, WOPI, end of 2020 and end of 2021, in FTE. Excluding scientific field Healthcare.

The percentages of women full professors at all universities at the end of 2020 and the end of 2021 are presented in Table 2.1, along with the growth rate in percentage points. The low average growth rate of 1.0 percentage point is striking 📉. Last year, the average growth rate was still 1.5. This year, again, there were no outliers with growth percentages above 3 percentage points as had been the case at the end of 2020 for the University of Groningen and Erasmus University Rotterdam (EUR). There was a stagnation of growth in the case of the latter, with the percentage of women full professors remaining constant. This means that EUR has dropped two positions in the ranking, from 8th to 10th position³.

TABLE 2.1

Percentage of women full professors at universities end of 2020 and end of 2021, in FTE, and growth in percentage of women full professors in percentage points, end of 2020 to end of 2021.

	Percentage of women full professors, end of 2021	Percentage of women full professors, end of 2020	Growth in percentage of women full professors end of 2020 through end of 2021 (in percentage points)
LEIDEN UNIVERSITY	31.2	30.2	1.1
UTRECHT UNIVERSITY	29.6	28.3	1.3
UNIVERSITY OF GRONINGEN	27.6	26.4	1.2
ERASMUS UNIVERSITY ROTTERDAM	24.3	24.3	0.0
MAASTRICHT UNIVERSITY	35.1	32.6	2.5
UNIVERSITY OF AMSTERDAM	26.7	24.1	2.6
VU AMSTERDAM	28.9	27.5	1.4
RADBOUD UNIVERSITY NIJMEGEN	29.2	30.2	-0.9
TILBURG UNIVERSITY	25.9	23.9	2.0
DELFT UNIVERSITY OF TECHNOLOGY	17.7	17.9	-0.2
EINDHOVEN UNIVERSITY OF TECHNOLOGY	20.3	20.1	0.2
UNIVERSITY OF TWENTE	21.2	20.2	1.0
WAGENINGEN UNIVERSITY & RESEARCH	21.9	20.9	0.9
OPEN UNIVERSITY	40.4	42.0	-1.6
TOTAL	26.7	25.7	1.0

Source: UNL, WOPI, end of 2020 and end of 2021, in FTE. Excluding scientific field Healthcare.

3. The Erasmus School of Health Policy & Management (ESHPM), which is part of EUR, is included in the HOOP (Higher Education and Research Plan) area of Healthcare, and for this reason it is not included in the regular analyses of the Monitor. The ESHPM's activities focus on education and research in the area of policy and management of healthcare, though, and not on healthcare as such. For this reason it might be interesting to calculate the percentages of women full professors for EUR inclusive of ESHPM. At the end of 2020, EUR including ESHPM, had 24.6% women full professors and at the end of 2021 this figure was 24.97% (Source: D&I Office EUR, November 2022). This leaves EUR unchanged in 10th position in the ranking at the end of 2021.

TOTAL POPULATION OF FULL PROFESSORS AT UNIVERSITIES IN FTE AND IN NUMBER OF PEOPLE

For more insight into the decline of or increase in the percentages of women full professors, it is interesting to consider developments in the total numbers of full professors. From the end of 2020 to the end of 2021, the total size of the population of full professors increased from 3,007.9 FTE to 3,060.3 FTE. This is an increase of 52.4 FTE.

Focusing on where the growth took place, we see that at ten universities there was an increase in the total number of full professors in FTE.

At four of the fourteen universities there was a decline in the total number of full professors. This was the case at Leiden University, the University of Groningen, Tilburg University and TU Eindhoven. The decline at these universities was 1.2 and 1.1 and 6.8 and 0.8 FTE, respectively. In the 2021 Monitor we had already seen a sizable decline in the total number of full professors at Tilburg University. This year again, Tilburg had a noticeable decline of 4.4 percentage points. Relatively speaking, at 9.6 percentage points, the growth in the number of full professors was largest at Wageningen University & Research.

TABLE 2.2

Total population of full professors and growth between end of 2020 and end of 2021, by institution and gender, and percentage growth in total number of full professors, in FTE.

	Total FTE for full professors at end 2021	Growth W 2020-2021	Growth M 2020-2021	Percentage growth in total population of full professors end of 2020 - end of 2021 (in FTE)
LEIDEN UNIVERSITY	287.2	2.7	-3.9	-0.4
UTRECHT UNIVERSITY	338.4	4.6	-3.3	0.4
UNIVERSITY OF GRONINGEN	315.5	3.6	-5.6	-0.3
ERASMUS UNIVERSITY ROTTERDAM	193.2	2.0	6.0	4.3
MAASTRICHT UNIVERSITY	145.5	6.2	1.9	5.9
UNIVERSITY OF AMSTERDAM	306.4	9.5	-3.8	1.9
VU AMSTERDAM	292.2	7.2	4.4	4.2
RADBOUD UNIVERSITY NIJMEGEN	251.4	-0.2	7.3	2.9
TILBURG UNIVERSITY	148.6	1.3	-8.1	-4.4
DELFT UNIVERSITY OF TECHNOLOGY	281.3	0.8	6.6	2.7
EINDHOVEN UNIVERSITY OF TECHNOLOGY	169.0	0.1	-0.9	-0.5
UNIVERSITY OF TWENTE	164.3	1.7	-1.2	0.3
WAGENINGEN UNIVERSITY & RESEARCH	127.0	3.5	7.6	9.6
OPEN UNIVERSITY	40.6	0.0	1.5	3.9
TOTAL	3,060.3	43.0	9.5	1.7

Source: UNL, WOPI, end of 2020 and end of 2021, in FTE. Excluding scientific field Healthcare.

Between end of 2020 and end of 2021, the population of full professors in number of people increased by 23. The total population of women full professors in number of persons increased by 39 whereas the population of men full professors (in number of people) decreased by 17^{4,5}.

It is striking that the increase in number of people in the whole population of full professors was considerably smaller than in the period from the end of 2019 through the end of 2020. The number of women increased by 78 in that period, and the number of men by 29.

At two of the universities there was a decline in the number of women full professors (in number of people), namely at Tilburg University and at Erasmus University Rotterdam. At eleven other universities there was an increase in the total population of women full professors (in number of people). At the Open University the population of women full professors remained unchanged (in number of people).

For the men, five universities saw a growth in the number of full professors in number of people. The number of men full professors remained unchanged only at the Open University. For the remaining eight universities, there was a decline in the number of men full professors.

Wageningen University & Research showed an increase in the percentage of women full professors, as well as the largest growth in the total proportion of full professors, relatively speaking: 8.1 percentage points, representing an increase of four persons for women full professors and six persons for men full professors.

4. There was an increase of 1 person also in the category of 'Other'. The numbers for this category were so small that the LNVH cannot include them in presentations in the Women Professors Monitor. This is due to possible traceability. See Appendix 1 for further explanation regarding this category.

5. In this context, the growth and/or decline is determined by the sum of incoming, advancing and outgoing full professors.

TABLE 2.3

Total population of full professors and growth between end of 2020 and end of 2021, by institution and gender, and percentage growth in the population of full professors (in number of people).

	Total population of full professors end of 2021 (in number of people)	Growth W '20-'21	Growth M '20-'21	Percentage growth in total population of full professors end of 2020 - end of 2021 (in number of people)
LEIDEN UNIVERSITY	332	0	-8	-2.4
UTRECHT UNIVERSITY	388	4	-5	-0.3
UNIVERSITY OF GRONINGEN	349	3	-10	-1.7
ERASMUS UNIVERSITY ROTTERDAM	231	-1	7	2.7
MAASTRICHT UNIVERSITY	179	7	3	5.9
UNIVERSITY OF AMSTERDAM	351	11	-6	1.4
VU AMSTERDAM	366	7	-5	0.5
RADBOUD UNIVERSITY NIJMEGEN	284	0	7	2.5
TILBURG UNIVERSITY	186	-1	-10	-5.6
DELFT UNIVERSITY OF TECHNOLOGY	335	1	8	2.8
EINDHOVEN UNIVERSITY OF TECHNOLOGY	195	2	-3	-0.5
UNIVERSITY OF TWENTE	198	2	-1	0.5
WAGENINGEN UNIVERSITY & RESEARCH	133	4	6	8.1
OPEN UNIVERSITY	51	0	0	0.0
TOTAL	3,578	39	-17	0.6

Source: UNL, WOPI, end of 2020 and end of 2021, in number of people. Excluding scientific field Healthcare.

PROPORTION OF WOMEN SCIENTISTS AT UNIVERSITIES IN EACH JOB CATEGORY

While this publication goes by the name Women Professors Monitor, it also contains information about the other job categories as a matter of course. For proper advancement to the highest echelons of the academic world, one needs insight into the state of play in the job categories leading up to this.

The following can be observed for associate professors: there was an average growth of 2 percentage points in the proportion of women associate professors. At Erasmus University Rotterdam and Radboud University Nijmegen in particular, there was a striking growth in the proportion of women associate professors, at 7.4 and 6.5 percentage points, respectively. As to universities where there was a decline: Utrecht University and Tilburg University both show a decline, of 2.9 and 0.4 percentage points, respectively 📉.

Given the conspicuous growth in the proportion of women associate professors, Table 2.4 gives more detailed information regarding the developments at the various universities.

TABLE 2.4

Number of associate professors, total growth and growth of women and men associate professors and proportion of the growth going to women, by university, end of 2020 to end of 2021, in FTE.

	Number of associate professors in FTE at end of 2021	Total growth 2020-2021	Growth W 2020-2021	Growth M 2020-2021	Share of the growth going to women	Growth in proportion of women associate professors 2020-2021 in percentage points
LEIDEN UNIVERSITY	206.3	18.2	7.1	11.0	39.2	0.0
UTRECHT UNIVERSITY	279.7	31.4	5.5	25.9	17.5	-2.9
UNIVERSITY OF GRÖNINGEN	264.8	12.8	7.0	5.7	55.1	1.0
ERASMUS UNIVERSITY ROTTERDAM	186.6	18.2	19.7	-1.6	108.5	7.4
MAASTRICHT UNIVERSITY	128.8	7.0	5.5	1.5	78.4	2.2
UNIVERSITY OF AMSTERDAM	295.3	19.3	12.7	6.6	65.9	2.3
VU AMSTERDAM	229.4	16.2	12.2	4.0	75.3	3.3
RADBOUD UNIVERSITY NIJMEGEN	158.8	22.8	16.9	5.9	74.0	6.5
TILBURG UNIVERSITY	116.1	5.1	1.1	4.0	21.6	-0.4
DELFT UNIVERSITY OF TECHNOLOGY	313.7	12.1	6.1	6.1	50.0	1.1
EINDHOVEN UNIVERSITY OF TECHNOLOGY	140.3	0.7	2.8	-2.6	417.9	1.9
UNIVERSITY OF TWENTE	170.1	16.4	8.9	7.5	54.1	3.6
WAGENINGEN UNIVERSITY & RESEARCH	231.7	23.5	10.5	12.9	44.9	1.5
OPEN UNIVERSITY	28.4	3.2	2.2	1.0	68.8	4.6
TOTAL	2,750.1	206.7	118.2	88.0	57.2	2.0

Source: UNL, WOPI, end of 2020 and end of 2021, in FTE. Excluding scientific field Healthcare.

For assistant professors, the proportion of women has increased by an average of 0.9 percentage points, to 44.5%. Three universities have experienced striking growth, namely Utrecht University (3.5), Wageningen University & Research (3.6) and the Open University (3.1 percentage points). There are five universities where the proportion of women assistant professors has declined 📉. In this respect, the decrease of 4.3 percentage points at Erasmus University Rotterdam is particularly noticeable, though it may be explained in part by the strong increase in the proportion of women associate professors.

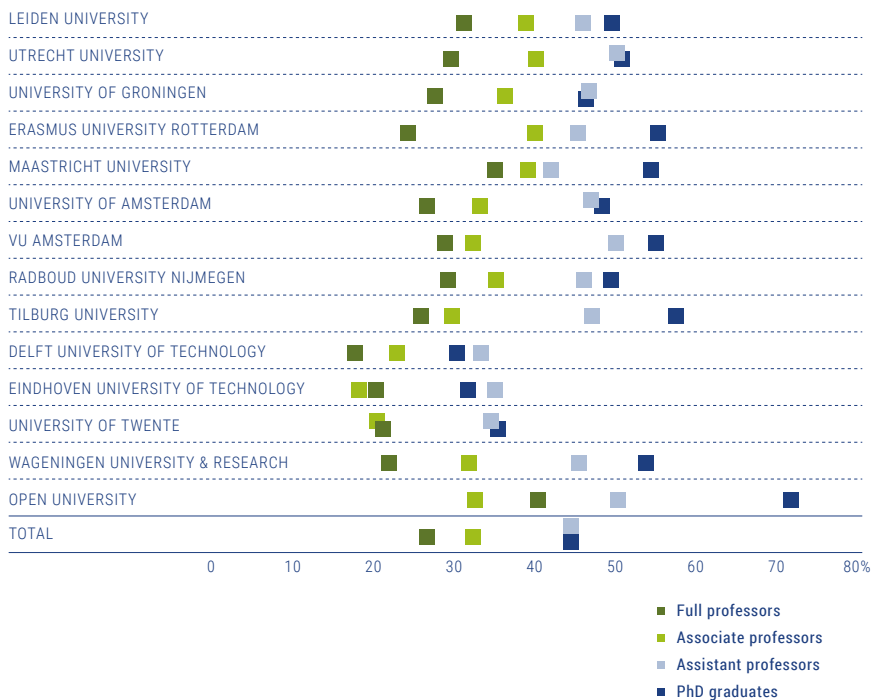
After a number of years in which the proportion of women PhD graduates decreased, these numbers have recovered in recent years. The proportion of women PhD graduates at the end of 2021 had increased slightly by 0.2 percentage points to 44.5. It is now equal to the percentage of women assistant professors. Erasmus University Rotterdam and the Open University stand out with growth in the proportion of women PhD graduates, at 4.0 and 8.8 percentage points, respectively⁶. At a number of universities, however, the proportion of women PhD graduates has declined. This is the case at Maastricht University (-2.4), Wageningen University & Research (-2.3), the University of Groningen (-0.6) and VU Amsterdam (-0.5 percentage points) 📉.

We briefly consider the situation in respect of women full professors. On average, the proportion of women full professors increased by 1 percentage point, to 26.7%. As mentioned before, three universities have experienced a decline in the proportion of women full professors, namely the Open University (-1.6), Radboud University Nijmegen (-0.9) and TU Delft (-0.2 percentage points).

6. It should be noted that the Open University's staff numbers are very small in comparison with those of the other institutions. For this reason, even a small change in the numbers will result in a large change in the percentages.

FIGURE 2.2

Percentage of women by job category at each university, in FTE, end of 2021.



Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

As supplementary detail to Figure 2.2, Table 2.5 presents the relative differences between the percentages of women in the job categories of PhD graduate, assistant professor and associate professor, and the percentage of women full professors at each university.

On average, the difference between the percentage of women PhD graduates and the percentage of women full professors at the end of 2021 was 17.9 percentage points, a reduction which is continuing. At the end of 2019 this difference was 19.4 percentage points, at the end of 2020 it was 18.6 percentage points and at the end of 2021 it was 17.9 percentage points.

There are four universities at which the difference between the percentage of women PhD graduates and the percentage of women full professors is greater than 30 percentage points: Erasmus University Rotterdam, Tilburg University, Wageningen University & Research and the Open University. At 11.4 percentage points, this difference is smallest at TU Eindhoven.

The average difference between the percentage of women assistant professors and women full professors was 17.8 percentage points. While at sector level this difference is approximately equal to the difference between PhD graduates and full professors, in a number of instances this is noticeably different at university level. At the Open University, for example, the difference between PhD graduates and full professors is 31.3 percentage points while the difference between assistant professors and full professors is a mere 10 percentage points.

Maastricht University catches the eye: the difference between the percentage of women assistant professors and women full professors is only 7.0 percentage points. The reason for this is the percentage of women assistant professors which, at 42.0%, is just under the average for the sector, as well as by the relatively high percentage of women full professors, 35.1%, which is higher than the average for the sector (26.7%).

Developments at Radboud University Nijmegen also catch the eye. While the percentage of women associate professors at this university was smaller than the percentage of women full professors last year, this is no longer the case. The percentage of women associate professors increased from 28.7% to 35.2% in one year. Conversely, the percentage of women full professors decreased from 30.2% to 29.2%. The growth in the percentage of women associate professors at Radboud University Nijmegen is the result of an increase of 22.8 FTE in associate professors, of which 16.9 FTE were for women and 5.9 for men.

This year, there were three universities at which the percentage of women associate professors was smaller than the percentage of women full professors: Eindhoven University of Technology, the University of Twente and the Open University. The difference between the percentage of women full professors and women associate professors, therefore, was negative at these universities.

TABLE 2.5

Differences in the percentage of women between the job categories of PhD graduate and full professor; between assistant professor and full professor; and between associate professor and full professor, by institution, in FTE, end of 2021.

	PhD graduate–Full professor	Assistant professor– Full professor	Associate professor– Full professor
LEIDEN UNIVERSITY	18.3	14.8	7.6
UTRECHT UNIVERSITY	21.3	20.7	10.7
UNIVERSITY OF GRONINGEN	18.9	19.1	8.7
ERASMUS UNIVERSITY ROTTERDAM	31.0	21.1	15.7
MAASTRICHT UNIVERSITY	19.3	7.0	4.1
UNIVERSITY OF AMSTERDAM	21.6	20.2	6.4
VU AMSTERDAM	26.1	21.1	3.4
RADBOD UNIVERSITY NIJMEGEN	20.3	16.8	6.0
TILBURG UNIVERSITY	31.6	21.2	3.8
DELFT UNIVERSITY OF TECHNOLOGY	12.7	15.7	5.2
EINDHOVEN UNIVERSITY OF TECHNOLOGY	11.4	14.8	-2.1
UNIVERSITY OF TWENTE	14.3	13.4	-0.7
WAGENINGEN UNIVERSITY & RESEARCH	32.0	23.6	10.0
OPEN UNIVERSITY	31.3	10.0	-7.9
TOTAL	17.9	17.8	5.8

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

THE GLASS CEILING INDEX

The Glass Ceiling Index (GCI) of each institution reveals the job transition that is accompanied by the greatest obstacles to advancement to the next job level at that institution. A higher number indicates a thicker glass ceiling (see GCI box in Chapter 1).

At the sector level, the GCI scores for women for the three job transitions (PhD graduate – assistant professor, assistant professor – associate professor and associate professor – full professor) at the end of 2021 were the same as those at the end of 2020⁷: 1.0, 1.4 and 1.2, respectively.

The scores for the individual universities nevertheless reveal several differences relative to the end of 2020.

Once more, the PhD graduate/assistant professor GCI for the sector is 1.0. We call this the neutral GCI. The GCI for this job transition has increased at three universities (Leiden University, Erasmus University Rotterdam and the Open University). There was a decline in this figure at three universities (Utrecht University, University of Amsterdam and Wageningen University & Research).

At CGI = 1.4, for women assistant professors, the assistant professor/associate professor job transition is the one that is accompanied by the greatest obstacles. This CGI declined somewhat at 8 of the 14 universities, though. At Utrecht University, Tilburg University and TU Delft, however, this GCI has in fact increased.

The GCI for the transition from associate professor to full professor declined at four universities (relatively fewer obstacles) and increased at six universities (relatively more obstacles). For this job transition two universities, namely TU Eindhoven and the Open University, had a GCI below 1.0 at the end of 2021. End of 2020 this was still true for three universities; the GCI for this job transition was 0.8 at the University of Twente. This had increased to 1.0, a neutral GCI, by the end of 2021.

An increase or decrease of a GCI can be caused by a change in the proportion of women in the lowest and/or highest job category of the job transition in question, and differs from one university to the next. The interventions needed to bring a GCI down to the neutral GCI of 1.0 or lower, therefore differs from one university to the next and must be considered and implemented by each university separately.

7. See p. 14 for more information concerning the sector-level GCI scores.

TABLE 2.6

GCI for women, by job transition and institution, in FTE, end of 2021.

	PhD graduate to Assistant professor	Assistant professor to Associate professor	Associate professor to Full professor
LEIDEN UNIVERSITY	1.1	1.2	1.2
UTRECHT UNIVERSITY	1.0	1.2	1.4
UNIVERSITY OF GRONINGEN	1.0	1.3	1.3
ERASMUS UNIVERSITY ROTTERDAM	1.2	1.1	1.6
MAASTRICHT UNIVERSITY	1.3	1.1	1.1
UNIVERSITY OF AMSTERDAM	1.0	1.4	1.2
VU AMSTERDAM	1.1	1.6	1.1
RADBOUD UNIVERSITY NIJMEGEN	1.1	1.3	1.2
TILBURG UNIVERSITY	1.2	1.6	1.1
DELFT UNIVERSITY OF TECHNOLOGY	0.9	1.5	1.3
EINDHOVEN UNIVERSITY OF TECH- NOLOGY	0.9	1.9	0.9
UNIVERSITY OF TWENTE	1.0	1.7	1.0
WAGENINGEN UNIVERSITY & RESEARCH	1.2	1.4	1.5
OPEN UNIVERSITY	1.4	1.5	0.8
TOTAL	1.0	1.4	1.2

Source: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

PROPORTION OF WOMEN SCIENTISTS AT UNIVERSITIES IN EACH SCIENTIFIC FIELD

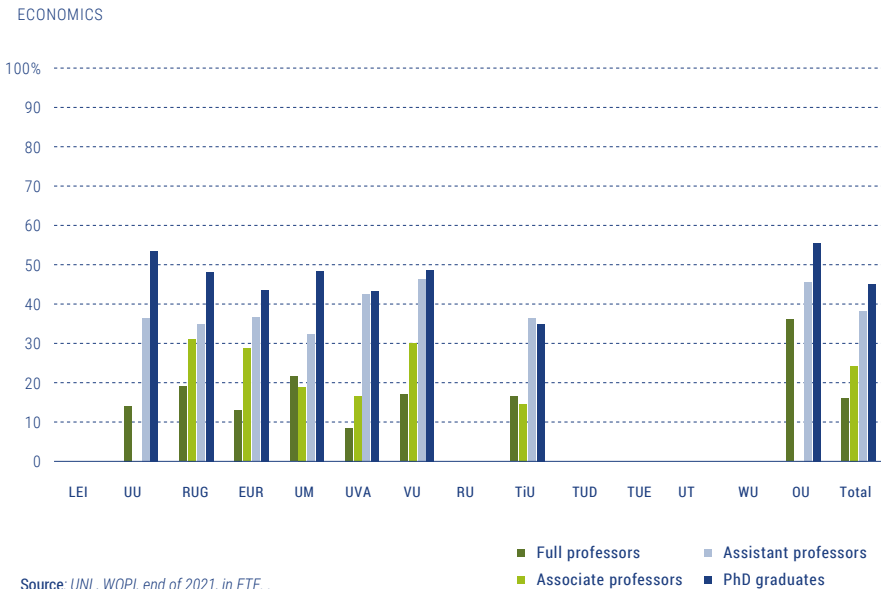
In some cases, the percentages of women in each job category at the institutional level can obscure the true facts. This is because the average percentages per institution do not reveal the true situation in certain faculties, which can be downright poor sometimes. The LNVH would therefore like to provide information regarding the gender ratios at the faculty level. With the data we have at our disposal that is, however, not possible. Efforts at obtaining data through separate requests yielded data that could not be used. LNVH therefore calls on universities to be alert to the current situation at faculty level themselves.

We can present the proportion of women for each scientific field at individual institutions, though. Here we look beyond the walls of the universities and the sector-wide image, with the hope of encouraging exchange between universities with regard to promoting growth in the share of women in specific scientific fields⁸.

8. For additional information on subdisciplines within scientific disciplines (in Dutch), see Indeling sectoren | Hoger onderwijs | Inspectie van het onderwijs (onderwijsinspectie.nl).

FIGURE 2.3.1

Share of women in the scientific field of Economics, by job category and institution, in FTE, end of 2021.



Source: UNL, WOPI, end of 2021, in FTE .

In the 2021 Monitor we singled out the scientific discipline of Economics. Our purpose with this choice was to focus attention on the fact that the low percentages of women in higher job categories in the scientific disciplines of Natural Sciences and Technology traditionally enjoy ample attention. The scientific discipline of Economics, however, is equally deserving of attention regarding this matter – at 16%, the percentage of women full professors is well below the average for the sector, which is 26.7%.

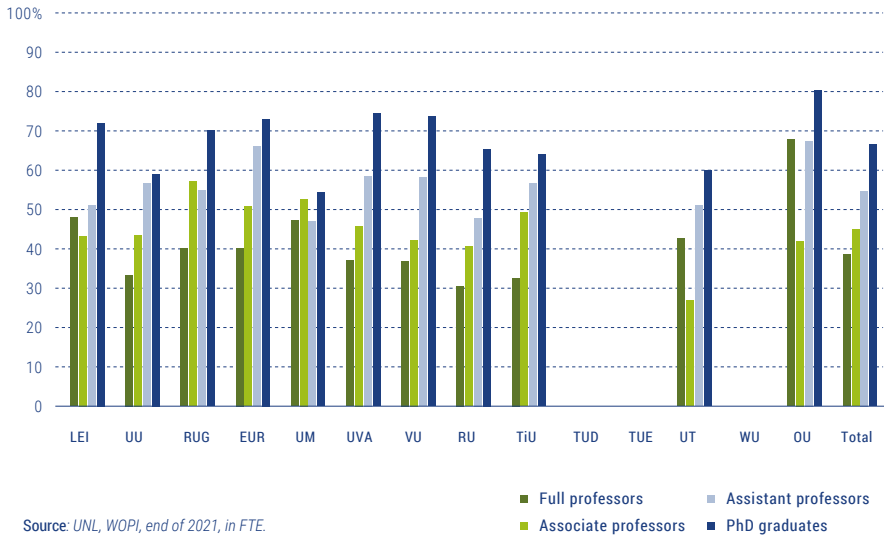
Considering individual universities, at 8.4% the proportion of women full professors in the scientific field of Economics at the University of Amsterdam is clearly below the average of 16%.

With reference to associate professors, we notice that (as was the case in the 2021 Monitor) there are no women associate professors in this scientific field at Utrecht University while the proportion of women full professors is 14.1% and of women assistant professors is 36.5%. This is a point for attention in terms of the future replacement of full professors who exit the profession and the number of associate professors, both men and women, needed to cope with this outflow.

FIGURE 2.3.2

Proportion of women in the scientific field of Behavioural & Social Sciences, by job category and institution, in FTE, end of 2021.

BEHAVIOURAL & SOCIAL SCIENCES



Source: UNL, WOPI, end of 2021, in FTE.

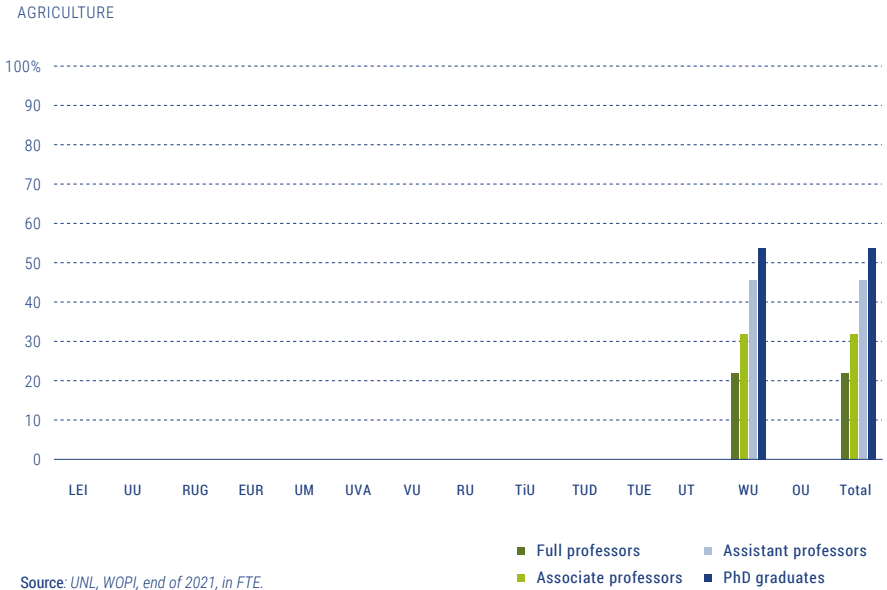
Relative to the average for the sector (26.7%), the scientific field of Behavioural & Social Sciences has a high percentage of women full professors (38.5%). For years now, it has also had a very high percentage of women PhD graduates. Consequently, the percentage point difference between these job levels in this monitor is high again (28.1 percentage points). At 66.6%, the percentage of women PhD graduates in the scientific field of Behavioural & Social Sciences is the highest of all scientific field.

In the scientific field of Behavioural & Social Sciences, the average proportion of women associate professors is 45.0%. At 26.9%, the percentage for the University of Twente is far below the average. Conversely, with a percentage of 57.1%, the University of Groningen has an above-average proportion of women associate professors.

Also notable are the percentages of women assistant professors at Erasmus University Rotterdam (66.1%) and the Open University (67.4%), These are considerably higher than the average of 54.7%. The number of women PhD graduates at the Open University is striking at over 80%.

FIGURE 2.3.3

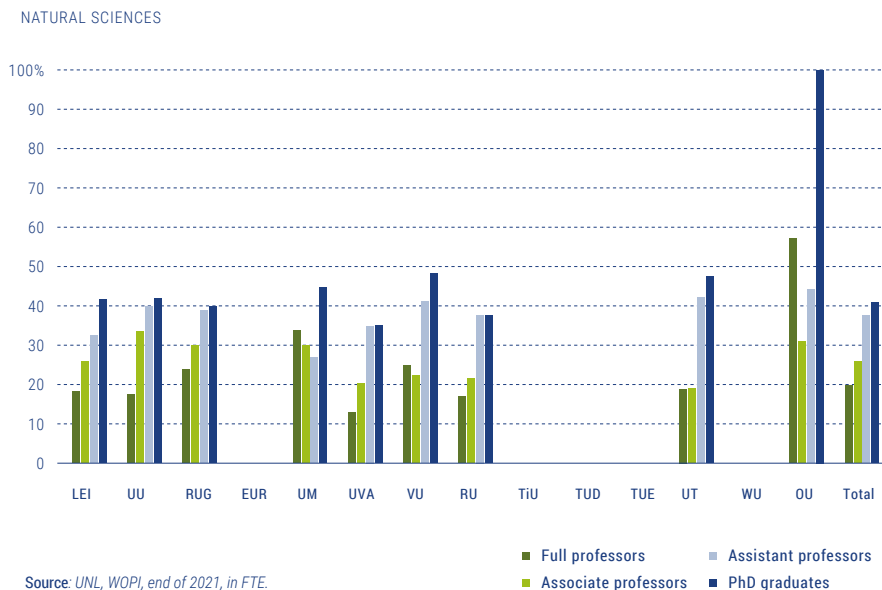
Proportion of women in the scientific field of Agriculture, by job category and institution, in FTE, end of 2021.



The relatively high percentage of women PhD graduates in the scientific field of Agriculture is notable. At 53.8%, it is way above the sector-wide average (that of all of the scientific disciplines together) of 44.5%. But then, at 22%, the percentage of women full professors is lower than the sector-wide average of 26.7%.

FIGURE 2.3.4

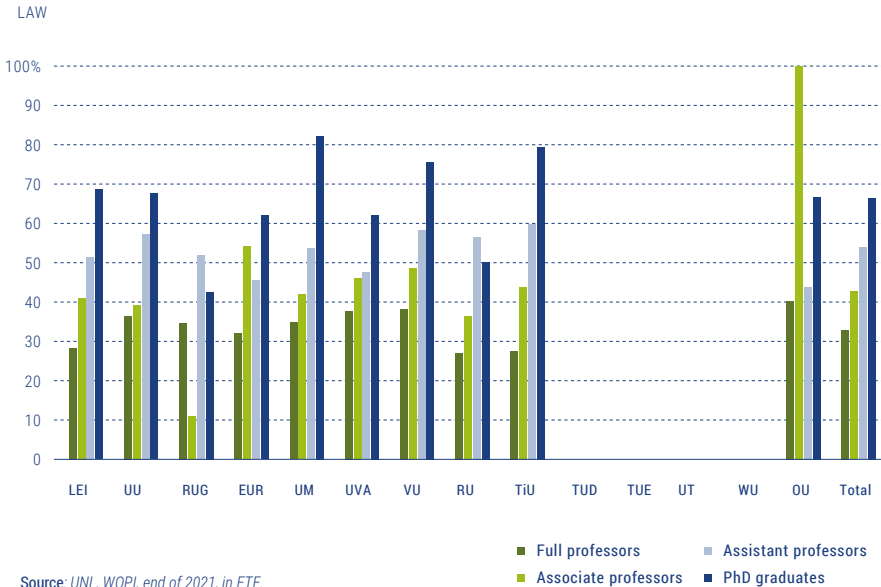
Proportion of women in the scientific field of Natural Sciences, by job category and institution, in FTE, end of 2021.



In the scientific field of Natural Sciences, on average the percentage of women full professors is 19.8%. The percentages for Maastricht University (33.8%) and the Open University (57.1%) are notable as they are far higher than the average. The University of Amsterdam, on the other hand, has a noticeable low percentage (12.9%) of women full professors in this scientific field. The Open University is also an outlier in this regard as it has only women PhD graduates in this scientific field.

FIGURE 2.3.5

Proportion of women in the scientific field of Law, by job category and institution, in FTE, end of 2021.



Source: UNL, WOPI, end of 2021, in FTE.

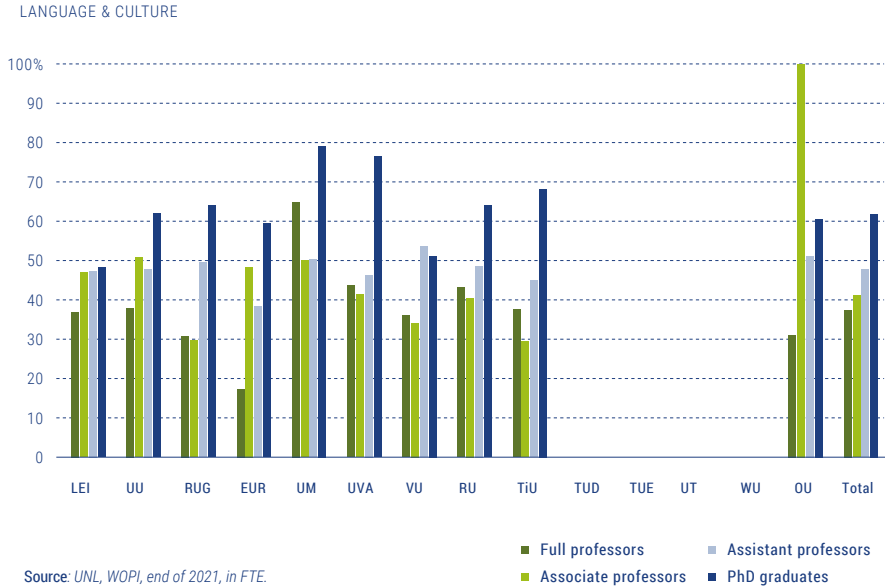
In the scientific field of Law, two in every three PhD graduates are women, while for full professors it is one in three.

Among the universities, the University of Groningen is notable for its low percentage of women associate professors: 11.1% compared to the average of 42.7%. The Open University, too, is notable for the fact that it has only women associate professors in this scientific field⁹. Maastricht University has the highest percentage of women PhD graduates in the scientific field of Law, namely 82.3%.

9. As far as the Open University is concerned, the staff numbers are relatively small. For this reason, even a small change in the numbers will result in a large change in the percentages.

FIGURE 2.3.6

Proportion of women in the scientific field of Language & Culture, by job category and institution, in FTE, end of 2021.



Source: UNL, WOPI, end of 2021, in FTE.

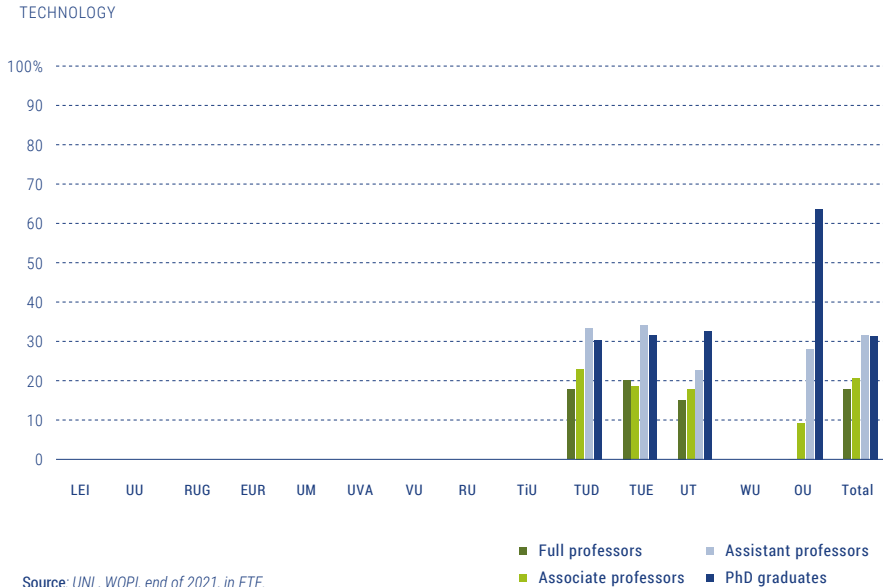
The average percentage of women full professors in the scientific field of Language & Culture is 37.4%. At 17.3%, the percentage for Erasmus University Rotterdam is quite paltry. Conversely, Maastricht University has a high percentage of women full professors in this scientific field: 64.9%.

What is notable is that the Open University has no men associate professors, similar to the situation in the scientific field of Law. The proportion of women associate professors at Tilburg University (29.4%) and the University of Groningen (29.7%) is well under the average of 41.1%.

The scientific field of Language & Culture and Behavioural & Social Sciences are the only ones in which the percentage of women assistant professors is higher than 50%. It is notable at Erasmus University Rotterdam that the percentage of women assistant professors (38.3%) is lower than that of women associate professors (48.4%). Moreover, at Erasmus University Rotterdam there is a large difference between the percentage of women full professors (17.3%) and of women associate professors (48.4%).

FIGURE 2.3.7

Proportion of women in the scientific field of Technology, by job category and institution, in FTE, end of 2021.



Source: UNL, WOPI, end of 2021, in FTE.

In the scientific field of Technology, it is striking that the proportion of women assistant professors is higher (albeit slightly) than the proportion of women PhD graduates. In both job categories, one in three is a woman. TU Eindhoven is notable for having a larger proportion of women full professors than of women associate professors. At 63.6%, the percentage of women PhD graduates at the Open University is substantially higher than the average of 31.3%. Additionally, the Open University has a conspicuously low percentage of women associate professors (9.1%) compared with the average of 20.7%. At the Open University there are no women full professors in the scientific field of Technology.

TARGETS FOR WOMEN FULL PROFESSORS

At the beginning of 2020, the LNVH requested the universities to set target figures for women full professors for the period 2020–2025. All 14 universities responded to this request and set new goals. If all of the target figures are achieved, no university will have a percentage of women full professors lower than 25% by 2025. Moreover, the average percentage of 31.2% will mean that, for the first time, one in three full professors will be a woman. With these new target figures, we should have passed the point of a critical mass¹⁰ by 2025.

The reality is, however, that it will be hard to achieve those future milestones. The effort still needed to achieve the set targets differs from one university to the next. For example, the effort needed to bridge the distance between the end of 2021 and the target for 2025 varies from 0.7 percentage points for Erasmus University Rotterdam to 8.1 percentage points for Wageningen University & Research¹¹.

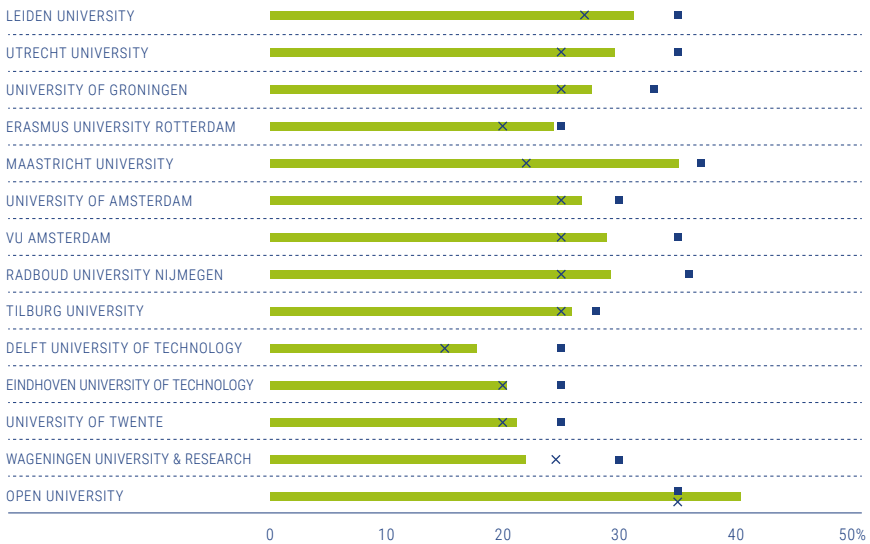
Basing our prognosis for the year 2025 on the growth between the end of 2020 and the end of 2021 shows that even fewer universities will achieve their targets than what appeared from the prognosis in the 2021 Monitor. No fewer than nine of the fourteen universities will not reach their target figure at this rate of growth 📌. By last year's prognosis, based on the growth between the end of 2019 and the end of 2020, this figure was only six.

10. Within this context, 'critical mass' refers to a sufficient number of actors adopting a new idea, technology or innovation within a social system, such that the acceptance rate can maintain itself and, in the case of unequal representation, it will no longer lead to the isolation of the under-represented group.

11. The target figure for Wageningen University & Research (30%) includes professors holding a personal chair. These professors holding a personal chair are classified at the rank of associate professor in the profile of the university job classification system. Associate professors are logically not included in the percentages of women full professors as presented in the Monitor. The target figure thus cannot be compared to the percentage of women full professors in the WOPI data.

FIGURE 2.4

Percentage of women full professors by end of 2021 and target figures for 2020 and 2025, by university.



Source of target figures for 2020: UNL letter of 17 December 2015 to Minister Bussemaker of Education, Culture and Science.

Source of target figures for 2025: UNL Office.

Source of information on staff: UNL, WOPI, end of 2021, in FTE. Excluding scientific field Healthcare.

- percentage women full professors end of 2021
- × target figure for 2020
- target figure for 2025

In the current Monitor we again present the picture that emerges if the forecast for 2025 is not based on the growth in the previous year, but on the distance that has been bridged between 2016 and 2021 in order to achieve the target figures for 2020 (see Table 2.7). The effect of the Westerdijk Talent Impulse is thus included in the prognosis. The picture that emerges is the following: 10 of the 14 universities will reach their targets by the end of 2025. The 2021 Monitor gave a figure of 11, so here too the picture is less rosy.

According to this forecast, the University of Amsterdam, Wageningen University & Research, TU Delft and Radboud University Nijmegen will jointly have to bridge 11.5 percentage points in order to achieve their set targets for 2025. In the case of a forecast based on the growth from the end of 2020 to the end of 2021 – which does not incorporate the Westerdijk Talent Impulse – a total of 30 percentage points would still need to be bridged. This would therefore justify again establishing an additional incentive, whether sector-wide (as with the Westerdijk Talent Impulse) or specific to each institution.

In calling for this – necessary – additional incentive, the LNVH stresses that in the implementation of any such

new incentive, lessons must be learnt from the past. The accelerated appointment of a large cohort of women full professors will result in the underlying job category being emptied. What is called for is the simultaneous promotion of women assistant professors to the position of associate professor. What is more, the appointment procedures, which are in many cases instituted in haste, make plain that recruitment is not always transparent and that criteria are not clear. Besides this, attention must continue to be paid to appointing women in the regular appointment procedures. If this is not done, such incentives will not be translated into sustained growth.

TABLE 2.7

Percentage of women full professors at end of 2021, target for 2025 and prognosis for 2025, based on growth in the period 2020–2021 and in the period 2016–2021, by university, in FTE.

	Percentage of women full professors, end of '21	Target for 2025	Prognosis for 2025 based on growth in the period '20-'21	Prognosis for 2025 based on growth in the period '16-'21	Prognosis for 2025 based on growth in the period '16-'21	Difference between prognosis for 2025, based on the period '16-'21 and target for 2025
LEIDEN UNIVERSITY	31.2	35	35.5	0.5	36.6	1.6
UTRECHT UNIVERSITY	29.6	35	34.6	-0.4	35.6	0.6
UNIVERSITY OF GRONINGEN	27.6	33	32.5	-0.5	34.7	1.7
ERASMUS UNIVERSITY ROTTERDAM	24.3	25	24.4	-0.6	35.0	10.0
MAASTRICHT UNIVERSITY	35.1	37	44.9	7.9	46.4	9.4
UNIVERSITY OF AMSTERDAM	26.7	30	37.3	7.3	29.5	-0.5
VU AMSTERDAM	28.9	35	34.4	-0.6	36.0	1.0
RADBOD UNIVERSITY NIJMEGEN	29.2	36	25.5	-10.5	31.5	-4.5
TILBURG UNIVERSITY	25.9	28	33.8	5.8	32.9	4.9
DELFT UNIVERSITY OF TECHNOLOGY	17.7	25	16.9	-8.1	21.7	-3.3
EINDHOVEN UNIVERSITY OF TECHNOLOGY	20.3	25	20.9	-4.1	27.3	2.3
UNIVERSITY OF TWENTE	21.2	25	25.2	0.2	28.1	3.1
WAGENINGEN UNIVERSITY & RESEARCH	21.9	30	25.6	-4.4	26.8	-3.2
OPEN UNIVERSITY	40.4	35	34.2	-0.8	49.5	14.5
TOTAL	26.7	31.2	30.5	-0.7	32.6	1.4

Source of target figures for 2025: VSNU Office.

Source of information on staff: UNL, WOPI, end of 2016 to end of 2021, in FTE. Excluding scientific field Healthcare.

Westerdijk Talent Impulse

On 10 February 2017, we celebrated the fact that the first woman full professor, Prof. Johanna Westerdijk, was appointed in the Netherlands 100 years ago. As an additional incentive, Jet Bussemaker, then Minister of Education, Culture and Science, decided to make a one-time sum of €5 million available for the appointment of 100 women professors. With this extra investment in the 'Westerdijk Year', universities were encouraged to do more to increase the number of women full professors, in addition to the target figures that they had set for themselves for 2020. The idea for the 100 additional women full professors in the Westerdijk Year came from Athena's Angels. This programme was carried out by the Dutch Research Council (NWO) on behalf of the Ministry

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THE PROPORTION OF WOMEN SCIENTISTS AT UNIVERSITY MEDICAL CENTRES

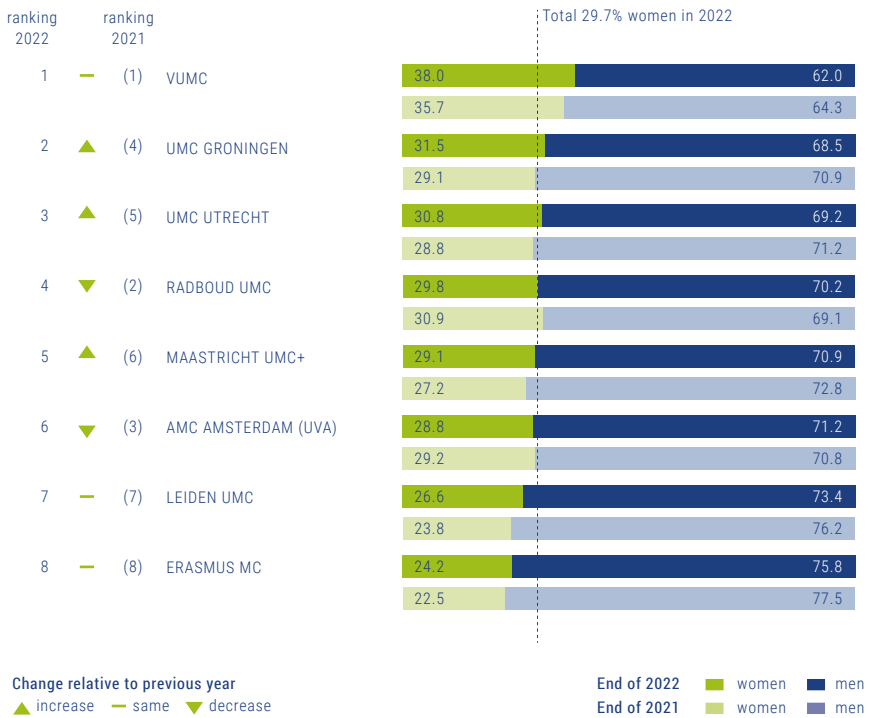
THE PROPORTION OF WOMEN SCIENTISTS AT UNIVERSITY MEDICAL CENTRES

The percentage of women full professors at the university medical centres increased from 28% in 2021 to 29.7% in 2022. This reflects an increase of 1.7 percentage points, as opposed to 1.6 percentage points last year. Six of the eight university medical centres experienced an increase in the percentage of women full professors. At Radboud UMC and at the Academic Medical Centre (AMC) this percentage decreased: from 30.9% to 29.8% and from 29.2% to 28.8%, respectively 📉.

In 2022, three university medical centres passed the 30% threshold: VUmc, UMCG and UMCU. Due to a decline of 1.1 percentage points in the percentage of women full professors, Radboud UMC ended up short of the 30% threshold. Erasmus MC took last place, with a percentage of 24.2%, just behind Leiden UMC with a percentage of 26.6%.

FIGURE 3.1

Percentage of men and women full professors at university medical centres, in number of people, in 2021 and 2022. From high to low, by percentage of women full professors in 2022.



Source: Provided by separate UMCs, in number of people, reference dates between 31 December 2020 and 1 July 2021 and between 31 December 2021 and 1 July 2022.

The percentages of women full professors at the university medical centres in 2021 and 2022 are presented in Table 3.1, along with the growth rate in the period 2021–2022^{1, 2}.

TABLE 3.1

Percentages of women full professors at each university medical centre in 2021 and 2022, in number of people, and growth in the percentage of women full professors (in percentage points) from 2021 to 2022.

	Percentage of women full professors in 2022	Percentage of women full professors in 2021	Growth in the percentage of women full professors (in percentage points) from 2021 to 2022
LEIDEN UNIVERSITY MEDICAL CENTRE	26.6	23.8	2.8
UNIVERSITY MEDICAL CENTRE UTRECHT	30.8	28.8	2.0
UNIVERSITY MEDICAL CENTRE GRONINGEN	31.5	29.1	2.4
ERASMUS MEDICAL CENTRE	24.2	22.5	1.7
MAASTRICHT UMC+	29.1	27.2	2.0
ACADEMIC MEDICAL CENTRE (UVA)	28.8	29.2	-0.4
VU UNIVERSITY MEDICAL CENTRE	38.0	35.7	2.3
RADBOUD UMC	29.8	30.9	-1.1
TOTAL	29.7	28.0	1.6

Source: Provided by separate UMCS, in number of people, reference dates between 31 December 2020 and 1 July 2021 and between 31 December 2021 and 1 July 2022.

1. Note: The data supplied by VUmc as well as those by AMC (Uva) include data concerning professors occupying an endowed chair as well.

2. In all universities except Maastricht University, the staff of the medical faculties has been transferred to the university medical centres from 1998 until the present. Maastricht University differs from the other universities in this regard. At the end of 2020, the percentage of women full professors at Maastricht University (not including the scientific field of Healthcare) amounted to 35.1% (in FTE), while the percentage of women full professors in the substantial scientific field of Healthcare at Maastricht University amounted to 25.8%. The percentage of women full professors including the scientific field of Healthcare at Maastricht University is 31.8%. In terms of number of people, at the end of 2021, there were still 67 men full professors and 25 women full professors within the scientific field of Healthcare at Maastricht University.

DEPARTMENT HEAD PROFESSORS AT THE UNIVERSITY MEDICAL CENTRES

The percentage of women department head professors increased from 17.7% to 21.3% relative to 2021. This increase was evident at all of the UMCs except at the Leiden UMC, where the percentage dropped from 15.4% to 12.8%.

The percentage of women full professors who are heads of departments within the UMCs varies strongly, from 12.8% at Leiden UMC to 43.2% at UMC Utrecht.

TABLE 3.2

Women and men department head professors, by UMC, and share of women department head professors, in number of people, in 2022.

	Women	Men	Total	Percentage of women
LEIDEN UNIVERSITY MEDICAL CENTRE	5	34	39	12.8
UNIVERSITY MEDICAL CENTRE UTRECHT	16	21	37	43.2
UNIVERSITY MEDICAL CENTRE GRONINGEN	7	32	39	17.9
ERASMUS MEDICAL CENTRE	6	35	41	14.6
MAASTRICHT UMC+	8	42	50	16.0
AMSTERDAM UMC	8	39	47	17.0
RADBOUD UMC	14	34	48	29.2
TOTAL	64	237	301	21.3

Source: Provided by separate UMCs, reference dates between 31 December 2021 and 1 July 2022, in number of people.

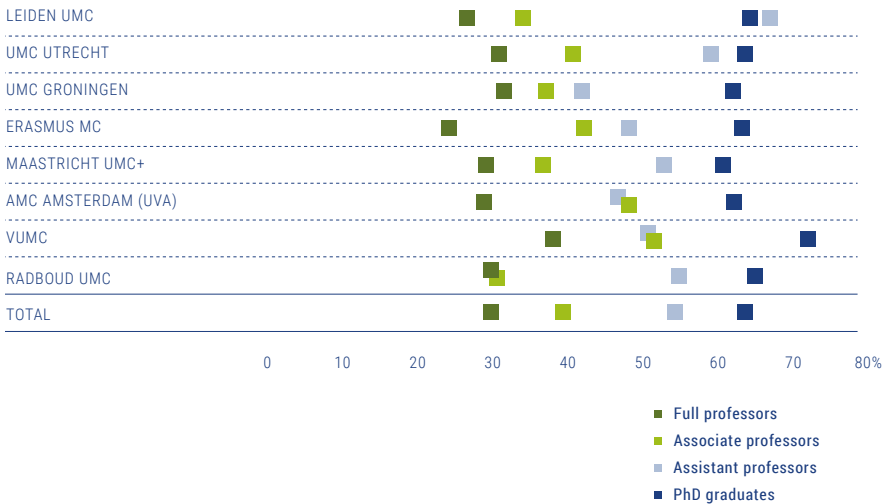
PERCENTAGE OF WOMEN BY JOB CATEGORY

The share of women was higher in all job categories for the UMCs as a whole than was the case for the universities. For purposes of comparison: at the universities, the percentage of women full professors was 26.7%, with 32.4% women associate professors, 44.5% women assistant professors and 44.5% women PhD graduates. The percentages at the UMCs were 29.7% (full professors), 39.4% (associate professors), 54.3% (assistant professors) and 63.6% (PhD graduates). It is interesting to note the extremely high percentage of women amongst the PhD graduates.

The difference between the percentage of women associate professors and women full professors at the UMCs was 9.7 percentage points compared to 5.3 percentage points at the universities. This resulted in a higher GCI for this job transition – see Figure 3.3 for further details.

FIGURE 3.2

Percentage of women by job category at each university medical centre, in number of people, in 2022.



Source: Provided by separate UMCs, reference dates between 31 December 2021 and 1 July 2022, in number of people.

GLASS CEILING INDEX

The Glass Ceiling Index (GCI) of each university medical centre reveals the job category that is accompanied by the greatest obstacles to advancement to the next job level. A higher number indicates a thicker glass ceiling.

The GCI for all job transitions at the UMCs as a whole is higher than 1.0. The GCI for the transition from PhD graduate to assistant professor and from assistant professor to associate professor is unchanged compared to last year. The GCI for the transition from associate professor to full professor declined from 1.4 in 2021 to 1.3 in 2022.

At the individual UMCs we notice that the GCI for the job transition from PhD graduate to assistant professor was a neutral GCI of 1.0 at Leiden UMC, just as it was last year. At the other UMCs this GCI was above 1.0.

The GCI for the job transition from assistant professor to associate professor was 1.0 at both the AMC (UvA) and the VUmc, while it had been 1.1 last year. The highest GCI for this job transition, namely 2.0, was observed at Leiden UMC. At 1.9, Leiden UMC also had the highest GCI in 2021.

The GCI for the job transition from associate professor to full professor declined slightly compared to 2021 at five of the UMCs. Maastricht UMC+, AMC and VUmc saw a slight increase in the GCI.

TABLE 3.3

GCI for women at each UMC, in number of people, in 2022³.

	phd graduate to assistant professor	assistant professor to associate professor	associate professor to full professor
LEIDEN UNIVERSITY MEDICAL CENTRE	1.0	2.0	1.3
UNIVERSITY MEDICAL CENTRE UTRECHT	1.1	1.5	1.3
UNIVERSITY MEDICAL CENTRE GRONINGEN	1.5	1.1	1.2
ERASMUS MEDICAL CENTRE	1.3	1.1	1.7
MAASTRICHT UMC+	1.1	1.4	1.3
ACADEMIC MEDICAL CENTRE (UVA)	1.3	1.0	1.7
VU UNIVERSITY MEDICAL CENTRE	1.4	1.0	1.4
RADBOUD UMC	1.2	1.8	1.0
TOTAL	1.2	1.4	1.3

Source: Provided by separate UMCs, reference dates between 31 December 2021 and 1 July 2022, in number of people.

3. The calculation of the GCI based on FTE is more accurate than the calculation based on number of people. No data on FTE were available for the university medical centres, however. The GCI scores based on number of people must therefore be interpreted as indicative of the UMCs.

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WOMEN AT THE HIGHEST LEVELS OF ACADEMIC MANAGEMENT AND GOVERNANCE IN SCIENTIFIC ORGANISATIONS

ACADEMIC MANAGEMENT AT UNIVERSITIES

In addition to having insight into the composition of scientific staff, it remains important to consider the gender distribution in management roles and decision-making positions. However, data regarding academic management is not readily available or only to a limited extent. The data presentation below is based on data from 12 of the 14 universities, with data from 4 universities having been obtained through separate requests, as these universities no longer provide the data as standard in WOPI. From the available data we can observe the percentages of women in the ranks of deans and directors of research and educational institutes.

The percentage of women in the ranks of deans was significantly higher at the end of 2021 than it was at the end of 2020. It increased from 20.1% to 29.7%. At present, almost one in three deans is a woman.

Amongst the directors of educational institutes, the percentage of women increased from 43.2% to 53.5% in the past year. An increase can also be observed amongst the directors of research institutes: from 20.3% to 25.0%. Although the number of directors of research institutes shows a reasonable increase, it remains clear that women are better represented in education than they are in research and integrated management. Considering the reputation, authority and actual influence of these roles, women are more strongly represented in the roles with less influence.

FIGURE 4.1

Share of women and men in academic management at 12 of the 14 Dutch universities, end of 2021, in FTE.



Source: UNL, WOPI (8 universities), separate request (4 universities), end of 2021, in FTE. Excluding scientific field Healthcare.

PERCENTAGES OF WOMEN ON THE EXECUTIVE BOARDS AND SUPERVISORY BOARDS

UNIVERSITIES

Executive Boards

The Executive Boards of the Dutch universities comprise a total of 40 administrative positions. Of these 40 positions, 17 are held by women, and 23 are held by men. The number of women has increased by 1 (from 16 to 17) compared to 2021. The number of male members of Executive Boards has decreased from 24 to 23. This has brought the average percentage of women on Executive Boards in 2022 to 42.5%. This represents an increase of 2.5 percentage points compared to 2021 (40.0%).

Supervisory Boards

The Supervisory Boards comprise a total of 69 administrative positions. In 2022, 33 of these positions were held by women, and 36 were held by men. This brings the percentage of women on Supervisory Boards to 47.8%. This represents a decrease of 1.5 percentage points compared to 2021. Assuming the decrease does not continue, an equal gender distribution does not seem too far off.

FIGURE 4.2

Number of women and men on Executive Boards and Supervisory Boards of Dutch universities in 2022.

17 of the 40 positions on university Executive Boards are filled by women



■ women ■ men

33 of the 69 positions on university Supervisory Boards are filled by women



Source: Websites of Dutch universities, reference date 29 August 2022, in number of people.

TABLE 4.1

Number of women and men on Executive Boards and Supervisory Boards of Dutch universities in 2022.

	Executive Boards		Supervisory Boards	
	W	M	W	M
LEIDEN UNIVERSITY	2	1	2	3
UTRECHT UNIVERSITY	1	2	3	2
UNIVERSITY OF GRONINGEN	1	2	2	3
ERASMUS UNIVERSITY ROTTERDAM	2	1	2	3
MAASTRICHT UNIVERSITY	2	1	3	2
UNIVERSITY OF AMSTERDAM	1	1	2	3
VU AMSTERDAM	1	2	3	2
RADBOUD UNIVERSITY NIJMEGEN	1	2	2	2
TILBURG UNIVERSITY	2	1	1	3
DELFT UNIVERSITY OF TECHNOLOGY	1	2	2	3
EINDHOVEN UNIVERSITY OF TECHNOLOGY	1	2	3	2
UNIVERSITY OF TWENTE	1	2	2	3
WAGENINGEN UNIVERSITY & RESEARCH	1	2	3	3
OPEN UNIVERSITY	0	2	3	2
TOTAL	17	23	33	36
PERCENTAGE OF WOMEN	42.5		47.8	

Source: Websites of Dutch universities, reference date 29 August 2022 in number of people.

UNIVERSITY MEDICAL CENTRES

Executive Boards

In 2022, the total number of Executive Board members at the Dutch university medical centres remained the same as in 2021: 30. Of the 30 members of the Executive Boards, 12 were women and 18 were men. This amounts to 40.0%. This is a sharp decline from the 46.7% women members in 2021 📉.

Supervisory Boards

The Supervisory Boards of the Dutch university medical centres comprise a total of 38 members. This represents a decline of 1 since last year. The proportion of women was 43.6% in 2021. With 19 positions held by women and 19 by men, an equal gender distribution has been achieved for the first time.

FIGURE 4.3

Number of women and men on Executive Boards and Supervisory Boards of the University Medical Centres in 2022.



Source: Websites of Dutch university medical centres, reference date 9 August 2022, in number of people.

TABLE 4.2

Number of women and men on Executive Boards and Supervisory Boards of Dutch university medical centres in 2022

	Executive Boards		Supervisory Boards	
	W	M	W	M
LEIDEN UNIVERSITY MEDICAL CENTRE	0	4	2	3
UNIVERSITY MEDICAL CENTRE UTRECHT	2	2	3	3
UNIVERSITY MEDICAL CENTRE GRONINGEN	2	2	3	2
ERASMUS MEDICAL CENTRE	1	3	2	4
MAASTRICHT UMC+	3	2	2	2
AMSTERDAM UMC ¹	2	3	4	3
RADBOUD UMC	2	2	3	2
TOTAL	12	18	19	19
PERCENTAGE OF WOMEN	40.0		50.0	

Source: Websites of Dutch university medical centres, reference date 9 August 2022, in number of people.

1. The Academic Medical Center and the VU Medical Center merged to form Amsterdam UMC on 7 June 2018, and they have a joint Executive Board.

ROYAL NETHERLANDS ACADEMY OF ARTS AND SCIENCES (KNAW)

Members

The KNAW has a total of 620 members, 132 (21.3%) of whom are women. This represents an increase of 2.1 percentage points compared to 2021 (19.2%). With regard to members, the skewed male/female ratios within the domains of Medical, Biomedical and Health Sciences and the Natural Sciences and Technology stand out.

Management and governance

The governance of the KNAW consists of the president, two vice presidents (one of whom is also the general secretary) and four Board members who are also Domain Directors. The governance of the KNAW comprises a total of seven positions, three of which are filled by women, and four filled by men. In addition, the KNAW has a general director. This position is filled by a woman. Since 1 September 2022, the position of vice president has also been filled by a woman.

FIGURE 4.4

Number of women and men in the management and governance of the Royal Netherlands Academy of Arts and Sciences (KNAW) in 2022.



Source: KNAW Office, reference date 29 August 2022, in number of people.

TABLE 4.3

Number of women and men in the management, governance and membership of the Royal Netherlands Academy of Arts and Sciences (KNAW) in 2022.

	W	M
General Director	1	
Executive Board	3	4
President	1	
Vice president (W from 1 September 2022)	1	1*
General Secretary*		1
Members	1	3
Members		
Humanities	41	89
Behavioural & Social Sciences and Law	45	97
Medical, Biomedical and Health Sciences	20	81
Natural Sciences and Engineering	26	221

*Note: The general secretary of the KNAW is also the vice president.

Source: KNAW Office, reference date 29 August 2022, in number of people.

THE YOUNG ACADEMY

The executive board of The Young Academy consists of 3 women (60%) and 2 men (40%). In total, The Young Academy has 50 members. Of those, 29 are women, which amounts to 58%. This represents an increase of 2 percentage points compared to last year. Of the 160 total alumni of The Young Academy, 68 (42.5%) are women and 92 (57.5%) are men.

FIGURE 4.5

Number of women and men members of The Young Academy in 2022.

100 of the 215 members (including Board and alumni) of The Young Academy are women



Source: KNAW Office, reference date 29 August 2022, in number of people.

TABLE 4.4

Number of women and men members of the Executive Board, members and alumni of The Young Academy in 2022.

	W	M
Executive Board	3	2
Members	29	21
Alumni	68	92

Source: KNAW Office, reference date 29 August 2022, in number of people.

DUTCH RESEARCH COUNCIL (NWO)

The administrative structure of the NWO consists of an Executive Board, a Supervisory Board and four domain boards. The Executive Board consists of six positions, three of which are filled by men and three of which are filled by women. The President of the Executive Board is a man. The Supervisory Board has 5 members: 2 women and 3 men. As with the Executive Board, the President of the Supervisory Board is a man.

The following can be observed with regard to the domain boards:

Exact and Natural Sciences Domain:	7 positions, 3 of which are filled by women and 4 of which are filled by men
Social Sciences and Humanities Domain:	8 positions, 5 of which are filled by women and 3 of which are filled by men
Applied and Engineering Sciences Domain:	8 positions, 3 of which are filled by women and 5 of which are filled by men
Netherlands Organisation for Health Research and Development (ZonMw):	9 positions, 5 of which are filled by women and 4 of which are filled by men

Note: The domain directors (2 women and 2 men) serve as both domain directors and members of the Executive Board. The total is based on the summed total of positions, in which domain directors are counted twice. The NWO thus has 38 administrative positions, which are filled by 34 people.

FIGURE 4.6

Number of men and women serving in administrative positions (excluding the Supervisory Board) of the Dutch Research Council in 2022.

19 of the 38 administrative positions within NWO are filled by women



Source: NWO Executive Board Bureau, reference date 1 September 2022, in number of people.

TABLE 4.5

Number of women and men serving in administrative positions (excluding the Supervisory Board) of the Dutch Research Council in 2022.

	W	M
Executive Board		
President		1
Portfolio holder for Operations and Finance	1	
Domain Directors	2	2
Domain Boards		
Domain Board for the Exact and Natural Sciences	3	4
Domain Board for the Social Sciences and Humanities	5	3
Domain Board for the Applied and Engineering Sciences	3	5
Domain Board for the Netherlands Organisation for Health Research and Development (ZonMw)	5	4

Source: NWO Executive Board Bureau, reference date 1 September 2022, in number of people.

— 5 —

SUPPORT AND MANAGEMENT STAFF COMPARED TO ACADEMIC STAFF

THE INCREASE IN THE SHARE OF WOMEN IN THE MANAGEMENT AND SUPPORT STAFF AND IN THE ACADEMIC STAFF IS CONTINUING

Between the end of 2020 and the end of 2021, the total FTE in management and support staff increased by 979.9 FTE, of which 638.2 was for women and 339.2 for men. The category 'Other' gained 2.5 FTE¹. The proportion of women in management and support staff at the end of 2021 was 56.7%. This is an increase of 0.4 percentage points compared to the year before.

TABLE 5.1

Number of Management and support staff members by gender and growth, end of 2017–2021, in FTE.

	Management and support staff (W)	Management and support staff (M)	Management and support staff (Other)	Total	Growth (W)	Growth (M)	Other	Growth (Total)	Percentage of women
2017	9,983.9	8,352.3		18,336.1	383.2	182.9		566.1	54.4
2018	10,392.5	8,424.7		18,817.2	408.7	72.4		481.1	55.2
2019	10,962.9	8,692.9		19,655.8	570.4	268.2		838.6	55.8
2020	11,532.4	8,965.0		20,497.5	569.6	272.1		841.7	56.3
2021	12,170.7	9,304.2	2.5	21,477.4	638.2	339.2	2.5	979.9	56.7

Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

It is not only within management and Support staff that the number of FTE has increased, but also in academic staff. Between the end of 2020 and the end of 2021, Academic staff grew by 1,545.7 FTE. Of these FTE, 946.3 was for women and 599.3 for men. Between 2020 and 2021, the proportion of women in academic staff increased from 41.0% to 42.0%.

1. Given the sector-wide presentation and slightly greater availability of data, the category 'Other' is also included here. Due to possible traceability this was not done elsewhere in this Monitor. See Appendix 1 for further explanation regarding this category.

TABLE 5.2

Numbers of academic staff members by gender and growth, end of 2017–2021, in FTE.

	Academic staff (W)	Academic staff (M)	Academic staff (Other)	Total	Growth (W)	Growth (M)	Other	Growth (Total)	Percentage of women
2017	9,940.2	15,540.5		25,480.8	316.4	316.5		632.9	39.0
2018	10,269.9	15,721.6		25,991.5	329.7	181.0		510.8	39.5
2019	10,781.7	16,301.1		27,082.8	511.7	579.5		1,091.3	39.8
2020	11,872.1	17,069.4		28,941.5	1,090.4	768.3		1,858.7	41.0
2021	12,818.4	17,668.7	7.5	30,494.6	946.3	599.3	7.5	1,545.7	42.0

Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

During the same period, the number of students at the universities increased by 12,386 (in number of people). This makes it worthwhile to consider what the ratio of academic staff and management and support staff to students is, as well as how these ratios have developed in the past five years. Table 5.3 shows that academic staff and management and support staff have not grown apace with the growth in student numbers. The academic staff/student ratio, management and support staff/student ratio and the academic and management and support staff/student ratio have all declined compared to five years ago. The growth in numbers of academic staff and management and support staff is not keeping up with the growth in student numbers.

TABLE 5.3

Number of students, academic staff and management and support staff, and ratio between academic staff and management and support staff and the number of students, and three more ratios, end of 2017 through end of 2021.

	Students	Academic staff	Management and support staff	Academic staff/student ratio	Management and support staff/academic staff ratio	Management and support staff/student ratio	(Management and support staff+academic staff)/student ratio
2017	242,798	25,480.8	18,336.1	0.1049	0.7196	0.0755	0.1805
2018	256,704	25,991.5	18,817.2	0.1013	0.7240	0.0733	0.1746
2019	268,177	27,082.8	19,655.8	0.1010	0.7258	0.0733	0.1743
2020	290,616	28,941.5	20,497.5	0.0996	0.7082	0.0705	0.1701
2021	303,002	30,494.6	21,477.4	0.1006	0.7043	0.0709	0.1715

Source: UNL, WOPI, reference date 31 December, in FTE. Excluding scientific field Healthcare.

Source of information on students: 1cHO2017, 1cHO2018, 1cHO2019, 1cHO2020, 1cHO2021, reference date 1 October, in number of people.

APPENDIX 1 – SOURCE DATA

Universities

Since 1990, universities have been collecting staff data in a structured manner and according to a fixed reference date (31 December). This data collection has been coordinated by the UNL since 1999 and is termed WOPI (Wetenschappelijk Onderwijs Personeelsinformatie - Scientific Education Personnel Information). The information in this Monitor is based on this. The files contain data on staff **employed** by universities, categorised since 2003 in UFO profiles (profiles from the university job classification system). The WOPI data on personnel are collected both in numbers of people and in FTE, based on the scope of the employment contract(s). FTE stands for full-time equivalent and is a unit of account that can be used to express the extent of a contract of employment. A full-time working week equals 1 FTE. Until 2003, the data on personnel in the WOPI were collected exclusively in FTE. Beginning in 2003, the WOPI data have been collected in both FTE and number of people. For this reason, it is not possible to present information on the number of people for the period before 2003.

UNL WOPI variable 'Origin' and category 'Other' of the variable 'Gender'

The variable Origin in WOPI is based on the nationality as per passport as entered in the registration systems of the universities. The following categories of origin are used in the WOPI data available to LNVH, and are exclusive: Dutch, EEA (excluding NL), European non-EEA, Non-European and Unknown. In order to prevent traceability of individuals, LNVH reports at sector level and not at institutional level.

In the WOPI data to the end of 2020, the United Kingdom was included in EEA. At the end of 2021, the United Kingdom was moved to non-EEA in the WOPI data. Due to this "Brexit shift", the comparison of the categories EEA and European non-EEA between the end of 2021 and prior years has not given a very clear picture. For this reason, the analyses for the category EEA and European non-EEA for the 2022 Monitor are limited to the data for the end of 2021.

At the end of 2021, the variable 'Gender' in WOPI included the category 'Other' in addition to the categories M and W. The category 'Other' was used in the WOPI data by a number of institutions. However, the numbers of FTE and people in the category 'Other' are so small that, with the exception of a few sector-level overviews, we have not included them separately in this monitor to avoid traceability. The percentages of men and women that are presented are based on the totals including the category 'Other'. The LNVH calls for this category to be renamed, as 'Other' still reads as 'outside the norm'.

Students and graduates

Data on students and graduates comes from the Central Register of Higher Education Enrolments (CRIHO), which includes data on inflow, enrolment and exams. For students, it concerns main enrolments on 1 October of the year in question. For graduates, it contains Master's and doctoral degrees awarded in each academic year. Of the students enrolled on the reference date of 1 October 2021, 98.4% were studying fulltime, 1.4% part-time and 0.2% in work-study arrangements.

University Medical Centres

With the transition of almost all staff from university medical faculties to university medical centres from 1998 to the present, the entire scientific field of Healthcare in WOPI has been lost. Data on the vast majority of that field of science in this Monitor have been provided by the individual university medical centres. The remaining personnel data in the HOOP field of Healthcare in the WOPI data have not been taken into account in this Monitor.

Scientific fields

The Higher Education and Research Plan (HOOP) of the Ministry of Education, Culture and Science includes a division into scientific fields. These scientific fields are also known as HOOP areas. The HOOP distinguishes nine areas of study: Agriculture, Natural Sciences, Technology, Economics, Law, Healthcare, Behavioural & Social Sciences, Language & Culture and Education. The students and graduates are classified in the source files according to the nine areas of study. In the WOPI files, university staff is divided into eight areas plus a 'Miscellaneous' category. The field of Education is not used for the classification of university staff. Where reference is made in this Monitor to scientific disciplines or fields, this refers to the HOOP fields. Only those students and full professors who are affiliated with a single scientific field are included in the analyses according to scientific field. In the case of students, the field of Education has been excluded, and in the case of professors, the Miscellaneous category has been left out, unless otherwise stated.

Academic management and scientific organisations

With respect to academic management and scientific organisations, this Monitor is based on data published on the websites of the organisations in question. Data on the ratio of men to women in the ranks of deans, directors of research institutes and directors of educational institutes in 8 of the 14 universities are available from the WOPI data for the purposes of the Monitor, and for 4 universities these data were obtained through separate requests. At the other two universities, the registration of these position classifications does not take place in a form that can be included in the data for WOPI.

APPENDIX 2 – COOPERATING PARTNERS

Dutch Network of Women Professors (LNVH)

www.lnvh.nl

The LNVH foundation is a networking and knowledge organisation which aims to promote a proportional representation of women in science, to improve the position of women in science from all disciplines and backgrounds, and to ensure an inclusive and safe academy in which equal pay is the norm. The LNVH tries to achieve these goals through efforts including strengthening the bond between women scientists in the Netherlands. In addition, the LNVH is committed to promoting the advancement of women to higher academic ranks (both scientific and administrative top positions), as well as preventing the premature outflow of women. In order to achieve these objectives, the LNVH is involved in:

- Policy development, policy influence and the establishment and support of projects relating to the advancement and appointment of women academics.
- Monitoring the career advancement of women scientists by publishing relevant figures in the Women Professors Monitor.
- Publishing research reports on relevant themes related to gender diversity.
- Chairing the platform of advisors and policy makers for gender/diversity/talent policy of all Dutch universities and university medical centres, NWO and KNAW.
- Relationship management with national and international organisations both within and outside the academic community.
- The nomination of women scientists for science awards, prizes, grants and positions.
- Organising mentoring, peer support, workshops, conferences and symposiums.
- Increasing the visibility of our own network and the impact of our activities.
- Initiating networks and identifying best practices.

Universities of the Netherlands (UNL)

www.unl.nl

Universities of the Netherlands (UNL) manages and develops information on education, research, personnel and finance for policy development, accountability, benchmarking and quality assurance. Key figures in the field of personnel are part of the WOPI file (*Wetenschappelijk Onderwijs Personeelsinformatie - Scientific Education Personnel Information*).

Netherlands Federation of University Medical Centres (NFU)

www.nfu.nl

The Netherlands Federation of University Medical Centres (NFU) represents the eight collaborating UMCs in the Netherlands, as an advocate and employer of 65,000 people. In doing so, the NFU is committed to the continuity of care and the safety of patients with often serious, rare and difficult to treat conditions. The partnership provides the UMCs with even more opportunities to treat their patients according to the latest insights of medical science, to give care providers forward-looking training and to conduct scientific research on a global scale. Leading motives include a sense of responsibility for patients and the ambition to innovate.

SoFoKles

The 2022 Monitor was co-financed by a contribution from SoFoKles.

The Social Fund for the Knowledge Sector (SoFoKles) sponsors projects and research and subsidises activities in the academic labour market. The fund shares its knowledge with the Dutch universities, research institutes and university medical centres (UMCs).

De Beauvoir Foundation – in remembrance

Since 2003, the Women Professors Monitor has been published every three years by the De Beauvoir Foundation, in collaboration with the Dutch Network of Women Professors (LNVH). In 2015, the LNVH incorporated the De Beauvoir Foundation. The 'De Beauvoir Monitor' has thus become the 'LNVH Women Professors Monitor'. The LNVH is very grateful to the De Beauvoir Foundation for all that the Foundation and the Board of the Foundation have done for the advancement of women to the higher echelons of science.

PUBLISHER'S DETAILS

Composition

Lidwien Poorthuis has been employed by the Dutch Network of Women Professors since October 2013 as the managing director and as a senior policy officer. In this position, she has also been responsible for the composition and development of the Women Professors Monitor.

Thea Verdonk worked at the VSNU (currently UNL) from 2007 to 2011, during which time her responsibilities included the management and development of the WOPI file, the main source file for the Monitor. She is also a coach with DPM-Coaching, with a focus on coaching with regard to giftedness, as well as stress and burn-out-related problems.

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