closingap

Executive Summary

October 2022

ClosinGap: the opportunity cost of the gender gap in digital professions

This report, the **fourteenth** in a series of monographic studies, analyses the **gender gap in digital professions,** while seeking to encourage the debate that our society needs in order to learn from evidence and to implement measures to correct currently existing inequalities.

Despite the first things that spring to mind when talking about digital professions are those related to engineering, computing or mathematics, new professions have appeared on the scene in recent years that are not related to those branches in which digital competence is highly relevant. In addition to gaining importance, these professions are going to be the "professions of the future". These professions of the future include, among others, those related to data science, web development, e-commerce management, cybersecurity, digital marketing or social media management and the digital experience of companies.

Nevertheless, one of the first difficulties encountered in this study is the fact that some of those professions are not even identified as such in employment statistics, i.e., they are grouped together in a general category. Consequently, we shall follow our own methodology in which an estimation will be made concerning the people who work in these professions, who we shall refer to as "people employed in digital professions", and which will describe people who are engaged in digital positions and who have also been educated in digital disciplines.

Causes of inequality between women and men in digital professions

No biological causes have been identified that could explain the existing gender gaps in digital professions, but rather they are the product of social construction, convention or practices that are a part of the collective mindset that is deeply rooted throughout society. The following are therefore the fundamental causes of gender inequality that have been observed in digital professions:

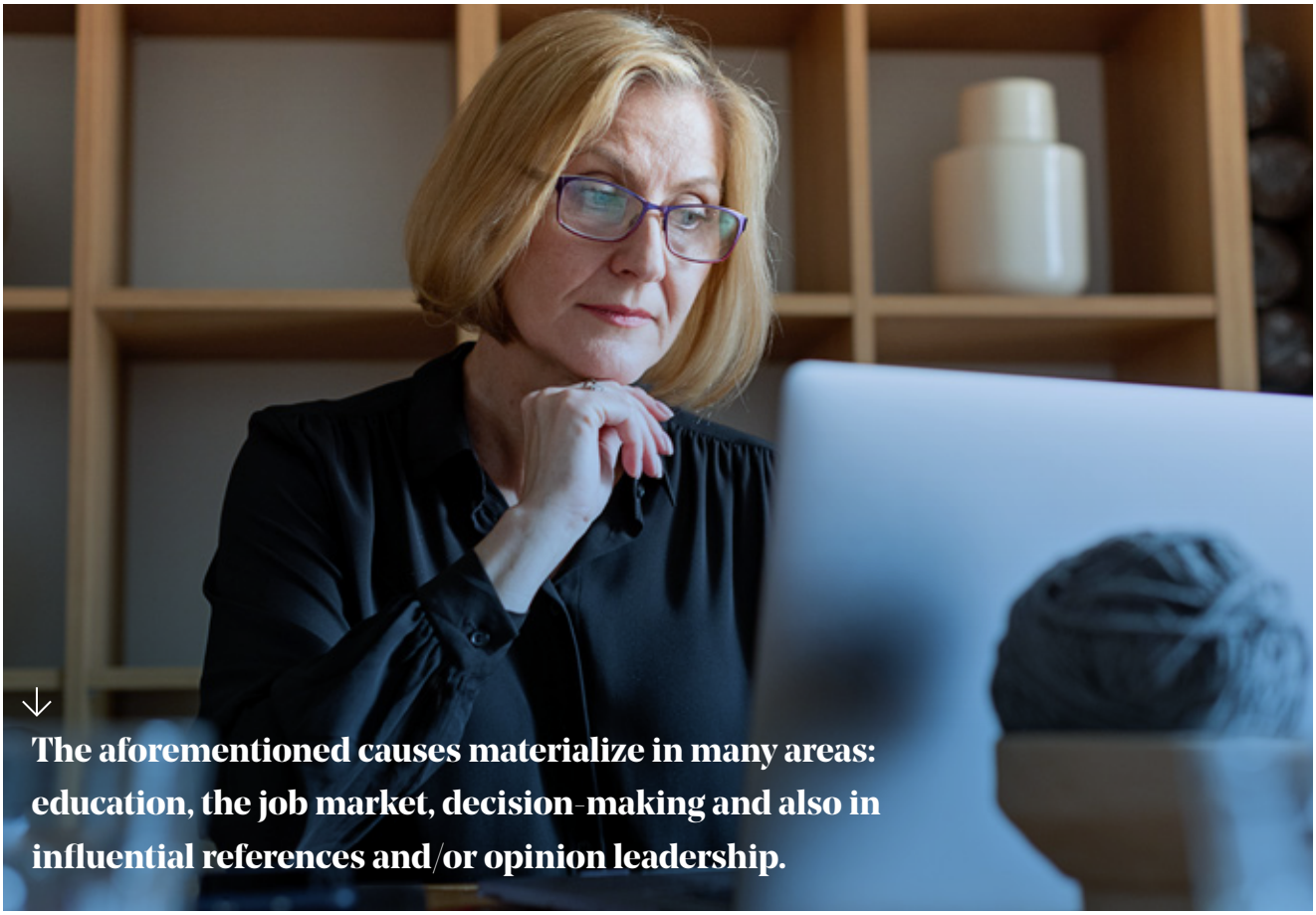
- Insufficient joint responsibility in the home regarding caring and household chores, which is unequally distributed among women and men (as analysed in detail in the Closingap Conciliation Report).
- Gender stereotypes that condition the perception, expectations and decision-making by men and women in their educational stages and careers.
- The persisting imbalance regarding the presence of influential female references in visible areas, public acclaim and relevance.

Effects of the gender gap in digital professions

Whenever behaviour patterns between men and women differ due to non-natural causes, such as the case we are dealing with, there is said to be a gender gap.

The aforementioned causes materialize in many areas related to the choice and exercising of a profession. They materialize at a very early age, starting in educational environments when people begin to make choices from among the available training itineraries, i.e., during compulsory secondary education. They continue to materialize in the job market, where difficulties are anticipated to produce talent at the rate new jobs are created in order to deploy the digital economy, and in areas and instances where decisions are made, including investment in digital entrepreneurialism, and in public areas where people arise as influential references and/or opinion leaders, which condition (or feed) the training or career choices of other people at the aforementioned early ages.

This opportunity cost is calculated on the basis of an estimation that different effects caused by the gender gap in digital professions have on the economy and the wellbeing of society as a whole, through the effects on how resources are assigned, the degree of participation and conditions of participation in the job market, harnessing of talent and the availability and use of resources, just to mention the most relevant ones.



The aforementioned causes materialize in many areas: education, the job market, decision-making and also in influential references and/or opinion leadership.

The following effects are emphasized:	Opportunity cost	
Digital skills	**Personal / family environment**	**Economy and society as a whole**
The Spanish population improved its digital skills during the pandemic (2019 vs. 2021).	Job searches on the Internet: 19.2% vs 2.0% / Videocalls: 80.0% vs 60.7% / Change of software settings: 46.6% vs 25.9% / Online purchases: 93.2% vs 63.7% / Advanced spreadsheet functions: 59.7% vs 27.5%.	
The previously existing gender gap is maintained (and is even higher) after the pandemic.	Use of e-mail: 0.94 vs 0.97; Searches for information on health: 0.93 vs 1.20; Programming: 0.42 vs 0.51; Online banking: 0.91 vs 0.95.	
The gender gap was closed in some activities during the pandemic.	W/M ratio of advanced use of Excel 2021 vs. 2019: 0.98 vs 0.76; searches for information on goods and services: 1.11 vs 0.99; searches for jobs via the Internet: 1.23 vs 0.90; online purchases: 1.02 vs 0.97; music, video and photograph editing: 0.99 vs 0.93.	
Training	**Personal / family environment**	**Economy and society as a whole**
Women choose digital professional training disciplines less often than men at Vocational Training, Intermediate and Advanced Level Training Cycles.	Vocational Training Registrations (general): W: 45.3% M: 54.7% / Vocational Training (non-digital disciplines): W: 55.0% M: 45.0% Vocational Training (digital disciplines): W: 22.1% M: / Intermediate Level Training: W: 8.7% M: 91.3% / Advanced Level Training: W: 28.7% M: 71.3%	
Women form the majority in Vocational Training distance learning.	Distance learning Vocational Training registrations: W: 19.9% M: 10.2%	
Women do not choose digital studies at University.	University Degree registrations (general): W: 751.0 thousand (56%) / M 589.2 thousand (44%) Degree registrations (digital disciplines): W: 112.3 thousand (14.9%) / M 208 thousand (35.9%) Master's Degree registrations (digital disciplines): W: 42.2 thousand (18.0%) / M 66.9 thousand (38.1%) Degree graduates (digital disciplines): W: 27 thousand (21.7%) /M 36 thousand (43%) Master's Degree graduates (digital disciplines): W: 11.4 thousand (14.7%) /M 16 thousand (30.3%)	

	Opportunity cost	
Training	**Personal / family environment**	**Economy and society as a whole**
Women complete their university studies more often and quicker than males, including studies in digital disciplines.	Graduates (course per year) Degree (general): W: 16.1% / M 12.5% Graduates (course per year) Degree (digital disciplines): W: 27.4% / M 18.1% Graduates (course per year) Master's Degree (digital disciplines): W: 52.5% / M: 43.4%	

Employability and entrepreneurialism	**Personal / family environment**	**Economy and society as a whole**
Women are under represented in digital professions.	People employed in digital professions: W: 295,000 (3.2%) / M: 875,000 (8.2%). Among the people employed in digital professions women account for 25.2% of the total.	If the growth rate of employment in digital jobs among women is not promoted (or at least maintained at the same rate as in the last two years), the opportunity cost of the digital talent gap for the Spanish economy as a whole will increase to 71,700 million Euros by 2053, which is the equivalent to 6.4% of the 2021 GDP.
The presence of women in digital jobs of the future is currently very limited.	% women in jobs related to cybersecurity, blockchain, artificial intelligence, robotics or the videogame industry <25%.	
The gender gap in digital professions is lower in younger age groups.	People employed in digital professions (aged 26-35 years): W: 4.5% / M: 10.8% People employed in digital professions (aged 56-65 years): W: 1.2% / M: 4.9%.	
The gender gap in digital professions closes in line with education level.	People employed in digital professions with a Master's Degree: W: 10.5% / M: 22.0% / Bachelor's Degree: W: 7.0% / M: 20.7% (VT): 2.3% / M: 14.9%	
Temporary and part time employment is lower in digital professions, but the gender gap is wider.	Temporary digital employment: W: 17.9% / M: 12.1% / Non-digital: W: 26.8% / M: 24.3%. Part time digital employment: W: 6.8% / M: 2.1% / Non-digital: W: 23.7% / M: 7.4%	
Access to funding for digital entrepreneurialism is limited for women.	3% of start-up funding transactions are assigned to all-women teams, 13% to mixed teams whereas 84% is assigned to all-male teams.	
Growth in employment of women in digital jobs is fundamental to close the digital talent gap in the Spanish economy, and also the gender gap.	The number of women employed in digital professions grew at a yearly rate of 5.6% between 2019 and 2021, and by 2.1% among males.	

	Opportunity cost	
Public visibility	**Personal / family environment**	**Economy and society as a whole**
Not enough women hold university chairs, and even fewer are held in digital disciplines.	Total university Lecturing and Research Staff (LRS): W: 42.6% / M: 57.4% Public LRS employees: 35.6% women LRS vs. 45.0% male PRS. LRS in digital disciplines: W 24% vs H 76% Total university chairs: W 26.0% vs. M 74.0% / Digital discipline chairs: W 21.8% vs. M 78.2% (Computing) / W 22.8% vs. M 77.2% (Engineering, industry, construction).	
It will be hard to close the future gender gap in university teaching if there are less female PhD graduates than male graduates in digital disciplines.	Approved doctoral theses (total university): W: 48.0% / M: 52.0% / (digital disciplines): W: 32.8% / M: 2.% / (only IT): W: 20.0% / M: 80.0%.	
There is a gender gap in digital environments, in terms of recognition and security.	Creators of digital content: W: 6.4% / M: 11.0%. Remuneration (Euros) in digital content (influencers): W: 1,935 euros/post / M: 2,518 euros/post. They avoid sharing digital content because of concerns for privacy and security: W: 60.0% / M: 47.8%. They block online profiles due to harassment: W: 43.5% / M: 39.6%. They claim to be afraid to become victims of hate speech: W: 44.1% / M: 37.8%. People who claim to be gamers: W: 48.0% / M: 52.0%. People employed in the videogame industry: W: 23.0% / M: 77.0%.	
The people who head up the main digital corporations are not women.	In the 2019 Forbes list of the top 100 digital companies, there was only one female CEO, ranked in position 30.	

	Opportunity cost	
Hybrid work	**Personal / family environment**	**Economy and society as a whole**
There is no gender gap in regard to work preferences. But there is in terms of effective performance.	Employees who state: - that they are able to work remotely: W: 38.1% / M: 32.5% - remote work: W: 47.5% / M: 52.9% - that even though they could work remotely, they do not because their companies do not have sufficient technology resources: W: 16.3% / M: 14.1% - that even though they could work remotely, their home is not suitable for this purpose: W: 9.2% / M: 12.7%	
Women and men differ in terms of the disadvantages of remote working: overload and lack of technical resources for it; worse organization and coordination by males.	Feeling of work overload due to remote working: W: 91.2% / M: 45.1%.	

01

Gap 1. Digital skills: Spanish society is more digital after COVID-19, and although some gender gaps are narrowing, others remain.

An analysis of digital skills in the Spanish population is crucial because of the effects they can have on participation and current and future performance in the job market, and this fact is particularly relevant for new generations, since they will be immersed in a hyper-digitized economy and society. Digital skills can be defined as the ability to access, manage, understand, integrate, communicate, assess and create information securely and appropriately through digital channels with the aim of taking part in business and social activities (West et al., 2019[1]).

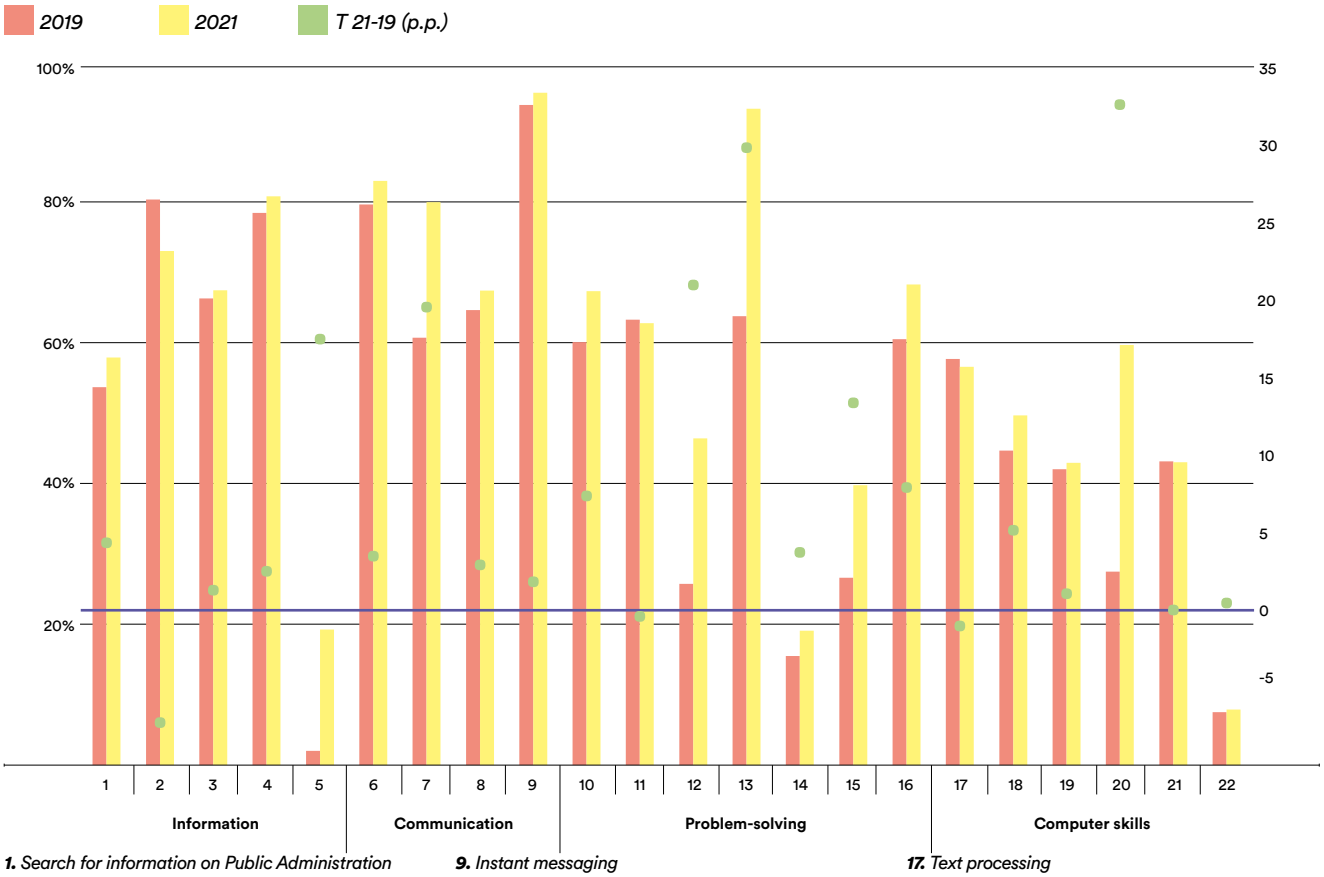
Through a survey on equipment and use of ICT in households (hereinafter, ICT Survey in households), the Spanish National Statistics Institute (INE) permits analysing the gender gap in regard to digital skills based on indicators that attempt to reflect the level of development of these skills in the population.

The data show that digital skills among the Spanish population improved significantly between 2019 and 2021 in regard to all skill sets: communication, information, problem solving and computer skills. This improvement is notable in the advanced use of Excel, changes to software settings and activities performed via the Internet such as purchases, job seeking and above all the use of telephony (videocalls); the latter being used by 61% of the population; around 20 percent higher than before the pandemic.

1 *West, M., Kraut, R., & Ei Chew, H. (2019). I'd blush if I could: closing gender divides in digital skills through education. UNESCO. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000367416*

Figure 1. Population who put into practice the synthetic digital skills index indicators (%, left), 2019 and 2021, and variations between the two years (p.p., right).

Source: Afi, from microdata taken from the Survey on equipment and use of ICT in households (INE)



1. *Search for information on Public Administration websites.*
2. *Search for information on goods and services*
3. *Search for information on health*
4. *Reading online media*
5. *Job searches on the Internet*
6. *E-mail*
7. *Telephone calls via the Internet*
8. *Social Media*
9. *Instant messaging*
10. *File transfer between computers and other devices*
11. *Installing software or Apps*
12. *Changing software settings*
13. *Online shopping*
14. *Online sale of goods and services*
15. *Online learning material*
16. *Online banking*
17. *Text processing*
18. *Creating documents and presentations*
19. *Basic Excel*
20. *Advanced Excel*
21. *Editing music, video or photographs*
22. *Programming in some language*

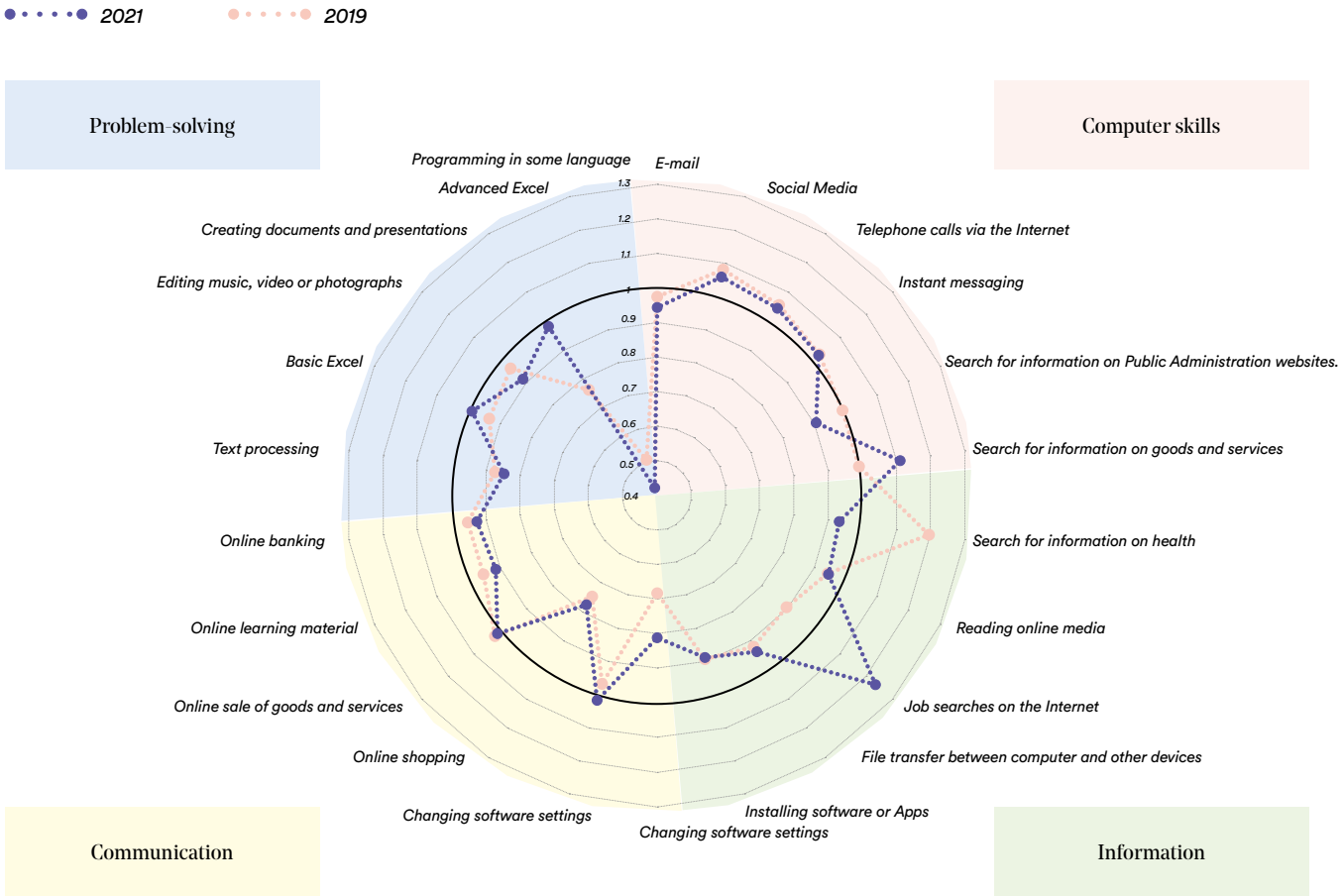
The data show that digital skills among the Spanish population improved significantly between 2019 and 2021 in regard to all skill sets: communication, information, problem solving and computer skills.

Despite the population's general improvement in digital skills, the gender gap existing before the pandemic is still evident in 2021, and has even widened in some digital communication activities (such as the use of e-mail), information (such as the search for information on health) but above all in computing skills (such as programming in a computer language).

Nevertheless, in some areas the gender gap has closed regarding online activities such as the search for information on goods and services, job searches, and online shopping. Advanced use of Excel is another activity, along with music, video or photography editing, where there has been a significant improvement among women.

Figure 2. Gender gap in items of the synthetic index of digital skills (male/female ratio, No. of times), 2019 and 2021

Source: Afi, from microdata taken from the Survey on equipment and use of ICT in households (INE)



02

Gap 2: Digital training: the presence of women in classrooms where digital disciplines are taught is lower than that of men.

Acquiring digital skills and competences is a process that the general population begins, firstly through performing daily activities in digital environments, for which they may not have had any specific training, but have learnt through trial and error and self-teaching. Secondly, the population within the study range acquires these skills through formal education, starting at compulsory secondary school. At basic and compulsory levels of education (primary and secondary schools), learning and using digital tools is widely employed in different areas and is not optional. It is therefore not possible to perform an analysis until post-compulsory education stages, and then only partially.

Women accounted for 22.1% of the total students in digital type qualifications.

Table 2. Digital training

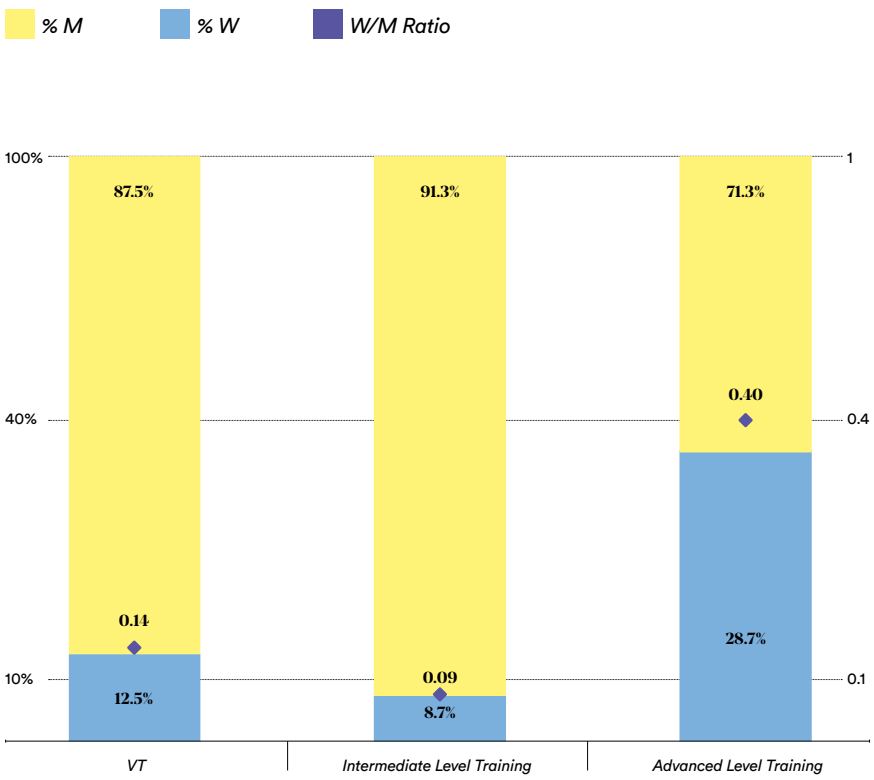
Source: Afi, MEFP

Complete areas of knowledge	
	Graphic Arts | Electricity and electronics | Image and sound | Computing and communications
Selected qualifications in other areas	
Commerce and marketing	Marketing and publicity
Food industry	Processes and quality in the food industry
Installation and maintenance	Development of thermal and fluids installation projects
Chemistry	Manufacture of pharmaceutical, bio-technology and similar products
Healthcare	Imagery for diagnosis and nuclear medicine | Clinical and biomedical laboratory | Orthoprosthesis and supporting products | Dental implants | Radiotherapy and dosimetry
Transport and vehicle maintenance	Automotive | Maintenance of Electronic and Avionic Systems in Aircraft

To continue with the training cycle, in basic Vocational Training (VT) it can be seen that women choose vocational training disciplines less than men (45.3% of the total students registered in the 2020-2021 academic year). Likewise, they account for the minority in digital type qualifications, where they represent 22.1% of the total students. However, they represent over half (55.0%) in other non-digital training.

Figure 3. Students on VT, Intermediate and Advanced Level Training Cycles (left axis: % women and % men; right axis: W/M ratio), 2020-2021 academic year

Source: Afi, MEFP

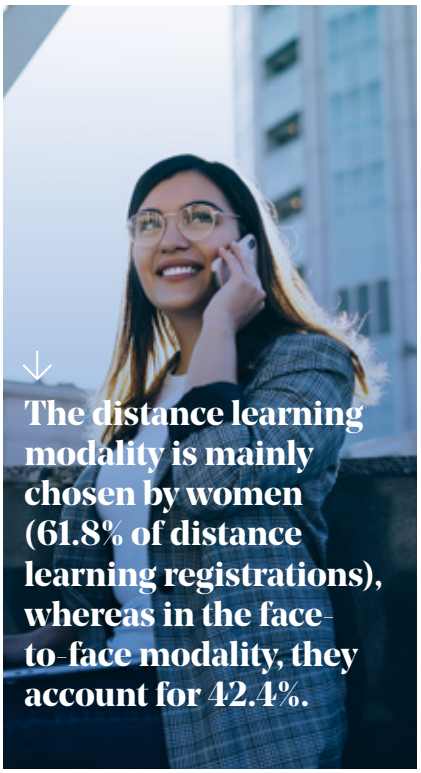


Likewise, the distance learning modality is mainly chosen by women (61.8% of distance learning registrations), whereas in the face-to-face modality, they account for 42.4%. These results were the same before the Covid-19 pandemic, and have increased in the last year.

The post compulsory studies alternative to VT is the Baccalaureate as the prior step to further education at university. In this case, we have not been able to perform an equivalence analysis as we could for VT because of a lack of data itemized by specific disciplines.

Among the many causes that limit young women's incentives to study digital qualifications during the secondary education stage when they start to choose their itineraries, is the misinformation about professional reality in these fields of knowledge. With a view to focusing their studies and career, young women tend to seek guidance from the career orientation team at their schools (60.6% of women compared to 53.9% of men). On the other hand, males are more involved in orientation activities that involve a higher interaction with professionals outside the school environment.

Going further into the study of education in digital disciplines, observing the number of university students in technology related activities is fundamental. The reason is that the qualifications that students choose at university will determine the performance of the job market in the coming years. Indeed, the data reveal that women attend university more than males (W/M ratio 1.28), and they report better academic performance (university graduation rate on degrees of 17.2% for women compared to 14.4% for men). Nevertheless, women are not found on digitally intensive university degrees (W/M ratio 0.54) despite also reporting better academic performance than men. The university graduation rate on digital discipline degrees is 27.4% for women compared to 18.1% for men.



Finally, it is to be emphasized that digital university qualifications entail higher employability rates than the rest of the disciplines, since the recruitment rate for digital qualifications is 78.9% four years after completing the degrees, compared to 71.2% for non-digital qualifications. The gender gap in terms of employability in digital qualifications shows a small difference (78.2% for females compared to 79.3% for males) which has remained stable over time.

To sum up, despite women reporting better academic results than men in digital disciplines at university level (Bachelor's and Master's Degrees) and the high employability rates associated with these studies, they do not feel inclined to take digitally intensive studies. The lower number of women in digitally intensive disciplines means they will not be massively employed in the digital professions of the future.

Figure 4. Bachelor's or Master's degree university graduates, depending on the field of study (left axis: number of registered students; right axis: W/M ratio), in the 2020-2021 academic year.

Source: Afi, Ministry of Universities

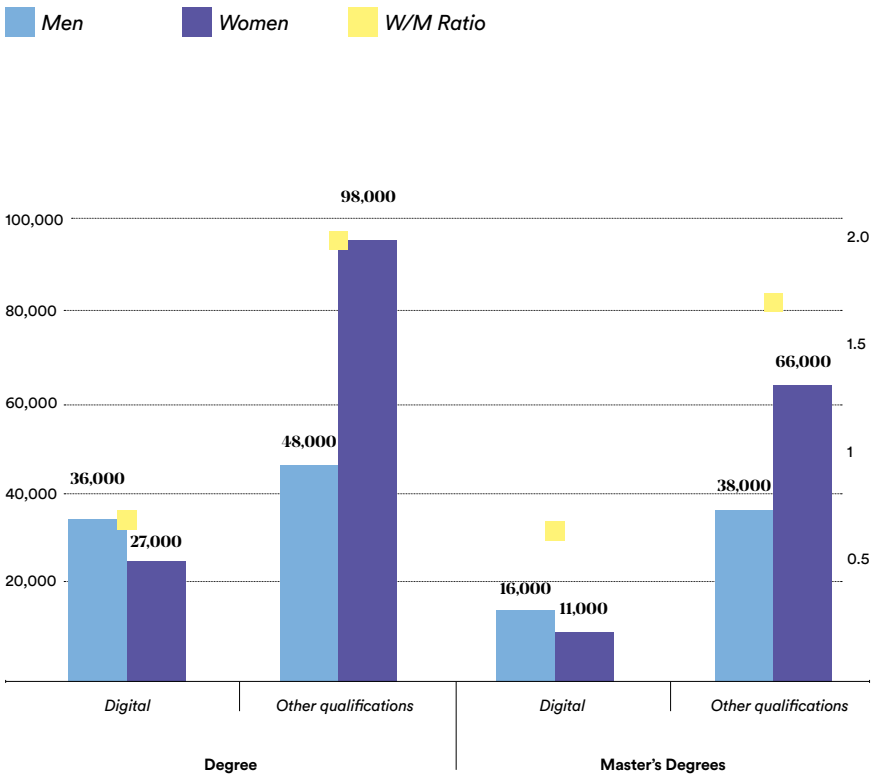
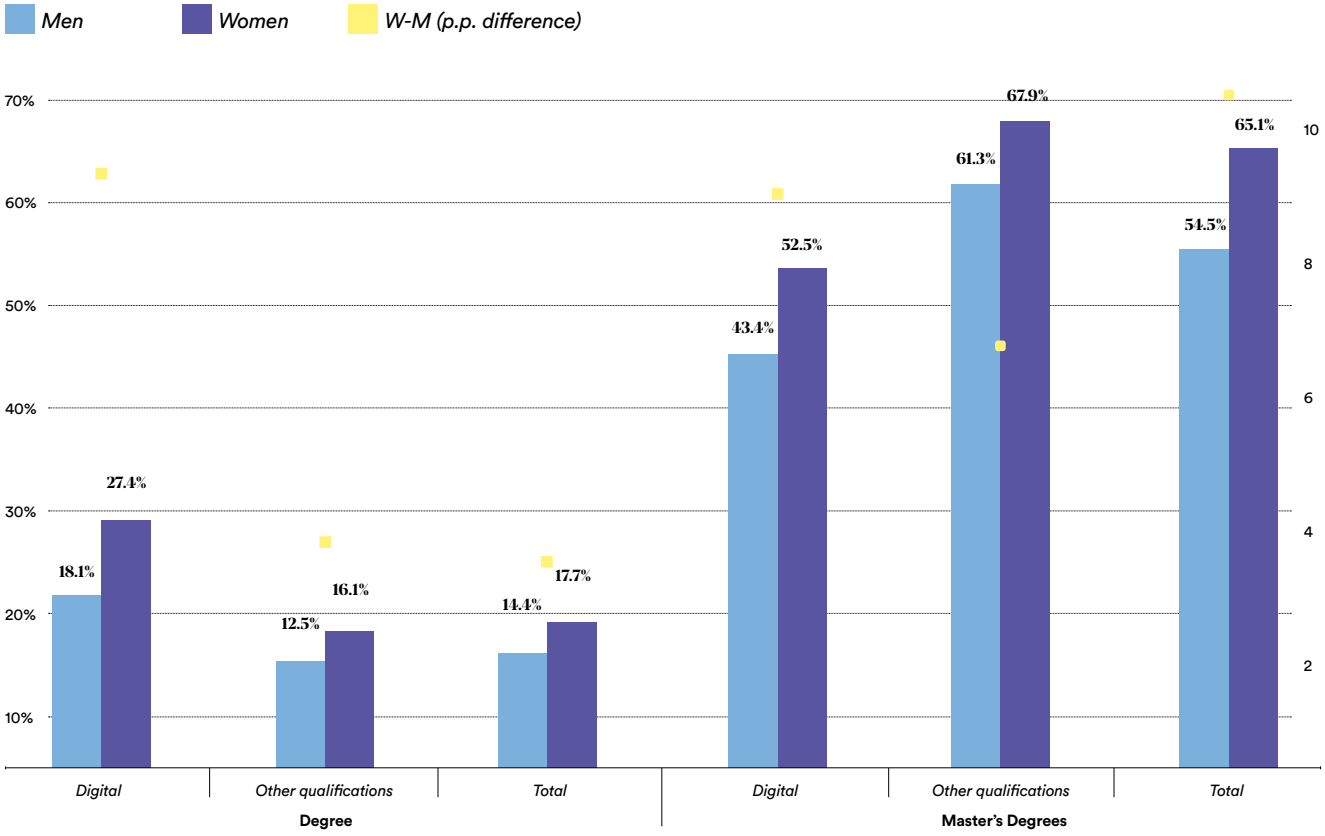


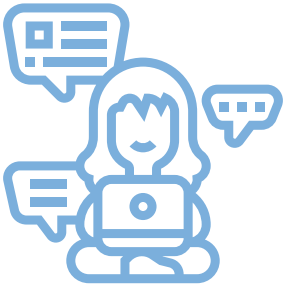
Figure 5. University graduation rate (left axis: percentage of graduates over registered students; right axis: difference in percentage), 2019-2020 academic year.

Source: Afi, Ministry of Universities



03

Gap 3. Employability and entrepreneurialism: there is an urgent need for more women to take up digital positions in order to cover the growing demand for talent that the jobs of the future require.



The economy and society are undergoing changes in which technology is becoming more relevant because of its omnipresence. The speed at which changes are taking place lead to constant updating of job market needs, which materializes in the form of jobs that did not previously exist, and which will gain more and more relevance in the coming years, to eventually become essential.

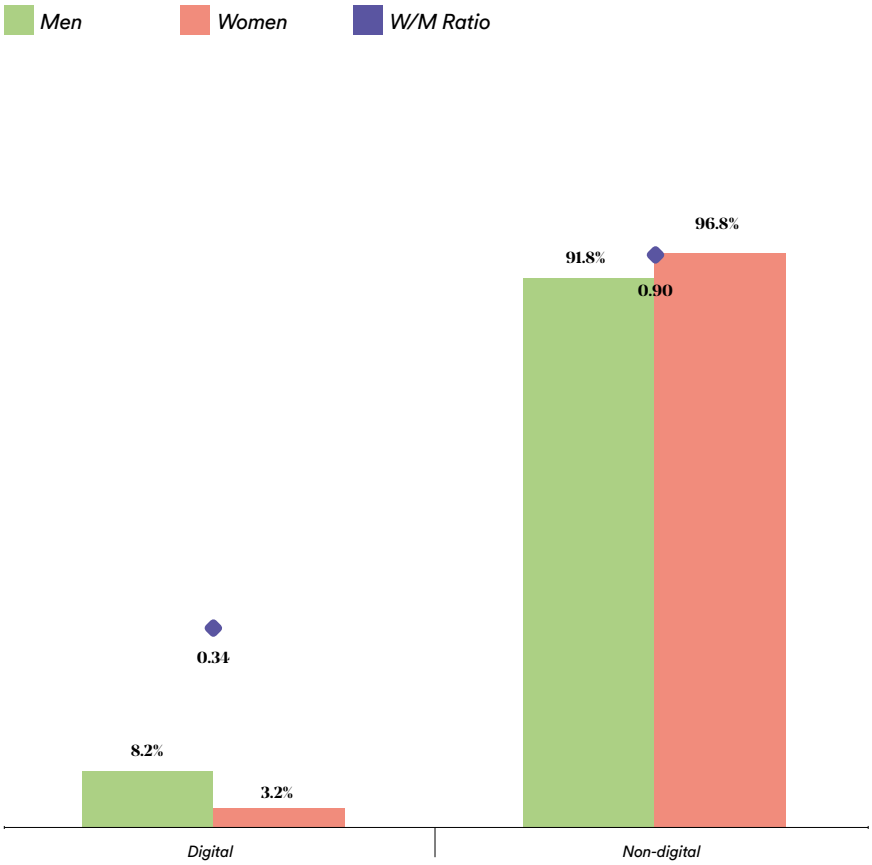
These jobs or "digital professions of the future" are characterized, among other attributes, by strong links and even dependence on data science, web and multimedia development, e-commerce management, cyber-security, digital marketing or social media management and the digital experience of companies, public administrations and the tertiary sector.

Furthermore, these jobs are characterized by the demand for professional profiles with specific studies in digital and technological disciplines. In this sense, as we have already seen in Gap 2, women will fare worse than men if they are not sufficiently represented in digital qualifications, and will not have their place in digital positions.

The analysis conducted in this chapter proves such. This is because a lower proportion of women study digital disciplines than men, and they are therefore under-represented in technology and digital jobs (for each man employed in a digital profession there are only 0.34 women).

Figure 6. Proportion of people employed in digital and non-digital professions by gender (left axis: % of people employed over the total; right axis: W/M ratio), 2021.

Source: Afi, Microdata from the Active Population Survey (EPA)



By activity sectors, it has been observed that the specific weight of women in digital intensive business sectors is considerably lower than that of men. For each man employed in a digital profession in the information and communications sectors, professional activities and the manufacturing industry, there are 0.22, 0.46 and 0.29 women, respectively.

Furthermore, the presence of women in the digital positions that will gain importance in the future is limited compared to that of men. This is the case of jobs in cybersecurity, blockchain, artificial intelligence and robotics, where women account for less than 20% of the total. In the videogame and entertainment software industry, female employment only accounts for 23.0% when female gamers represent 48% of the total.

By age and despite participation by young people in the job market being lower than other age groups (1 out of every 5 workers is between 26 and 35 years old), digital positions are gaining a bigger share in the job market among younger age groups, at the same time as the gender gap is closing (W/M ratio in digital professions is 0.42 in the 26 to 35 year age group, compared to 0.24 in the generation aged 56 to 65).

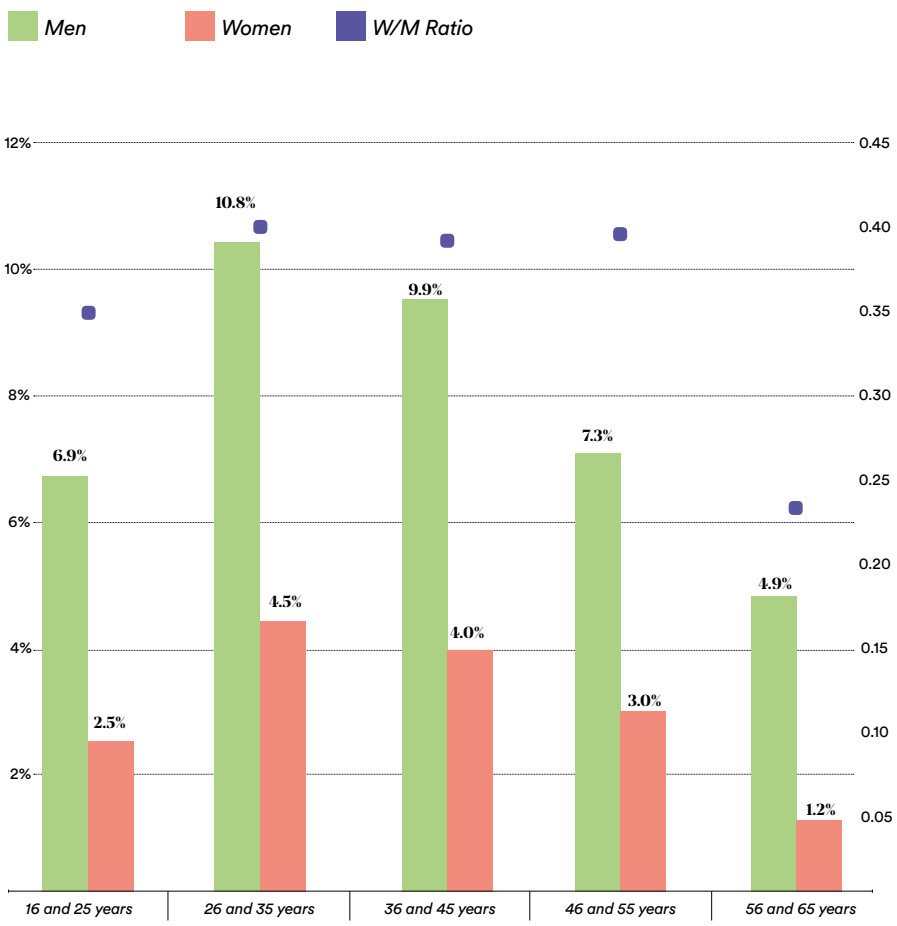
Likewise, the higher the level of education, the greater the presence of digital professionals and the smaller the gender gap (W/M ratio in digital professions of 0.47 in university Master's Degrees; 0.34 in Bachelor's Degrees; and 0.15 in VT).

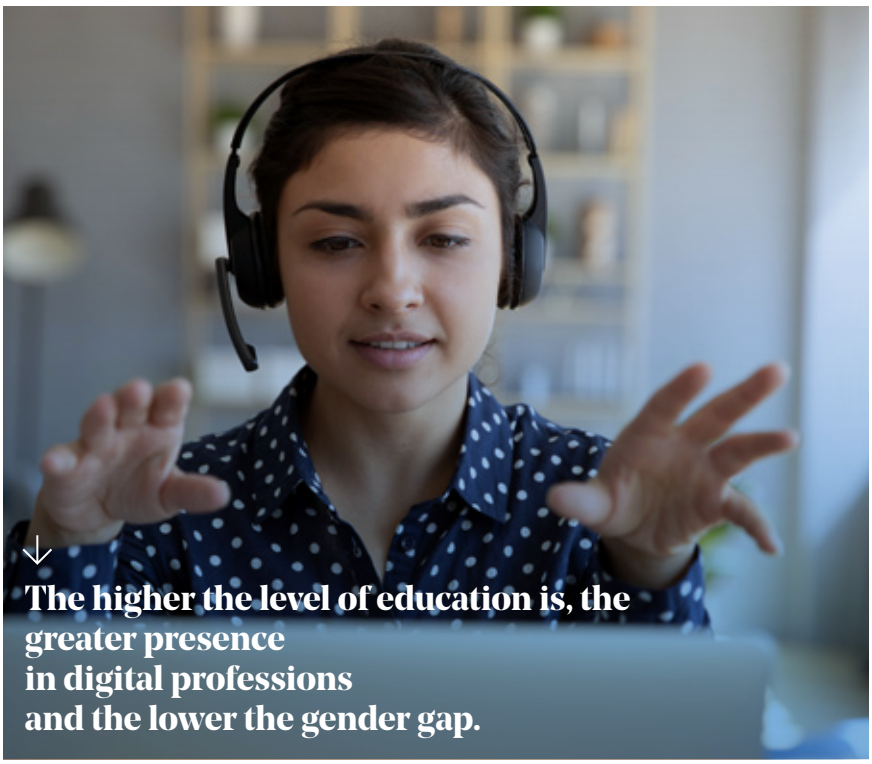
Finally, it must be stated that in general women account for a higher percentage of temporary work (26.5% in the economy as a whole) and part time work (23.1%) than men (23.2% and 7.0%, respectively).

There are better working conditions in digital positions in terms of temporary work data (17.9% for females compared to 12.1% for males) and part time work (6.8% females compared to 2.1% males), in regard to the average, although these figures are still higher than those recorded for males.

Figure 7. People employed in digital professions by age group (left axis: % people employed in digital professions in regard to the total number employed by gender and age group; right axis: W/M ratio), 2021

Source: Afi, Microdata from the Active Population Survey (EPA)





There is a technological gap in new businesses started by men and women in Spain. Indeed, according to the Global Entrepreneurship Monitor (GEM), 93% of startups by females are in the low technology sector, and in the case of males, it is 87%.

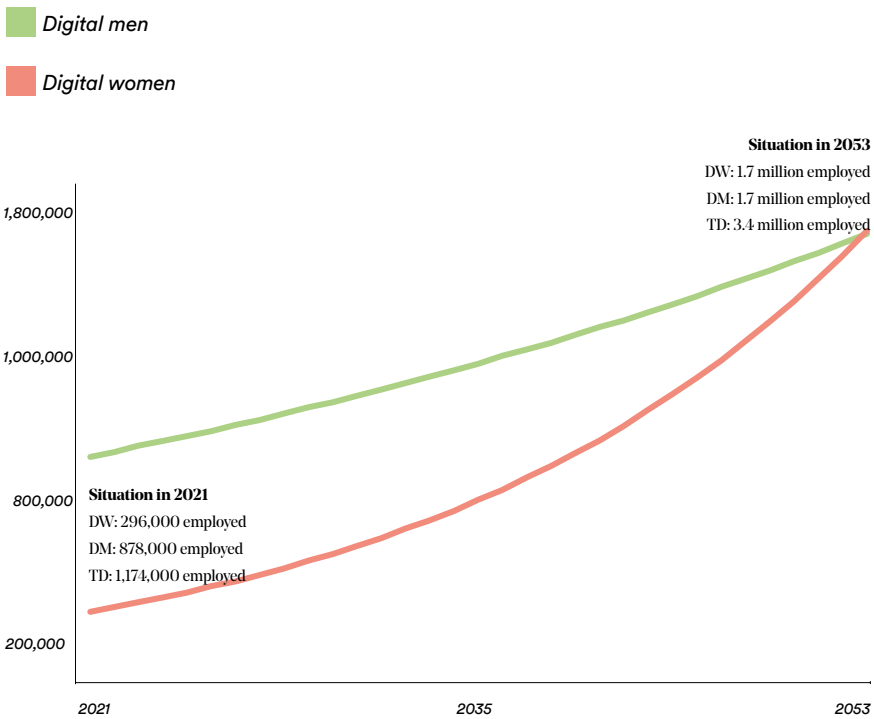
Likewise, according to the report *"The state of European tech 2021"*, the biggest gender funding gap is still a harsh reality for the European technology ecosystem, further exacerbated in 2021 when European startups by women secured the lowest proportion of capital since 2017 (1.1% of the capital and 5.4% of transactions), whereas in Spain this percentage is 3.0%. In the specific case of Wayra investments, 11.6% of the people founding startups through these investments are females. Most of these women have non-STEM studies, unlike the men who found startups.

To compare with 2019 data, the year prior to the coronavirus pandemic, it can be seen how the number of people in digital professions grew at an annual compound rate of 3.0%. Between 2019 and 2021, a growth of 5.6% for women compared to 2.1% for men can be highlighted. If growth continues at the same rate as between 2019 and 2021 (i.e., +5.6% among women and +2.1% among men), the gender gap in digital jobs will take 32 years to close (not until 2053).

In 2021 European startups by women secured the lowest proportion of capital since 2017 (1.1% of the capital and 5.4% of transactions), whereas in Spain this percentage is 3%.

Figure 8. Expected evolution of the number of people employed in digital professions by sex (number of people).

Source: Afi, Microdata from the Active Population Survey (EPA)



Note: DW: Women employed in digital professions; MD: Men in digital professions; TD: Total persons in digital professions. Scenario 1: Expected evolution if female and male positions grow at the rate reported over the last two years: +5.6% and +2.1% annual compound growth rate.

In a different scenario, if digital employment increases at the rate estimated by Afi, i.e., at an annual rate of 1.3%, by 2053 the number of digital workers will be around 1.8 million, but the gender gap will remain constant and will not close.

If we take the growth in new digital job offers and newly created technology employment (2.9% compound annual according to the reviewed literature[2]), the number of digital jobs (demand) will be 2.9 million by 2053. Consequently, the difference between the number of employed people (offer) estimated in accordance with a growth rate of 1.3% (1.8 million effective jobs) and the digital jobs (demand) in 2053, there will be an offer / demand gap in digital posts of 1.1 million (digital jobs not covered).

2 *According to the report "The Future of work in Europe" by McKinsey, by 2030 there will be over four million new technology related jobs in Europe. If we assume that the specific weight of Spain in newly created jobs is the same as at present, 341,000 of those newly created jobs in Europe will be in Spain. If this is the case, the compound annual growth of digitally intensive employment would grow at a rate of 2.9% between now and 2030.*

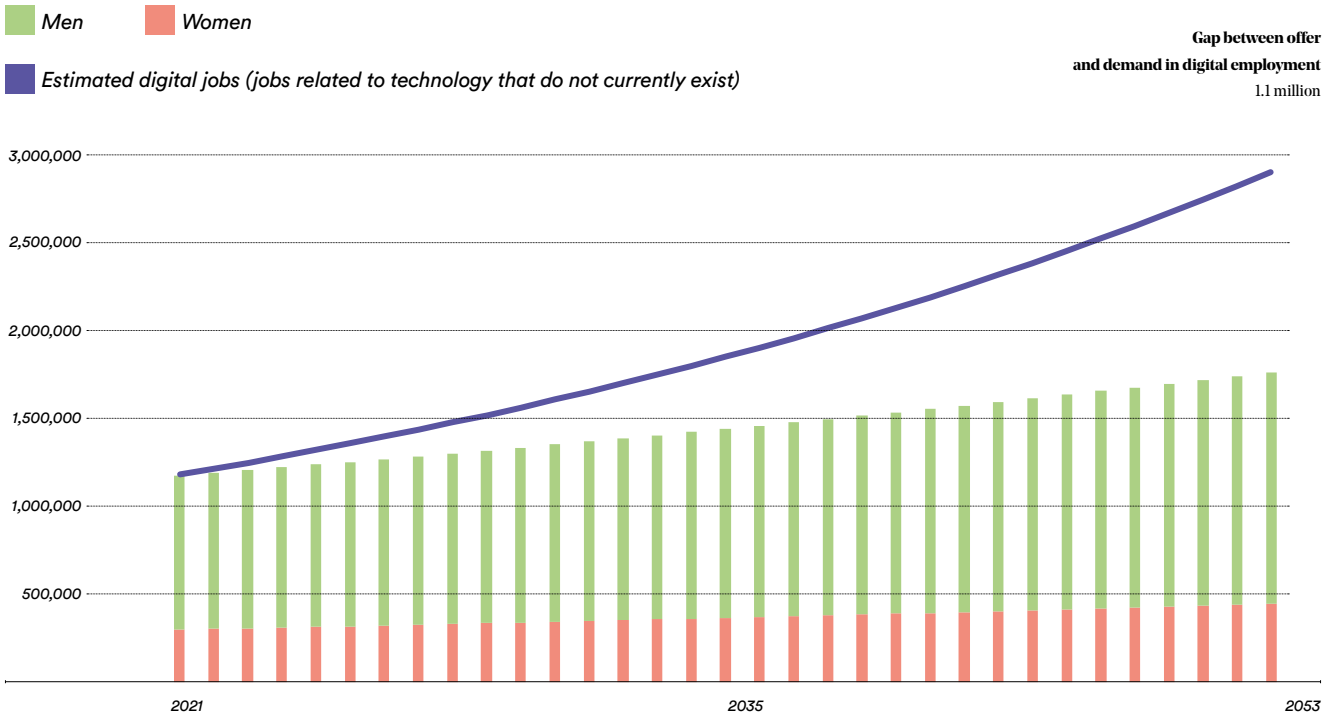
The difference between offer and demand in digital employment will have an enormous opportunity cost through significant economic repercussions and efficiency in job market operations. In this sense, and assuming productivity in digital jobs remains constant in the coming years[3], the economic impact caused by the difference between offer and demand in digital employment will be the equivalent of 6.4% of the 2021 GDP. If parity between the number of digital jobs on offer (demand) and the digital employees (offer) is not met, the Spanish economy will be waiving 71,700 million Euros in 2053.

If parity between the number of digital jobs on offer (demand) and the digital employees (offer) is not met, the Spanish economy will be waiving 71,700 million Euros in 2053.

3 *Productivity has been calculated through the salaries in the digital sector in conjunction with the Gross Operating Surplus (GOS). On the one hand, the salaries are the average result of remuneration of recently graduated employees in the digital sector (25,078 Euros per year according to the statistics published by the Ministry of Universities). On the other hand, the specific weight of the GOS in digital activities has been taken into account, according to the National Accounting statistics published by the INE.*

Figure 9. Expected evolution of the number of people employed in digital professions by sex and number of digital vacancies (number of people)

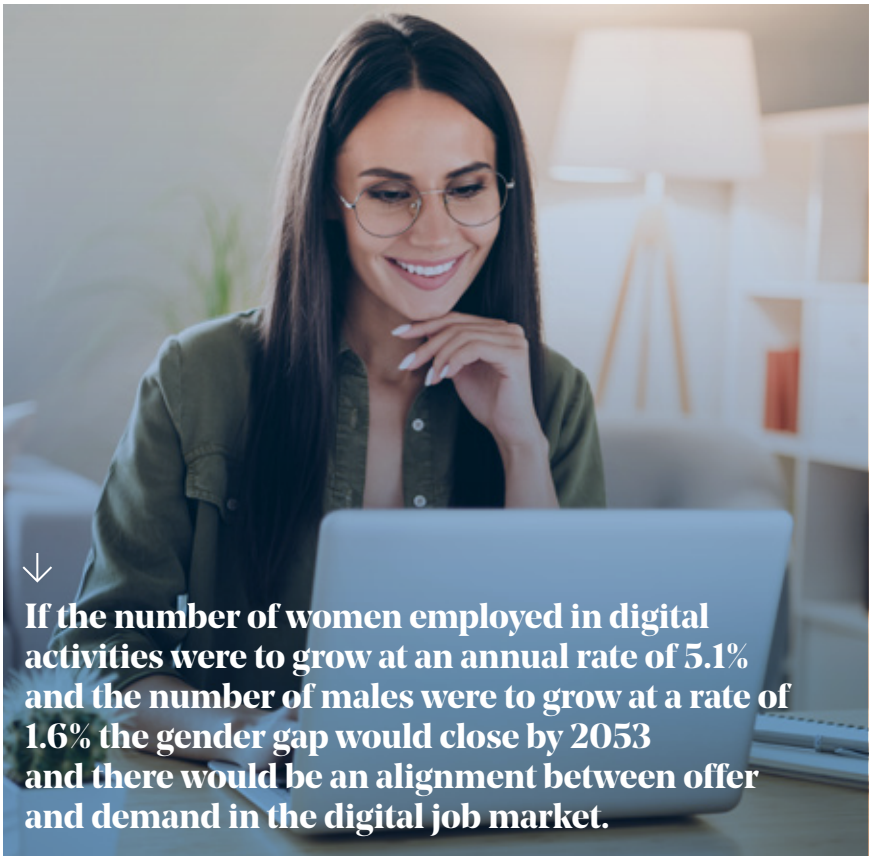
Source: Afi, Microdata from the Active Population Survey (EPA), National Statistics Institute (INE), The Future of Work in Europe Report (McKinsey)



Note: Scenario 3: Expected evolution if both female and male positions grow at the rate estimated in the Afi forecasts: +1.3% annual compound growth rate.

How to close both gaps (gender and talent) with growth rates that are not necessarily as extraordinary as those observed in recent years (5.6% in the case of women; 2.1% in the case of men)? If the number of women employed in digital activities were to grow at an annual rate of 5.1% (0.5 p.p. less than it has grown in the last two years) and the number of males were to grow at a rate of 1.6% (0.5 p.p. less than in the last two years), the gender gap would close by 2053, and there would be an alignment between offer and demand in the digital job market.

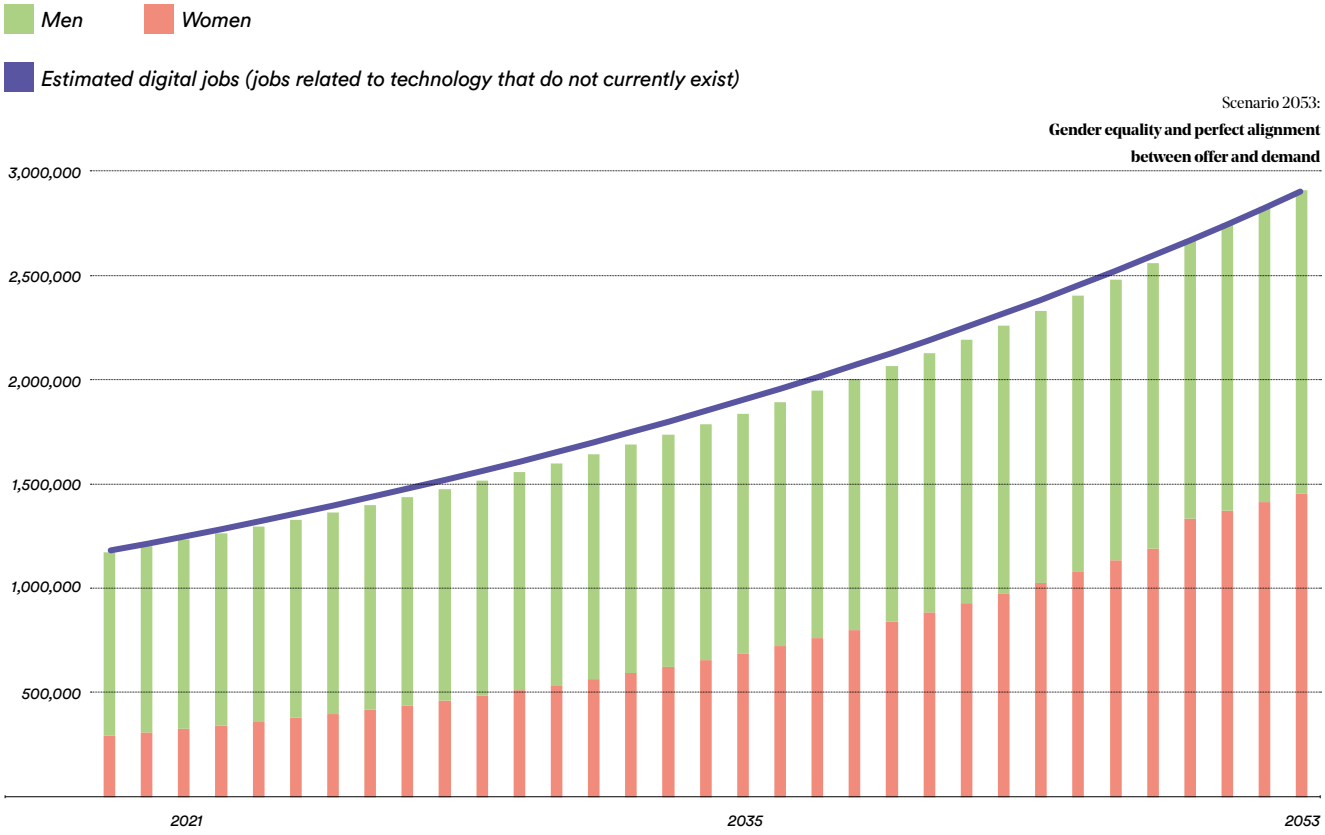
Therefore, the solution to the two gaps our country faces in regard to its capacity to fully develop in an increasingly digital future and to cover all future needs for digital professionals in Spain, i.e., the digital gender gap and digital talent gap, necessarily requires closing the gender gap.



If the number of women employed in digital activities were to grow at an annual rate of 5.1% and the number of males were to grow at a rate of 1.6% the gender gap would close by 2053 and there would be an alignment between offer and demand in the digital job market.

Figure 10. Expected evolution of the number of people employed in digital professions by sex and number of digital vacancies (number of people)

Source: Afi, Microdata from the Active Population Survey (EPA), National Statistics Institute (INE), The Future of Work in Europe Report (McKinsey)



Note: Scenario 4: Expected evolution if both female and male jobs grow at a rate of 5.1% and 1.6% respectively, in order to achieve parity in terms of gender and a perfect alignment between digital employment offer and demand.

04

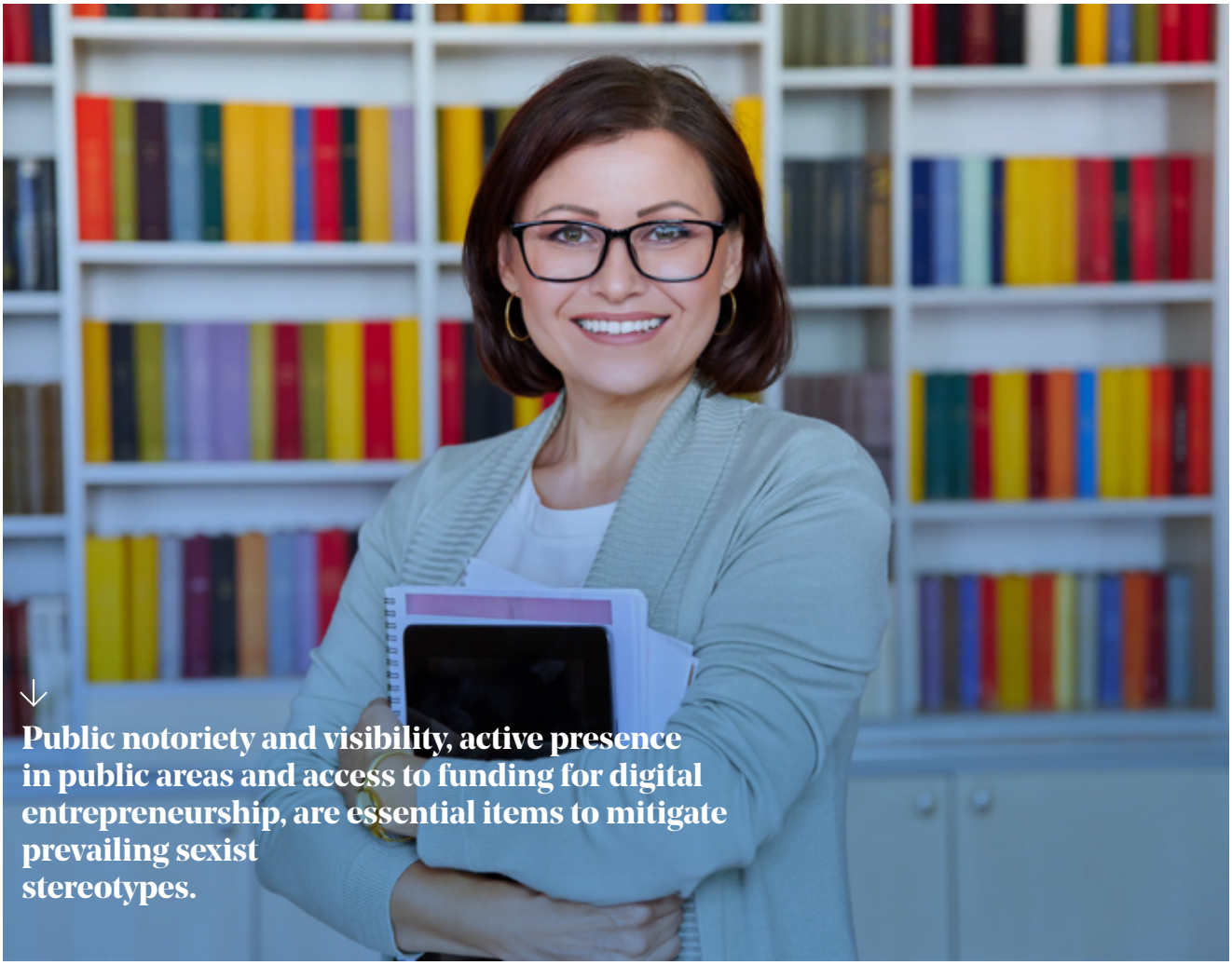
Gap 4. Notoriety in digital professions: Is it true that what the eye can't see does not exist? Without women of reference, it is harder to guide younger generations in their vocations.

Who are the references in digital professions? Public notoriety and visibility, active presence in public areas, both analogue and digital, conditioned by the climate of conversations and environments where such are carried out, and access to funding for digital entrepreneurship, are the essential items to mitigate the sexist stereotypes that prevail in many areas. The saying "what the eye can't see, doesn't exist" illustrates the gender gaps listed in this section.

First of all, it is emphasized that females account for 42.6% of the total Lecturing and Research Staff (LRS) in Spain (0.74 female lecturers for each male in these position). Likewise, females tend to hold more external public employment posts (hired female lecturers account for 64.4% of the total female lecturing staff, whereas external male lecturers account for 55.0% of the total male lecturers). Nevertheless, among the higher ranking university lecturers, the gap is even wider, with only 0.35 female chairs for each male chair countrywide.

In the digital type fields, women account for 23.9% of the lecturers, and the gender gap widens in posts of higher responsibility: there are 0.28 female chairs for each male chair in IT and 0.30 female chairs for each male chair in engineering, architecture and construction.

With a view to the future of university chairs in digital areas, and based on the approved doctoral theses in recent years, the gap is not expected to close. Only 20.0% of PhD graduates in computing were women and 32.8% in engineering, architecture and construction.



Public notoriety and visibility, active presence in public areas and access to funding for digital entrepreneurship, are essential items to mitigate prevailing sexist stereotypes.

CEOs in major corporations in the digital world tend not to be women. In fact, out of the top 100 digital companies worldwide, only one has a female CEO: Julie Sweet, Global CEO of Accenture since September 2019, according to Forbes. In other words, only 1% of the CEO in the world's most important digital companies are women. This is one of the positions, if not the highest, representing greater professional success and therefore it brings relevance, notoriety and the ability to be an influential reference.

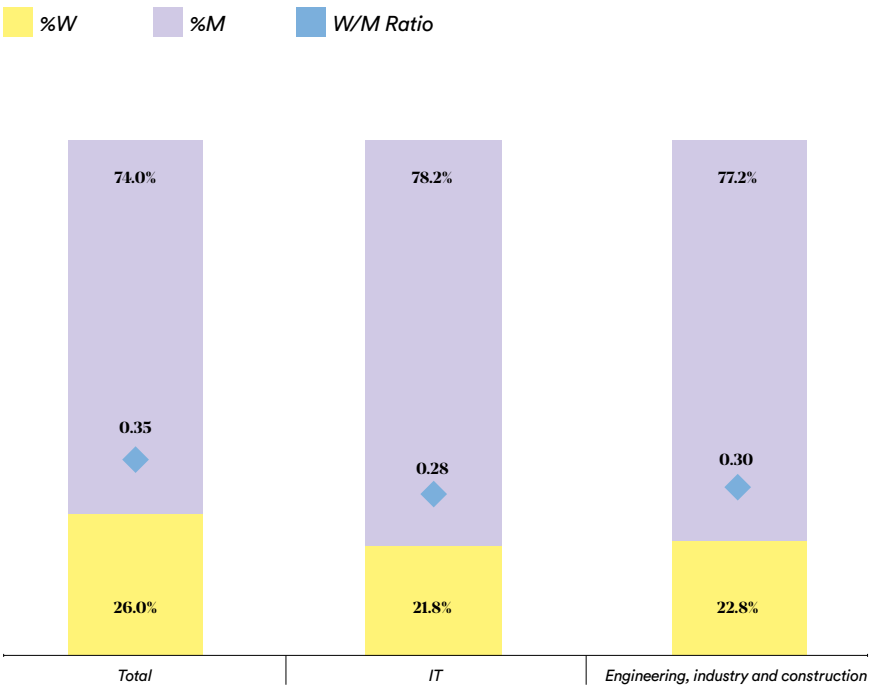
In the new job environment that has arisen through social media, and despite women having more sponsors (83.0%), their remuneration is lower (77 cents per post compared to one euro per post paid to males in 2021).

Professional interest in creating content is higher among young men (31.8% of young women, compared to 35.2% of young men). Young women admit they avoid uploading content to social media more than men, for fear of losing their intimacy or privacy (60.0% of women compared to 47.8% of men) and becoming victims of hate speech (44.1% of women compared to 37.8% of men). They also block contacts more often than males to avoid harassment (43.5% of females, compared to 39.6% of males).

Women are under-represented in public and social media technology events, where decisions are made to limit their exposure in order to avoid harassment in the digital environment.

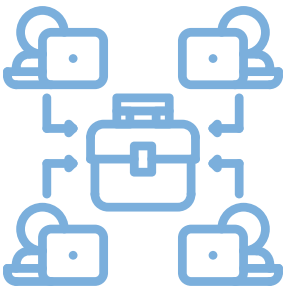
Figure 11. Male/Female Chairs at Universities or University Schools (left axis: %; right axis: W/M ratio), 2020-2021 academic year

Source: Afi, Ministry of Universities



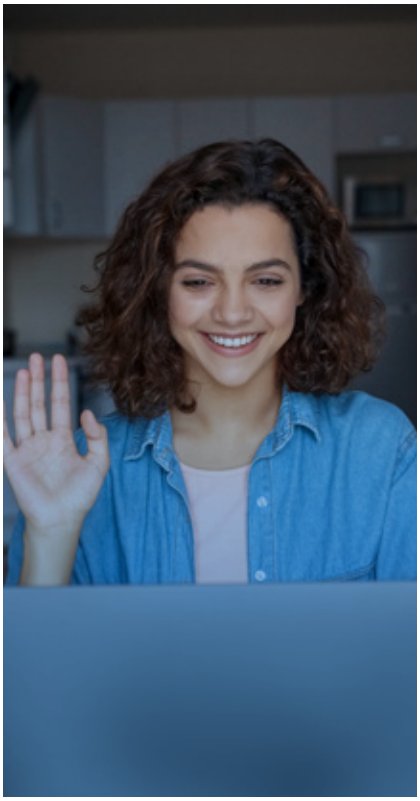
05

Gap 5. Hybrid work: similar preferences, different reasons and possibility of choice among women and men.



According to the microdata from the Survey on equipment and use of ICT in households by the National Statistics Institute (INE) of 2021, only 35.0% of surveyed workers state that they are able to work from home[4], either fully (17.7%) or partially (17.3%). As for distribution by sex, a higher percentage of women state that their main job allows them to work remotely (38.1% compared to 32.5% of men), meaning the ratio is 1.17 females for each male in this situation.

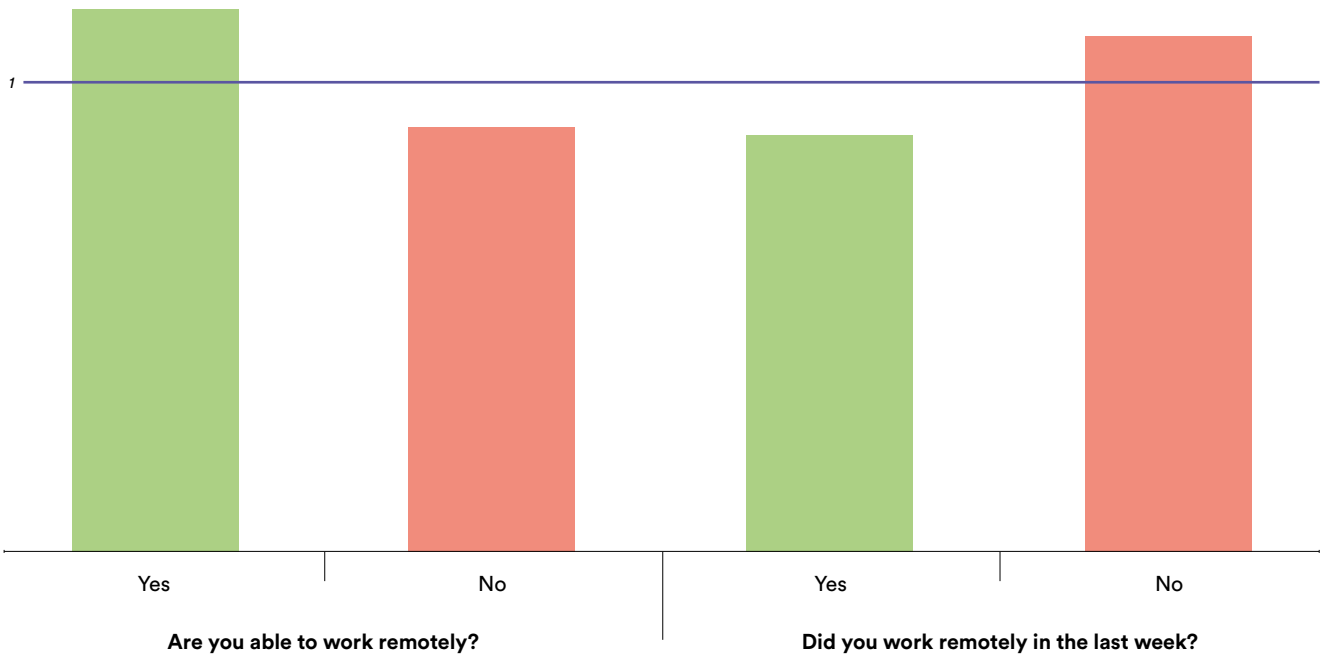
Nevertheless, out of the workers who state that their main job allows them to work remotely, only 50.2% had actually done so in the last week of the reference period. Unlike the possibility of remote work, a lower proportion of women than men state that they worked remotely in the last week (ratio of 1.11). In other words, despite the fact that more women than men claim they are able to work remotely, less women than men actually do so (9 women for every 10 men).



4 *Where remote working is understood as: "(...) working away from the work site through the exclusive or majority use of information, telematic and telecommunications systems and resources. Work is carried out off-site and can be from home, at co-working centers or wherever there is an internet connection".*

Figure 12. Gender gap in regard to the possibility of working remotely and actually working remotely in the last week of the survey reference period (W/M ratio, 1 = parity)

Source: Afi, from microdata taken from the Survey on equipment and use of ICT in households (INE)



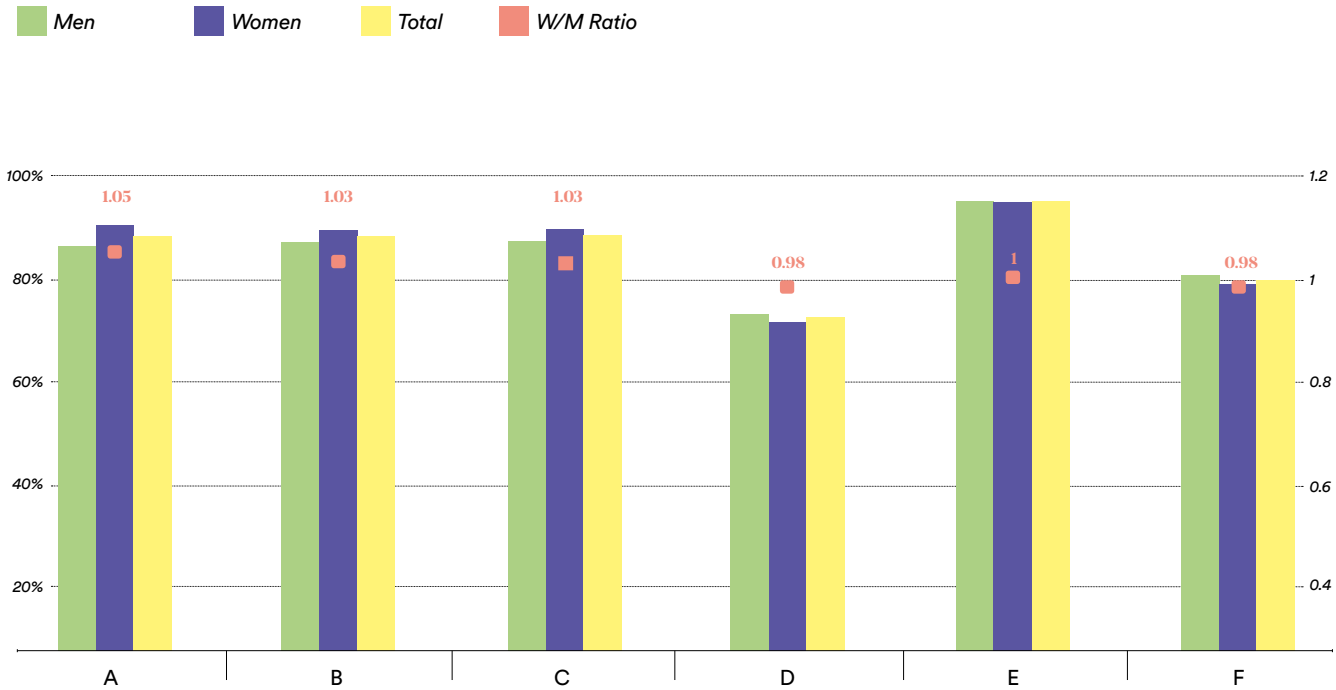
The most common reasons among those who do not work remotely (but would like to do so) are related to the possibilities offered by their employers (lack of willingness to implement remote work and lack of enough technological resource). Moreover, these reasons are stated more often among women, whereas men refer to the lack of suitable conditions at home. Similarly, when women do work remotely, they do so every day in a higher proportion than men, which matches their preferences which have come to stay.

The level of satisfaction with remote working by women is higher than by men. The gender gap in regard to the advantages of working remotely for people who do work off-site is not significant, although there are considerable differences among the disadvantages. One of the main disadvantages for women is work overload (91.2% of women claim this compared to 45.1% of men, leading to a ratio of 2.02), lack of technical resources (ratio of 1.24), in line with that observed in the preceding pages and not disconnecting from work (ratio of 1.09). The main problems concerning remote working claimed by men are poor organization and coordination of remote working (ratio 0.82) and the inconvenience of working from home (0.99).

The main problems concerning remote working claimed by men are poor organization and coordination of remote working (ratio 0.82) and the inconvenience of working from home (0.99).

Figure 13. What do you think the main disadvantages of remote working are? Distribution by sex and reason (%, left) and gender gap (W/M ratio, 1 = parity, right)

Source: Afi, from microdata taken from the Survey on equipment and use of ICT in households (INE)



A. *Poor organization and coordination of remote work*

B. *Work overload*

C. *No disconnection from work*

D. *Lack of social contact with colleagues*

E. *Lack of technical resources (equipment, connection)*

F. *Inconvenience of working from home*

ClosinGap

1. What is ClosinGap?

At the initiative of Merck, several leading companies have come together to constructively and rigorously analyse the opportunity cost to the economy of not using female talent to its fullest potential as a cause of persistent gender gaps.

2. Who are the members of the cluster?

The companies that have joined this cluster are Merck, MAPFRE, Repsol, Meliá Hotels International, Mahou San Miguel and Solán de Cabras, BMW Group, PwC, CaixaBank, Grupo Social ONCE, KREAB, Fundación CEOE and Telefónica.

ClosinGap Board
Chairwoman: Marieta Jiménez (Merck)
Members: Carmen Muñoz (Repsol), Antonio Huertas (MAPFRE), Manuel Terroba (BMW Group), Gabriel Escarrer (Meliá Hotels International), Eduardo Petrossi (Mahou San Miguel and Solán de Cabras), Manuel Martín (PwC), Juan Alcaraz (CaixaBank), Miguel Carballeda (ONCE Social Group), Eugenio Martínez Bravo (KREAB), Fátima Báñez (CEOE Foundation) and José María Álvarez-Pallete (Telefónica).

ClosinGap Executive Committee
Chairwoman: Ana Polanco (Merck)
Members: María Pilar Rojas (Repsol), Eva Piera (MAPFRE), Pilar García de la Puebla (BMW Group), Lourdes Ripoll (Meliá Hotels International), Patricia Leiva (Mahou San Miguel and Solán de Cabras), Isabel Linares (PwC), Anna Quirós (CaixaBank), Patricia Sanz (Grupo Social ONCE), Elena de la Mata (KREAB), Ángel Sánchez (Fundación CEOE) and Elena Valderrábano (Telefónica).

3. What kind of work are we doing?

The cluster publishes detailed reports on the impact on Spanish GDP of the persistence of the different gender gaps in different areas such as health, pensions, work-life balance, information technologies, consumption, leisure, positions of power, employment, disability, mobility and tourism, among others, along with other group activities.

4. What are our objectives?

To promote social transformation from the business realm in the area of women and the economy, in close collaboration with the public and private sectors. To generate knowledge and spark debate, to become a source of innovation, as well as a driving force and agent of change.

5. Where can you learn more about us?

You can find out more by visiting us at www.closingap.com or on our Twitter profile (@ClosinGap) and at LinkedIn.

More information at
www.closingap.com
or on our Twitter
(@ClosinGap) and LinkedIn profiles.