e-WOMEN IN ICT

INTELLECTUAL OUTPUT 1

Access conditions of women framework

This report is the deliverable of the
Intellectual Output 1 on the “Entrepreneurial Women in ICT”

Co-funded by the Erasmus+ Programme of the European Union

E-WOMEN IN ICT

2020-1-PT01-KA226-VET-094680

OI1.1. Conditions of access to training at an educational level for women (ICT and entrepreneurship)

OI1.2. Good practices in educational competence and Manual of good practices

RESEARCH METHOD:

The methodology for this Intellectual Output 1 was described in the revised proposal submitted to the Erasmus Plus Program and clarified during the initial meetings held between the steering group and the members of the study team and finalized in September 2021.

The study was structured around 4 main tasks:

TASK 1 - Initiation and structuring of the study;

TASK 2 - Review and evaluation of the context and political responses in selected Members (Spain, Germany and Portugal) and in selected Members with the best rates of women entrepreneurs in ICT;

TASK 3 - In-depth examination and assessment of the context and policy responses in the Member States of the case studies; and,

TASK 4 - Analysis and formulation of good practices in methodology and didactics and the Good Practices Manual.

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1. INTRODUCTION

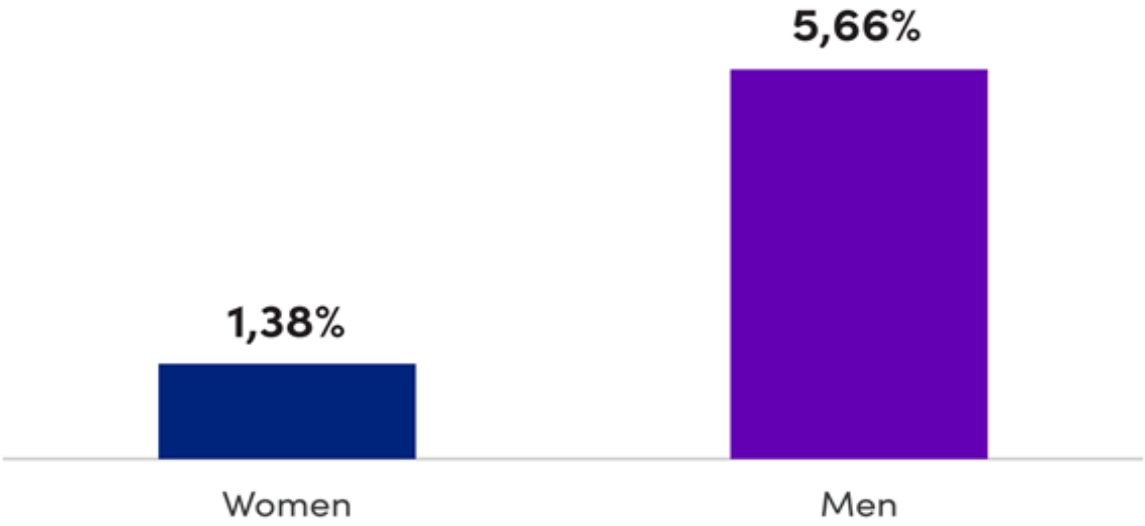
Digital jobs can bring new employment opportunities for young women, according to the report "Digital Jobs for Youth: Young Women in the Digital Economy". Globally, the share of women using the internet is 12 percent lower than that of men. Over 1.2 billion women in low and middle-income countries do not use mobile Internet, and women in these countries are 10 percent less likely to own mobile phones than men.

Digital jobs can help reduce longstanding occupational segregation, including in the IT sector. Working in the digital economy also offers young women the flexibility to overcome mobility constraints and combat restrictive gender norms. **Currently, women only account for only 38 percent of human capital wealth world-wide, compared to 62 percent for men.** It is also estimated that $160 trillion in wealth is lost due to gender inequality in earnings. With unemployment rates for youth reported over 300% higher than those for adults, young women are at a higher risk of exclusion, according to the report.

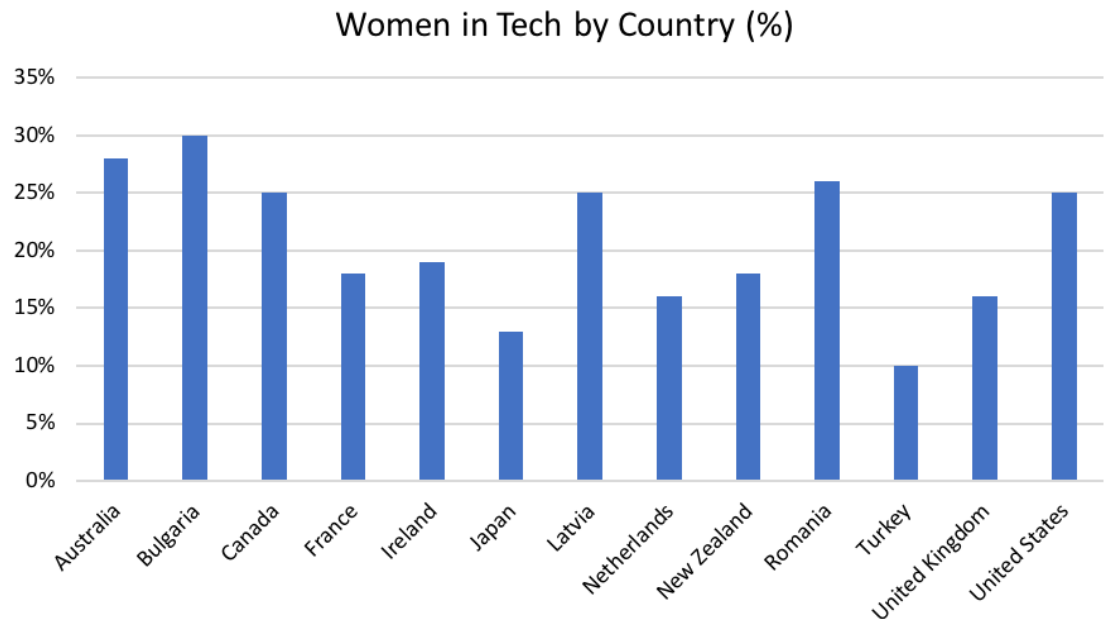
While digital technology continues to create new forms of work, the absence of appropriate policies will prevent it from being fully inclusive.

To empower women, governments can ensure women's online rights are protected, promote gender-inclusive digital skills in the educational system, provide and subsidize equitable access to information and communications technology systems (ICTs), and run public initiatives to close the gender divide in the digital world. The private sector can implement more inclusive policies to address gender bias in the workspace as well as promote gender equity in supply chains.

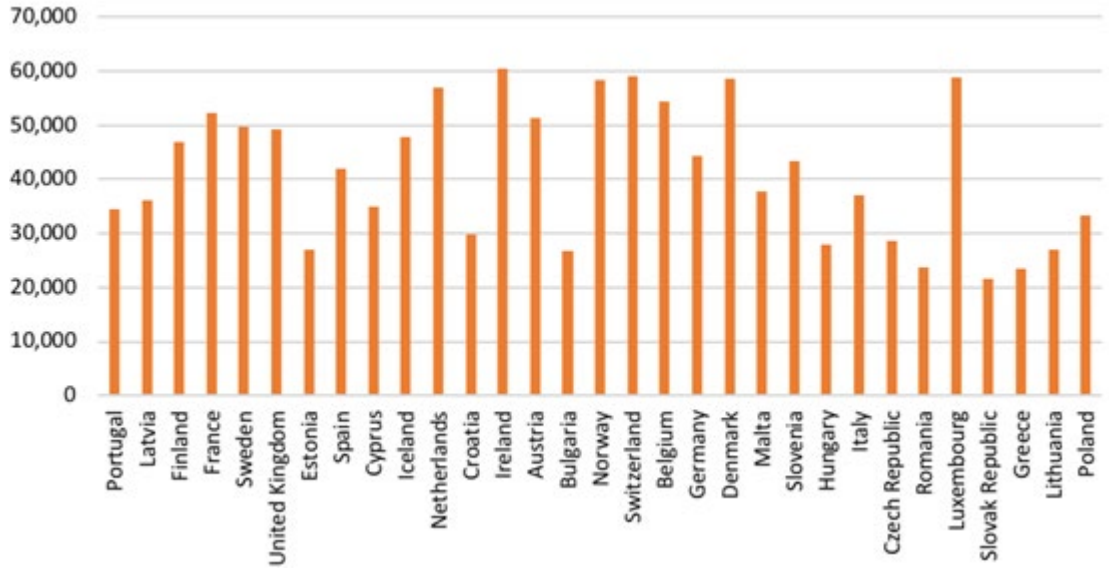
NOTE : "We can find different studies and statistics about Women in ICT and Women in Entrepreneurship, but we cannot find the two topics together. When we have requested information, we are also told that we cannot find both topics or that there is not enough data".



By 2025, 6% of working women should be ICT specialists



Women in ICT



Tech Average Wage for Women in Europe (USD$)

Eastern European Countries:

One reason for the high proportion of Eastern European women in tech is the legacy that communism has left behind. Under state communism, it was obligatory for women to have a job as well as caring for their children.

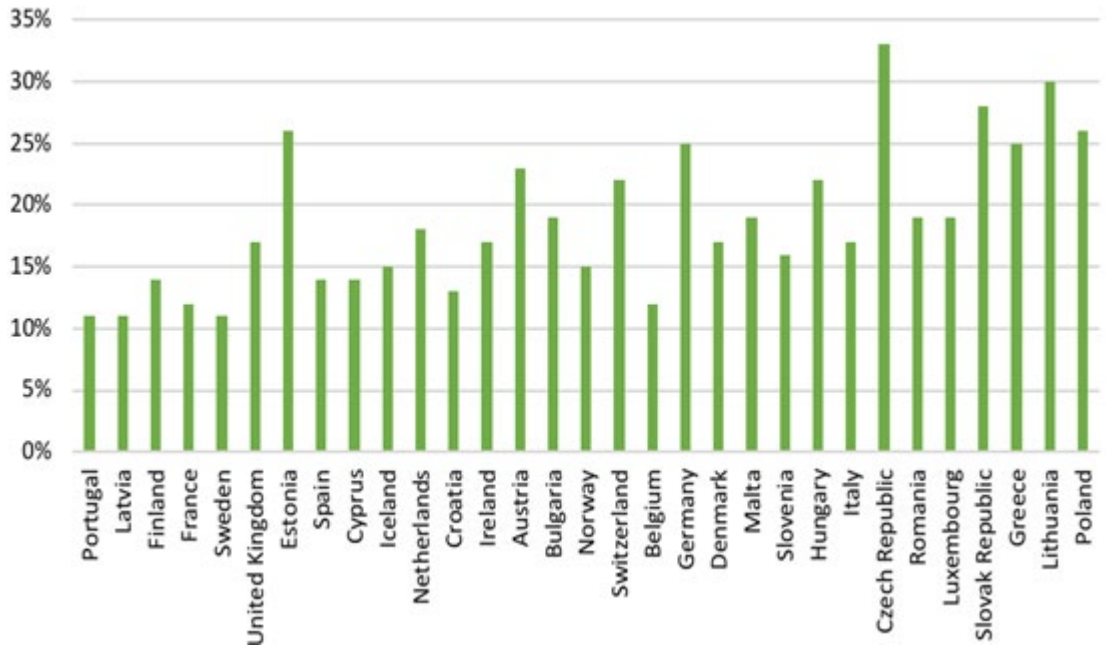
Young women were more likely to choose a role that guaranteed financial security for their families, investing their time in STEM areas rather than humanities. This tradition was also partly due to the fact that humanities, where freedom of expression could be displayed, were a daring choice under a communist regime; mathematics and science were much safer interests. As a consequence, many women in post-socialist countries combined full-time STEM jobs with domestic tasks and their daughters are now following in their footsteps.

Nowadays, the outlook is extremely positive. Bulgarian and Romanian developers make two or three times their country's average income, working in outsourcing or R&D for Western European or US businesses. In Romania, this is because of the country's low wages and cheap operating costs, which has encouraged international companies to open offices there. In all sectors, 26% of the highest positions in the country are occupied by women and for middle management roles the figure is 28%. Romania is now the second-fastest growing economy in Europe.

Latvia is particularly interesting as there is a significant gender imbalance, according to a 2010 report from the BBC. Approximately 50% more women were enrolled at the

University of Latvia than men that year, this was partially due to Latvia's high early male mortality rate resulting in there being 8% more women than men in the country. Further data from 2012 revealed that the capital of Latvia, Riga, had almost 127 women for every 100 men. More recently, women in Latvia have been said to live 9.6 years longer on average than men. Comparatively, according to the same 2015 data, women in the United Kingdom live just 3.6 years longer than men.

There's simply not as many men in Latvia and the percentage of women in tech reflects the country's high percentage of women in the workforce which stands at 50.25%, beating the United Kingdom's 46.69%.



Gender Pay Gap in Tech for Europe (%)

2. CONDITIONS OF ACCESS IN TRAINING AT THE LEVEL OF EDUCATION FOR WOMEN (ICT AND ENTREPRENEURSHIP) - ACCESS CONDITIONS FOR WOMEN IN EACH REGION

2.1. SWOT analysis about female entrepreneurship in ICT, legal state framework of each country about entrepreneurship and analysis about the rates of women and men studying technical education

The SWOT analysis makes clear our present position and where we wish to arrive. In this case, female entrepreneurship in ICT in age ranges 18-35:

PORTUGAL

The SWOT analysis makes clear our present position and where we wish to arrive.

In this case, female entrepreneurship in ICT in age ranges 25-55:

A)Strengths:
-Women entrepreneurs are more confident, innovative and creative, because , usually, they tend to take risks less than men; social recognition motivates them self–employment.
B)Weaknesses:
-Difficulty to have support, cooperation and back-up by their own family members; Gender bias; Credit discrimination; Women's family obligations; IT business opportunities; male-dominated industry;
C)Opportunities:
-Digitally skilled and growing numbers of women in the ITC industry will mean economic growth and a better and more inclusive society; Current public policies.
D)Threats:
-Only 12,6% of computing engineer graduates are female; Only 9% of ICT- sector workers are managed by women; Lack of family and community support.

GERMANY

A)Strengths:

- Targeted entrepreneurship training, coaching and mentoring and business counselling is widely available for women.

- A number of business associations and women's entrepreneurship networks offer opportunities for peer-learning.

- Start-ups are generally able to access a wide variety of financial support.

- The regulatory environment is generally supportive of entrepreneurship.

B)Weaknesses:

- Where entrepreneurship education exists, it mainly promotes a classic model of entrepreneurship, i.e. full-time self-employment

- Targeted support for female entrepreneurs is not integrated into mainstream support and female life circumstances (e.g. family and household responsibilities) are not taken into account.

- The education system does little to encourage more female entrepreneurs and gender segregation persists when girls and young women choose careers and professions.

- Financing programmes implicitly discriminate against female entrepreneurship in those cases where the programmes do not consider the specific characteristics and needs of women-owned businesses.

C)Opportunities:

- Support for entrepreneurship education (at all levels) is growing and as a result, there are many EU initiatives and funds available to support further development of entrepreneurship education.

- Use ESF funds to organise a large national event such as National Women's Entrepreneurship Day to increase the impact of ongoing women's entrepreneurship promotion activities and increase their impact.

- The new initiative FRAUEN unternehmen provides an opportunity to increase promotion of entrepreneurship among women. It could also be used to promote growth-oriented entrepreneurship for women.

D)Threats:

- Women are under-represented in the financing industry itself, as, for example, venture capitalists and business angels. This hinders access to finance for women entrepreneurs.

- Tax policy contributes to reinforcing traditional gender roles and undermines many of the positive family policies.

- German society continues to ascribe housebound and family-related roles to women, thus implicitly rendering entrepreneurship as a less desirable career choice for women.

- The increased attention paid to women's entrepreneurship in recent years in the federal government has led to increased actions. Improving coordination will ensure that policy actions are consistent and reinforce each other.

IN SPAIN

A)Strengths:

- The lack of VET Professionals in companies means that we have demand in the labour market

-The reform of VET Education System that seems to be heading towards labour insertion

- International technology companies located in Spain and the government is carrying out a VEUT Education reform

B)Weaknesses:

-VET Education is not seen as a professionalization tool.

-It is expensive to create a company in Spain

-Lack of women teachers in VET Education with professional experience in ICT companies

-We do not have enough role models from Spain and digitalization is not part of our culture

C)Opportunities:

-Spain is attractive to technology companies

-A strong relationship between company and VET Training can be created, as we currently have a lack of workers with VET Training

-We have many vacancies to fill and unemployed workers

-The government is aware of the lack of entrepreneurs in the ICT sector, especially women, and is carrying out active policies in this sector

D)Threats:

-Loss of professionals with VET Education

-Only a few will create technology companies

-An aging population can make it difficult to retain talent

-European recovery funds are not applied in this sector and we lose the opportunity to catch up on digitizalitation

1.IN PORTUGAL:

Legal state framework of each country about entrepreneurship (what is required in every country to create a startup or a company) and analysis about the rates of women and men studying technical education.

Since 2019 Portugal has a legal framework that encourages entrepreneurship. There is an entity, SPAPPE (Startup Portugal - Associação Portuguesa para a Promoção do Empreendedorismo), whose mission is to develop activities of public interest within the scope of promoting entrepreneurship based on innovation and added value, in close connection with public and private entities operating in the national entrepreneurship ecosystem. IEFP, IAPMEI, ANJE, provide a set of tools for financial support and project development.

In order to create and develop a start-up in Portugal, it is necessary to take a few steps. Assess whether the market needs the product or service to be developed; devise a management plan; carry out a survey of the legislation applicable to the business; draw up a budget; and create a business plan in which to assess, among other strategic aspects, the project's financing possibilities.

To facilitate this process, there are currently in Portugal incubation centers and start-up acceleration programs, in which, through training, mentoring and networking, not only the skills of the entrepreneurs are reinforced, but the viability of their ideas is tested.

In Portugal there is a wide variety of support for entrepreneurship. For example the **Startup Voucher (**691.70 euros monthly scholarship for business ideas, awarded for one year), **the Momentum Program (**691.70 euros monthly scholarship plus free incubation and accommodation for 12 months for recent graduates and finalists of higher education that have benefited from social support during the course), **the Incubation Valley** (support of five thousand euros for the contracting of services to support business development in incubators), **the Semente Program** (tax deductions up to 25% of the investment carried out and up to a maximum of 40% of the collection in the annual IRS, over a period of three years, for those who enter the share capital of innovative start-

ups) and calls from Portugal Ventures (entity responsible for public venture capital investment).

There is also support from IEFP and IAPMEI, credit lines with public guarantee, community incentives within the scope of Portugal 2020 or Horizon 2020, risk capital - public and private -, microcredit, business angels and mutualism.

ANJE also offers a wide range of tools to support entrepreneurship, such as the Young Entrepreneur Prize, Loja do Empreendedor, protocols with banking institutions for financing, 11 business centers / incubators, acceleration programs, specialized training and business consultancy.

Regarding the costs of creating a start-up: the value of the commercial registration of a company at the "Empresa na hora" counter is around 360 euros, covering the internet publication fee. value of the registration may, however, increase in the case of incorporation of companies with the entry of movable or immovable property or shareholdings subject to registration. **It will also be necessary to settle the other taxes in accordance with the legal nature of the business.**

2.IN GERMANY:

By setting regulations, **the state actively defines the ease of registering a new business**. T**he vast majority of Europeans (72%) rated the founding process to be too complex and too bureaucratic (EU Commission 2012)**. On average, it takes 12 days in Germany to found a sole proprietorship (Einzelunternehmen) and 24 days to forma GmbH (cp. limited) (EU 2003). By setting regulations, the state actively defines the ease of registering new business.

Nevertheless, European governments are starting to respond to this by streamlining the process, and compared to the mid-1990s, the time to set up a business has therefore been reduced by as much as 80% (EU 2003). The overall rank of Germany in the Doing Business study of the World Bank is 21 (World Bank 2014c). **However, a look into the detailed analysis shows various possibilities for improvements.** Less encouraging is the performance in the category 'Starting a business,' which contains the duration, number, and costs of procedures for starting a company. Here, Germany only ranks 111.

One way to shield the founder of the founding inhibitory effects of bureaucratic rules **is to create one-stop agencies** (Organization for Cooperation and Development (OECD)

2010). Those single-point-of-contact agencies function as a mediator to the authorities without changing their given distribution of responsibilities.

In Germany, such mediators were introduced by the end of 2009, associated with the implementation of an EU Services Directive.

Furthermore, introduced in 2008, the entrepreneurial company with limited liability (Unternehmergesellschaft haftungsbeschränkte or UG) can be established with only 1 Euro of share capital - compared to a minimum of 25,000 Euros for a limited liability corporation (Gesellschaft mit beschränkter Haftung or GmbH). Currently, over 10,000 UGs are founded every year.

3.IN SPAIN:

I**n an approximate way, we can say that the procedure of incorporation of a company, if a SL is chosen, will cost at least 300 euros and a maximum of 900 euros.** The average amount is 600 euros. Everything will depend on the administrative characteristics of the new company.

Opening a business in Spain has an average cost of 85,800 euros. 87.9 percent of the Spanish population involved in nascent businesses required to invest a minimum of initial capital or seed, according to the latest report Global Entrepreneurship Monitor Spain 2018-2019.

The main types of business structure are as follows:

-Self-employed workers in Spain are commonly known as autonomous, and must register their business with the Spanish tax authority and Spanish social security department.

-The cheapest way of setting up a business in Spain is by forming an unincorporated company. You can do this as a sole trader (empresa individual) or partnership (sociedad civil). With these arrangements, there are no minimum investment requirements and you won't need to go through many of the formalities required when setting up a limited company.

As a business owner, you will be responsible for your own personal tax return. There is no legal distinction between your business assets and your personal assets. Therefore, if your business gets into debt, you are personally liable. Sole traders and partnerships are more suitable for smaller businesses that won't have a large annual turnover or employ many staff. If you are starting up a business in Spain alone, you can also choose to set up as a freelance professional (profesionales autónomos).

The most common form, however, is the sociedad limitada or S.L. Incorporation is important in protecting the owner from personal liability in the event of bankruptcy, but this kind of structure does involve a number of additional tax, accounting, and mercantile obligations.

An SL has to present an annual Spanish corporation tax return and statutory accounts. The owner will have to file their VAT returns (IVA), and several other periodic declarations are usually applicable.

If a few people are setting up as a partnership and want to limit the amount of personal liability and give the business a more formal structure, they can set up as a limited partnership (sociedad comanditaria) instead of a general one. While it might take some time to adjust to business practices in Spain, there is no need to be put off. **The 2018 World Bank Ease Of Doing Business Survey placed Spain 28th out of 190 countries,** meaning it's considerably easier to do business here than in the majority of its neighboring nations.

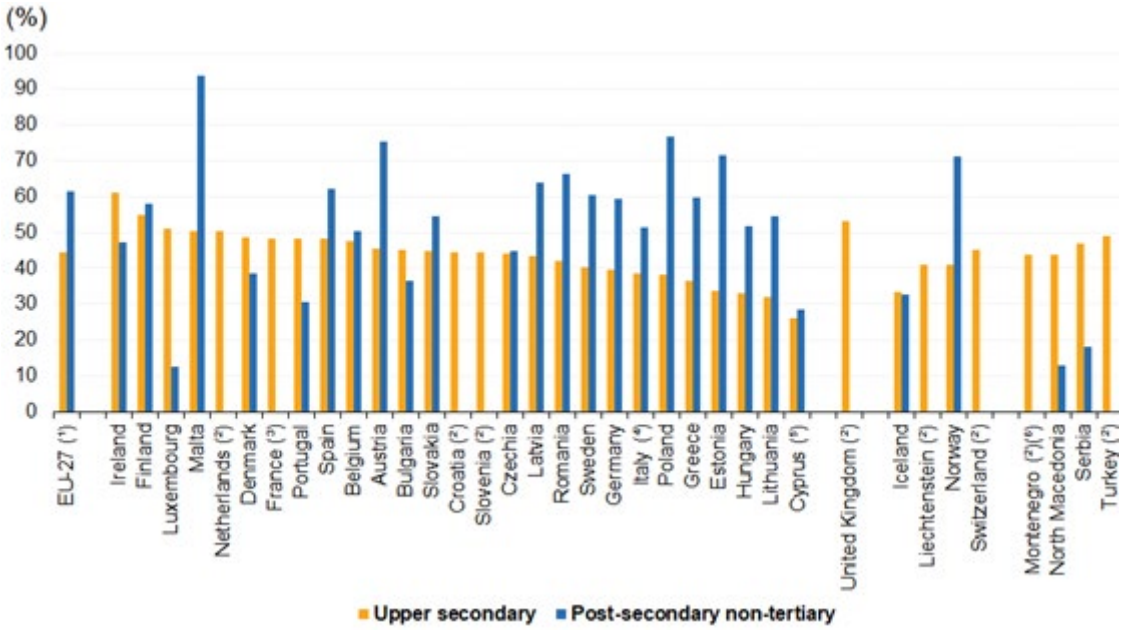
Analysis about the rates of women and men studying technical education

In Portugal, although more than 54% of higher education students are women, in the areas of science, mathematics and engineering (The STEM areas) this number drops to 43,1%. If we are referring to just engineering courses the number of women learners is 28%, and in more technological engineering the number is as low as 12%.

For more than 10 years, the number of women with a doctorate has been higher than the number of men. In total, there are still more men in science, but women are in the majority in state laboratories, occupying half of the research places in higher education institutions and outnumbering the number of male researchers in five of the seven major scientific areas.

Portugal is above the European average in all of these indicators and is one of the countries where parity in science is closer to being guaranteed. Even so, there are still inequalities, namely in access to top positions.

In engineering there are still more men and this imbalance is also visible in leadership positions, the result of a tradition of dominance of men in the scientific career.



Proportion of females among all graduates from vocational education programs, 2018.Data: Eurostat, Statistics

In France, 41% of students in the Sciences stream are girls. Still under-represented in scientific fields, there are still many debates on the origin of this asymmetry. On the one hand, limiting beliefs and received ideas are singled out, on the other we protest by assuring that in our time there would be a spontaneous appetite for other disciplines.

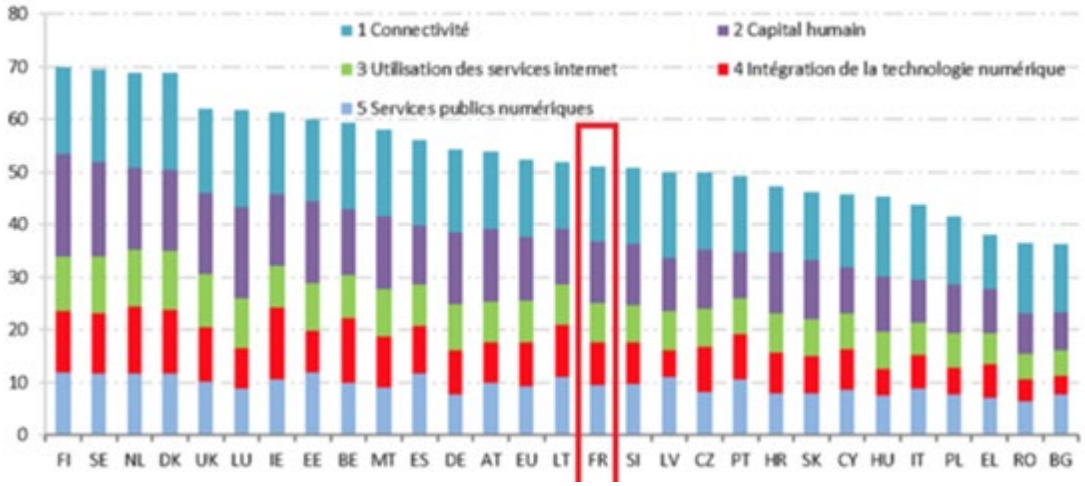
The Villani report aims to increase the number of women in engineering schools to 40% in 2020, currently they are still less than 30%.

In 2018, typically between one third and one half of all graduates from upper secondary vocational programmes in the EU Member States were female, with this share averaging 44.6 % across the EU-27. **The lowest share was 26.2 % in Cyprus while shares just above 50.0 % were recorded in the Netherlands, Malta and Luxembourg, with somewhat higher rates in Finland (54.8 %) and Ireland (where a peak of 61.3 % was registered).**

A similar comparison for post-secondary non-tertiary graduates reveals a wider range between the EU Member States. In 2018, the share of female graduates from vocational programmes was around one eighth (12.7 %) in Luxembourg.

By contrast, female graduates accounted for close to three quarters of all post-secondary non-tertiary graduates from vocational programmes in Austria (75.5 %) and Poland (76.6 %) and more than nine tenths (93.9 %) in Malta

2.1.1. Learning for the development of projects and training for women



Source: Commission European.Classement 2019 de l'Indice relatif à l'économie et à la société numériques (DESI)

According to the 2nd European Start-up Monitor, only 14.8% of start-up founders are female. The Global Entrepreneurship Monitor in 2016 shows that Europe had the lowest female involvement in Early-stage Entrepreneurial Activity of every analyzed region (6%) and the lowest gender parity. Malta has the lowest and Lithuania has the highest rate of female entrepreneurs of all EU member states**.**

The percentage of female entrepreneurs within EU member states for all economic activities shows large disparities with percentages ranging from 19.4% in Malta to 39.5% in Lithuania, the member state with the highest rate of female entrepreneurs. Women in OCED countries are about 50% less likely than men to be involved in launching or running a new business. Women-operated businesses are also less likely to create jobs for others.

Moreover, **women tend to operate different types of business than men. While women start firms in all sectors, including technology-intensive sectors, 13.3% of self-employed women in 2018 were operating in health and social work sectors and 11.5% in service sectors such as cleaning of textile products and physical well-being activities.** However, only 3.3% and 2.5% of self-employed men were operating in these sectors. Men on the other hand were much more likely to operate in construction (18.7% vs 1.6%), transportation and storage (5.2% vs. 1.1%), information and communication (4.3% vs. 1.9%) and manufacturing (7.8% vs. 4.4%).

These gender gaps in the quantity and quality of entrepreneurship activities can be explained by many factors, including a need for more entrepreneurship skills. Between 2014 and 2018, women in OECD countries were 35% less likely than men to report having the skills and knowledge to be able to successfully start a business (Figure 1). This highlights skills gaps in areas such as business management, opportunity recognition and risk management. T**raditional approaches to building entrepreneurship skills among women include dedicated entrepreneurship training as well as coaching and mentoring programmes.** Tailored approaches are usually better-equipped to respond to the needs of women-operated businesses, and use delivery methods that are more effective for women entrepreneurs such as the use of female coaches and mentors.

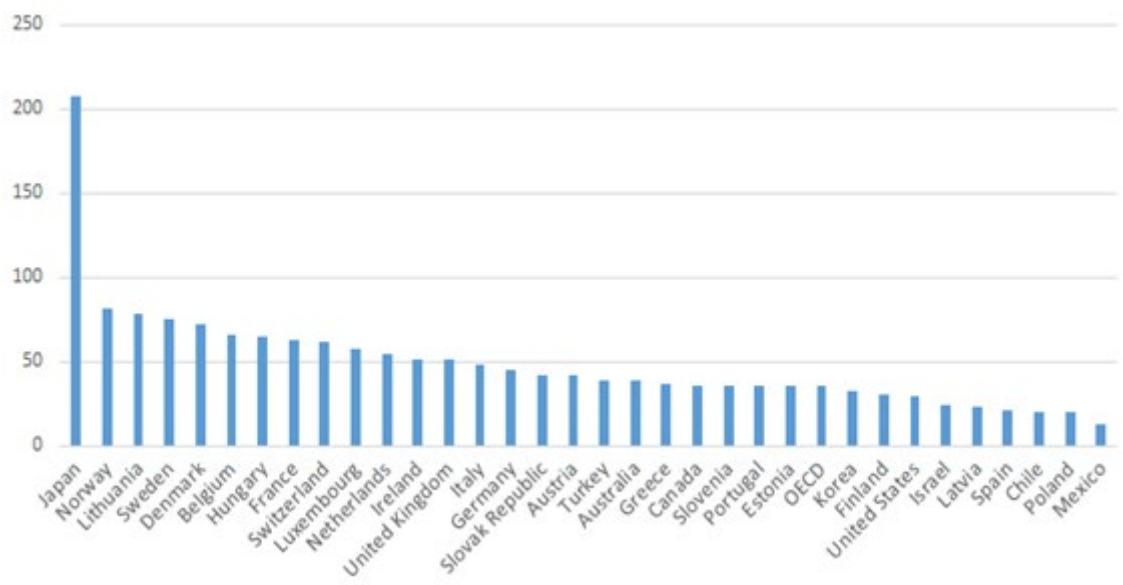


Figure 1. Women are 35% less likely than men to report having the skills needed to start a business. "Do you have the knowledge and skills to start a business? Gender gap in the share of the population who responded "yes", 18.64, years old, 2014-2018

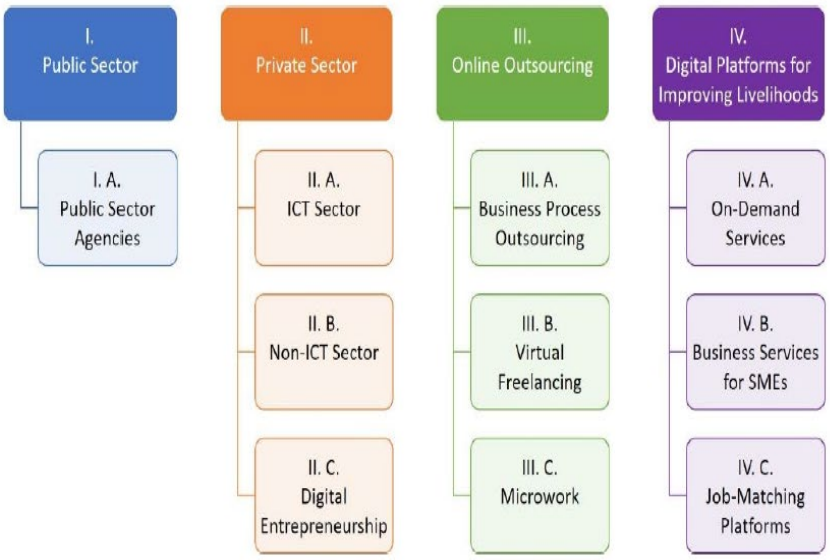
DIGITAL SKILLS :

-Advanced Digital Skills: Skills necessary to create, manage, test and analyze ICTs. They relate to technology development, network, management, machine learning, big data, analysis, IoT, cybersecurity and blockchain technology. Example: software development, cloud computing.

-**Intermediate Digital Skills:** Skills that enable one to use ICTs in more meaningful and beneficial ways. These are generally job-ready skills needed to perform work-related functions, such as desktop publishing and digital graphic design.

-**Basic Digital Skills**: Generic ICT skills required for nearly all digital jobs. They are related to the effective use of technology, including web research, online communication, use of professional online platforms. Example: Using a keyboard, online search, sending Email.

The World Economic forum identifies three pillars of '21st century skills': Foundational Literacies, which describe how students apply core skills to everyday tasks (e.g. literacy, numeracy, digital skills)**; Competencies**, which refer to how students approach complex challenges (e.g. critical thinking, problem-solving, communication); **and Character Qualities,** which encompass how students approach changing environments (e.g. curiosity, initiative, persistence, leadership). **Regardless of how they are categorized, the digital economy is creating cross-functioning roles that require youth to have technical, social and analytical skills.** To stimulate youth digital employment, it is necessary to first identify the sectors of the economy where digital jobs are found.



Drivers of demand for digitals jobs.

Sector classification	Definition	Examples	Type of Digital Work	Digital skills (Required)	Additional Skills (preferred)	Work Arrangement	Additional Comments
Digital Entrepreneurship	Ventures using Internet, digital products or services or digital distribution channels, incl. cloud services	Application development; online education; web hosting, membership sites	ICT-intensive. ICT-dependent	Advanced; Intermediate	E-business skills, strong cognitive, analytical skills	Self-employment, entrepreneur	-
Virtual Freelancing	Jobs involving complex tasks (translation, coding, web/graphic design, software development, techincal writing), distributed via an online platform	Upwork; freelancer.com; 99designs	ICT-dependent	Advanced; Intermediate: Basic	Strong cognitive/analytical skills, soft skills	Self-employment, temporary	Work done within longer projects than microwork (days, weeks)
MicroworK	Business processes are broken down into small tasks (e.g., data input, proof-reading, image tagging, and text transcription) which are then distributed to workers via an online platform	MTurk, Figure Eight, ISSPs (e.g., Samasource, CloudFactory)	ICT-dependent	Basic	Foundational cognitive skills	Self-employment, temporary	Microtasks are quickly performed (seconds, minutes) and workers are paid small amounts by task
Business Services for farmers & SMEs	Online information services for farmers and small entrepreneurs, providing price and weather info; links to buyers; funding and technical services; online markets	For farmers: M-Farm (Kenya), ict4dev.ci; Lelapafund (Kenya) For SMEs: Alibaba, Etsy	ICT- enhanced	Basic	Varied	Self-employment, entrepreneurs, farmers	
On-Demand Services Platforms	Online on-demand services that require ICT	Ride hailing (e.g., Lyft, Uber, Gojek); Food delivery	ICT-dependent	Basic	Varied	Self-employment (Independent contractor)	For this discussion, excludes platforms that facilitate asset sharing but not labor (e.g., Airbnb)
	Online on-demand for traditional services facilitated by ICT	Babysitting; Home services (e.g., Taskrabbit); Home cleaning	ICT-enhanced	Basic	Varied		

DRIVERS OF ICT-INTENSIVE, ICT-DEPENDENT AND ICT-ENHANCED WORK

To increase women's participation in the digital economy, new program models must be developed to address women's specific needs. Programs intended to connect youth with digital jobs often fail to address women's constraints in accessing and utilizing ICTs.

It is imperative for digital jobs programs to be designed with young women in mind. To do so, practitioners and policy-makers must understand the program design and implementation strategies that overcome these barriers and generate optimal employment outcomes for young women.

2.1.2. ICT as an element that favors equality

Achieving gender equality in technology makes us have more talent, vision, resources and wealth.

1.Unfair treatment at work.-

A 2017 study by the Kapor Center for Social Impact, based on a sample of over 2.000 people who had left a job in technology-related industry, found that women had significantly higher experiences of unfair treatment at work than men. **One in ten women experienced unwanted sexual attention, and women from all backgrounds experienced significantly more stress in technology companies than other companies.**

2.Women in lower income households.-

Online platforms are making it easier for young women to start their own business and access new markets. E-commerce as Etsy or Alibaba in China allows artisans and artists to sell their works on their platforms. Microwork can be especially helpful for remote or vulnerable populations that face constraints to mobility and access to local employment, including low-income rural residents, and women in culturally conservative environments. **Business processing outsourcing jobs in call centers, which also tap into global rather than local demand, go disproportionately to women compared with their share of employment in the broader local econom.** YOnline freelancing can help young women circumvent physical, social, and economic constraints to their mobility. E-lancing can also be advantageous for young, educated women who face societal or family pressure that discourages their formal employment.

3.Digital Jobs for young women with disabilities.-

In 2013, UNICEF estimated that there are between 93 million and 150 million children and youth with disabilities aged 0 to 18 years. Youth with disabilities are more likely to face severe social, economic, and civic disparities as compared with those without disabilities.

Youth with disabilities experience many employment barriers, including inaccessible physical environments and transportation, the unavailability of assistive devices and technologies, non-adapted means of communication, gaps in service delivery, and social stigma and prejudice. Young women with disabilities (YWWDs) also face the added burden of gender-based discrimination.

Digital jobs offer opportunities for YWWDs to overcome some of these barriers. Virtual skills-training programs can help them to develop the digital, soft and entrepreneurial skills necessary to succeed in the digital economy. These skills can help young women with disabilities facing mobility constraints to access online outsourcing and e-lancing opportunities. **Online work experience can also help young women with disabilities to qualify for ICT-dependent and ICT-intensive jobs in the public and private sectors, establish a work history, and develop a professional network.**

It’s necessary that public and private-sector commitments to disability inclusion, implementing non-discriminatory policies, and providing access to affordable assistive devices and technology. **Online freelancing can help young women with disabilities who experience workplace discrimination that limits their opportunities for advancement.**

4.Young women in rural areas.-

Populations in rural areas also have lower rates of Internet access and mobile penetration. **They often tend to have less access to ICTs, leaving them and their families at a disadvantage**. According to the Food and Agriculture Organization of the United Nations, while women play a fundamental role in agricultural production, they tend to have less access to ICTs, leaving them and their families at a disadvantage.

A good policy along with internet access and mobile access in rural areas can allow young women to stay in rural areas to which they belong, without having to travel to the cities in the search of employment. This situation allows: - cost savings for travel and accommodation, - lack of a family structure and support when being in another city - avoid situations of violence against women, - avoid the depopulation of rural areas and their impoverishment.

ICTs offer valuable opportunities for agricultural and rural development, increasing sustainable output, farm and agribusiness efficiency and revenues for a wide range of players. The access of women to information and education can also increase acceptance for sending both daughters and sons to school, which will have a greater impact, and increase the chances of reducing poverty.

Digital literacy in rural institutions and communities should be developed and enhanced, taking into consideration local needs and constraints by providing appropriate learning opportunities for men, women, youth and people with disabilities, which will enhance individual and collective decision-making skills.

5.Migrant women-

Digital jobs and entrepreneurship is a solution for migrant women. The problem that we can find is that coding and most of the jobs and tools necessary to carry out entrepreneurship in the digital sector are in English. So the idiomatic barrier is important for these migrant women. **We have to take into consideration that Women constitute approximately half of the 258 million migrants** who live and work outside their countries of birth.

Although many migrant women are highly skilled and well-educated, they face challenges in accessing foreign labor markets. **Employment restrictions for migrants coupled with the de-skilling prevalent in gendered labor markets and pervasive stereotypes associated with migrant women in countries of destination, can negatively impact their job prospects.**

Indeed, many migrant women participate in low-skilled and precarious jobs characterized by low wages, poor working conditions, limited labor and social protections, and exposure to physical and sexual violence.

A)Interculturality as a barrier or as an opportunity

Information and communication technologies can facilitate and support the integration of migrants, as they can contribute to the three main issues of intercultural integration.

B) Foreign Language Acquisition

If computers are utilised in a constructive and fruitful way they can support the acquisition of the foreign language. In computer assisted language learning the multimedia factor is especially convincing. Text, sound, pictures and video resources can be combined on demand and merged into multimedia packages to properly accomplish activities like listening, reading, writing and speaking.

Speaking another first language is seldom regarded as an advantage and children feel the pressure to learn the language of the country they currently reside in. The usage of the mother-tongue is limited to the communication out of school and to the family. **This often results in a lack of verbal abilities in both languages, causing limited communicative skills and inhibiting the development of the individual's identity.** For this and many other reasons the students' abilities in their first languages have to be encouraged and developed further at school.

The number of lessons in these first languages depend on the availability of teachers who speak these languages as their mother tongues and on the number of students and the homogeneity of the groups concerned.

ICT opens up new opportunities to overcome these problems in case children are provided with learning material and information in their native languages. E.g. multimedia online dictionaries can be a first step to overcome language barriers in a simple and fast way. Also child-oriented websites and wikis in their mother-tongues offer opportunities to learn about topics in their own languages.

Didactically designed videos can be a benefit for efficient learning. **The eduMEDIASERVICE, a modern streaming video on demand service developed by education highway** (http://estream.schule.at) offers a full range of didactical material in addition to the video. Beside the film, internet and text resources offer background information and learning material.

This supports self-organized learning and encourages information-retrieval by the children, making the students active learners rather than passive consumers. Furthermore the multilingual service is adaptable for any language and offers useful additional features like the transcript of the speakers' texts and subtitles of the videos. So this service leads to a better understanding of content and supports linguistic skills at the same time.

C) Intercultural Learning

For teachers and students the internet is an easy way to get in-depth knowledge and visual information on the children's countries of origin and culture. Moreover, questions on topical subjects can be answered more efficiently. Publishing the students' work on intercultural topics has a motivating effect on the "authors" and leads to the dissemination of the topics concerned as well as contributing to the sensitivity of the readers.

Last but not least ICT facilitates and supports quick and easy communication in cross-border projects and partnerships. Besides, it offers several ways of collaboration for teachers and even young learners.

Technology solutions, especially Artificial Intelligence (AI) need to be developed in unbiased and inclusive ways to ensure that they reflect society at large. More diverse and demographically representative participation of programmers, AI experts and designers, will help realise this goal.

According to Eurostat, fewer than two in ten ICT specialists' jobs in Europe are held by women. Typically, girls do as well as or outperform boys in Science, Technology, Engineering and Mathematics (STEM) classwork, but their interest in STEM subjects starts to wane by the age of 15. Therefore, more emphasis should be put on gender equality in the ICT sector.

It is important that children are exposed to technology at early ages, when they can develop digital skills and spark interest in STEM subjects. **Combining learning technology with female role models is crucial in encouraging girls to pursue further studies and careers in STEM.** Concretely, we ask European leaders to develop educational programmes that inspire young girls to study ICT and STEM subjects.

Technology innovation changes the labour market. Companies are delivering services and employees are completing their tasks online, globally, working from anywhere. Digital solutions enable new ways of working e.g. teleworking, working from home, virtual conference rooms, etc. This way of working has a direct impact on working conditions, resulting in an increasing number of people working in part-time jobs or being self-employed.

New business models, driven for example by social media, allow new generations of employers and employees to work flexible hours and remotely. In times of digital transformation, it is crucial that all stakeholders, especially companies and trade unions, are involved in rethinking the labour contract (ensuring e.g. lifelong learning, social security, etc.) together with the EU institutions and the Member States.

Interculturality is an opportunity as an element that favours equality, but interculturality is an opportunity for equality as long as the necessary elements are given. Without a correct application of ICT, it can become a barrier.

2.1.3. Study on the search for financing provided to these women entrepreneurs and if they have the appropriate ICT tools and the knowledge of this tools

External finance as a start-up barrier.Survey evidence from across the European Union indicates that obtaining external finance is a major barrier to business start-up across all socio-demographic groups.

More than one-half of new entrepreneurs across all groups consider obtaining finance to be an important problem, the only exceptions being entrepreneurs aged above 40 and those with post-secondary education.

The low-educated and young entrepreneurs have the greatest problems in this respect. Women entrepreneurs are disproportionately present in the services sector, which has lower entry costs, and are more likely to start a business driven by the need to combine family and work (OECD, 2012).

Thus, women entrepreneurs have lower financial needs on average than male entrepreneurs. On the other hand, there is evidence of undercapitalisation of many women-owned businesses, and greater reliance on bootstrapping and short-term loans, which tend to increase vulnerability to bankruptcy (OECD, 2012).

Women, migrants, young and low-educated entrepreneurs experience difficult access to credit and credit conditions. Although cases of open discrimination are possible, this is more often the outgrowth of firm-specific and market-specific factors: e.g. low entrepreneurial and financial literacy skills of the entrepreneur and undercapitalization or low growth prospects of the business. The mere supply of finance is unlikely to solve alone a condition of multifaceted disadvantage. **Programmes financing inclusive entrepreneurship should be aligned with other initiatives supporting entrepreneurial skills and market development skills.**

Those with high income have better financial knowledge than those with low income, although income is also positively correlated with age and level of education (Atkinson and Messy, 2012). **Financial knowledge influences financial attitudes and behaviors**. Those who rank high in financial knowledge will also show stronger propensity to saving and to appropriate financial behaviors (e.g. sound budget management, timely payment of bills, etc.).

An exception is represented by women, who do better than men with respect to financial attitudes and behaviors in spite of lower scores in financial knowledge. Improving financial literacy skills through financial education is, therefore, an important policy area. This is especially true for entrepreneurs from disadvantaged groups, since the way they manage their business and connect with credit markets will affect their livelihood and that of their families. **In this respect, it is generally recommended that financial education programmes be strongly tailored, because initial financial knowledge will vary a great deal among participants (OECD, 2012b).**

Programmes should also be of hands-on nature, drawing on experiential and interactive methodologies. The ultimate goal should be to influence attitudes and behaviours, rather than focus on financial concepts and principles. **Timing is also important and should be close to when education is most likely to have an impact.** Including financial education principles in vocational education colleges, self-employment training courses or still in active labor market programmes for the unemployed can make inclusive entrepreneurship stronger.

Policy makers should also work on the qualification and accreditation of financial education providers to guarantee quality in the offer of training, while banks and other financial institutions should be encouraged to communicate with clients in a language that is as simple as possible (OECD, 2005).

OECD16 confirms the presence of a gender gap in access to venture capital using various financing measures. The probability that a startup receives financing is 10% higher in those funded entirely by men, compared to those that include at least one woman. It should be noted that there are also differences in the funding received by startups whose founding teams include women, which is a third lower than that reached by those led only by men.

In 2019, $ 26.7 billion was invested in companies with at least one co-founder; just over $ 6 billion in businesses founded only by women; and $ 20.6 billion in companies co-founded by women / men.

General trends are that female founders raise less funding in seed capital rounds than their male counterparts. In proportion, startups founded only by women tend to raise less money than startups founded by mixed teams (men and women). This trend in seed capital tends to be replicated in subsequent funding rounds as well.

And here is where the numbers on gender diversity get alarming. **To go more in depth on the numbers, a research from WomenWhoTech shows that it is very hard for women CEOs to get funding for their businesses,** since only 3% of total venture capital goes to companies with women CEOs.

It's interesting to see that once they get funded, women entrepreneurs bring in 20% more revenue with 50% less money invested. And women-led tech startups have a 35% ROI when venture backed and generate 12% higher revenue than male-run startups. It takes a lot of courage to start up a company when you are a woman - but that's not how it should be.

We know large numbers of women are struggling to get funding. A female founder is 86% less likely to be funded than a man. That's crazy when we know the return on investment is higher; it is about 34% higher for companies with a gender diverse leadership. It's not about 'corporate social responsibility': a diverse range of thinking will bring better value for the company." Priya Guha, RocketSpace

Contextual obstacles Women's educational choices, and women's horizontal and vertical segregation in employment, result in the number or stock of women that could potentially set up a business in science and technology or turn an invention into a profitable market product being lower than the number of men.

Science and technology, innovation and inventions are concepts mostly associated with men and male areas making these fields less attractive to women, resulting in women-related invention and innovation being less recognized as valuable business ideas. Stereotypes about women: science and technology, innovation and invention are male dominated sectors, in which women are perceived by market stakeholders as less credible or less professional.

This means that women entrepreneurs are sometimes seen with scepticism by potential clients, suppliers and business partners and have to be more persistent to prove their knowledge, skills and capacities. Traditional views about the role of women in society and greater difficulties in balancing family responsibilities with working in fast-moving and competitive sectors that expect long and flexible working hours and constant training to be up-to-date with new technological development and market opportunities.

Economic obstacles

Difficulties in accessing finance: in general women entrepreneurs find it more difficult than men to access finance. The issue of accessing adequate finance is a greater problem in science and technology sectors and when a woman is trying to develop an innovation or invention for two main reasons, firstly these sectors often require substantial investments (i.e. product development, product marketing, etc.) and, secondly, women attempting to operate in these sectors are seen as less credible by financial stakeholders and investors.

Soft obstacles

Lack of access to relevant technical, scientific and general business networks. Access to these networks is essential to develop business ideas, meet potential clients, suppliers and business partners, understand the market with its developments, opportunities and weaknesses, and get strategic information, cooperation and support. Lack of business training when undertaking technical and scientific studies presenting entrepreneurship as a possible and achievable employment opportunity for women.

Women's perception that they lack personal/entrepreneurship skills such as self-confidence, assertiveness and risk-taking. In general, women more than men report the lack of these personal and entrepreneurial skills as being an issue in starting a business. **This is potentially a greater obstacle in science and technology sectors where both male dominance and levels of risk and uncertainty are higher.** Lack of role models sending positive messages that women can be successful in these sectors and fields of activities and to whom women could turn for mentoring and advice

Knowledge of the tools (Binance, cripto, crowdfunding, peer-to-peer lendings, news platforms for creating capital, online incubators, online accelerators, business angels, microcredits, loans..)

2.1.4. The issue of work-life balance and ICT and more when creating a company on their own

Digitalisation provides a unique opportunity for economic growth and inclusion of women in the labour market. Getting more women into ICT would reduce the persistent gender-pay gap in the labour market, which is partly due to a disproportionate amount of women concentrated in modestly paid jobs such as teaching and care-work.

A way to successfully promote gender equality and work-life balance in the ICT sector is forging partnerships with universities and NGOs and services providers to implement

work-life balance measures in the organisations. This joined up approach helped businesses both hire and retain women ICT specialists. **The most effective options to wallow work-life balance are telework, flexible work, parent-child office, parent support groups, women networks and mentoring programmes.** Is important too, fighting unconscious bias and stigma and normalising parenthood.

Family reconciliation is a key factor in the gender gap. Monetizing and putting economic value on motherhood, on the opportunity cost of women who decide to be mothers as well as on family care and what they contribute to the economic group in the time of motherhood, makes us see family conciliation in a realistic way.

Especially being a mother and entrepreneur or owner of a business in general and ICT in particular. Stewardship should be promoted with flexibility and support systems and help to families. HBR's article "3 Ways to Advance Gender Equity as We Return to the Office" highlights the need to take advantage of the COVID-19 crisis to apply real changes when planning employees' return to offices.

Specifically, it makes the following proposals: advocate for new, more flexible ways of working, take into account working parents and their needs regarding their children (permission to go to the doctor, being able to work from home if a child becomes ill, etc. .), and normalize and support that working parents can leave work earlier to fulfill their family obligations

Finland. Entrepreneurship in Finland and costs of parenthood

The Women Entrepreneurs of Finland (Suomen Yrittäjänaiset) urges the Parliament to share out the costs of parental leave by means of broad-based taxation.T**he Parliament must take measures to share out the costs of parental leave by means of broad-based taxation for the following reasons:**

- **Tripartite collective bargaining** has not succeeded in solving the problem.
- The current system pushes young women into jobs that are only temporary. **The costs of parental leave are largely paid for by female-dominated sectors.**
- **One child costs the mother´s employer around 17 000 euros** (wage level 3 300 euros/month).
- The largest items of direct expenditure paid by the employer include:
    - wages and holiday pay
    - leave of absence during pregnancy
    - leave taken to look after a sick child.

- In Finland, **around a million euros of taxpayers' money is invested in every child, including girls**, by the time the child reaches the age of 20.

When it comes to job recruitment, the 17 000 euro “motherisk” too often turns out to be the straw that breaks the camel’s back.

- Because of the current system**, only about 30 percent of entrepreneurs are women.**
- The current system hinders growth, employment and internationalization in female-dominated sectors.
- SMEs already keep the wheels running in Finland. Over 60 percent of Finns earn their daily bread.
- **The population of Finland is ageing fast, and hundreds of thousands of people will be retiring in the near future.**
- Not enough children are born in Finland.
- The work input and entrepreneurship of women is needed to maintain Finland´s competitiveness, since half of the population are women.
- **The current system is a remnant of old times that Finland no longer can afford.**

Economic impact of a Universal and Free Nursery Policy in Catalonia

A free public nursery school system in Catalonia would benefit 16,000 women, who would not have to leave the labor market, and over 20,000 who would not have to request a reduction of their working hours.

It is proposed to establish as a priority of public policy a childhood education, starting from the earliest stages of life, as it is an essential instrument to facilitate the reconciliation between family and work life, with direct positive effects on women's labor participation and, therefore, their economic independence and the reduction of the wage gap.

The study shows that free cost and expansion / universalization of early childhood education services would have important economic and social benefits, as it would make possible the progress in reducing gender inequalities. **However, for this policy to be as effective as possible, it must be accompanied by a timetable reform and an extension of maternity and paternity leave to cover the first stage of a child's life.** Equality policies are interlinked and must move forward in parallel to have significant effects.

The study estimates the benefits and costs of implementing a total free-of-charge model of the current public offer, expanded by 20%, to cover the needs of current demand in Catalonia.

Total profits are estimated at 37,646 full-time jobs, 790 million € in wage income and 154 million € in tax revenue. On top of this, the 160 million income released for families due to the free system.

This positive impact is clearly higher than the annual costs of making the extended system 100% free (163 M €) plus the construction of these vacants over four years (18.8 M €).

Therefore, the policy of zero cost and 20% expansion of public places would not only have no costs for the public sector but would also generate a positive impact on the economy through an increase in employment and income of families, all of which would translate into more consumption and, as a result, greater economic activity.

The study shows that the universalization of public early childhood education is a profitable investment, even if we only considered the increase in public income, in terms of social contributions and income taxes, that women would pay for not interrupting - totally or partially- their insertion in the labor market.

It is considered to be one of the best tools to reduce female and childhood poverty, since it enables mothers to work, consequently generating an increase in family income, present (wages) and future (pensions).

However, early childhood education 0-3 is not only an important mechanism for reducing gender inequalities, but it is, above all, a very relevant mechanism for eliminating social inequalities as well as for improving the social and economic future of a country.

Although the ICT sector generates better job opportunities (according to 2018 data, the average salary in the sector is much higher than in other sectors, a 22% more for women), **the abandonment of professional careers seems to be higher in this sector. At a European level, women with digital jobs between the ages of 30 and 44** (which is the critical stage in women's working lives, both because of motherhood and statistical discrimination) who leave the professional world and become inactive population are 8.7% compared to the 7.3% of other non-digital jobs, in this sense it would be interesting to determine, on the one hand, the reasons why women leave their careers in a higher percentage than in non-technological sectors, and on the other, get a deep understanding on the issue to fins out how many do not leave working life but change their sector.

Although co-responsibility measures play a specific role, it is necessary to take into account the fact that the feeling of hostility that many professionals suffer seems to be more intense in this sector, and it can also have a significant impact.

It should be noted at this point that measures related to conciliation should in no case be aimed at women, but at the working staff as a whole. That is, to help dissociate the idea of women with caring responsibilities.

Work/life balance and encouragement of co-responsibility

-Promoting equal and non-transferable leave for mothers and fathers. Such measures have proved successful both in improving the position of women in the labor market and in promoting co-responsibility and involvement of men in care.

-Establish aid to companies and entities to start: either Daycare centers in work centers, Checks for care, Conciliation measures aimed at men or Flexible hours measures (flex-working and teleworking)

2.1.5. Employability and relationship with ICTs

Like any business, startups need a set of skills to have a high performance and, as tech companies, they count on tech talents to make that happen. T**he field has been full of opportunities for development and to take action on shaping a better future for us, but a survey by The Guardian says that 73% of workers in the tech industry believe the industry is sexist.**

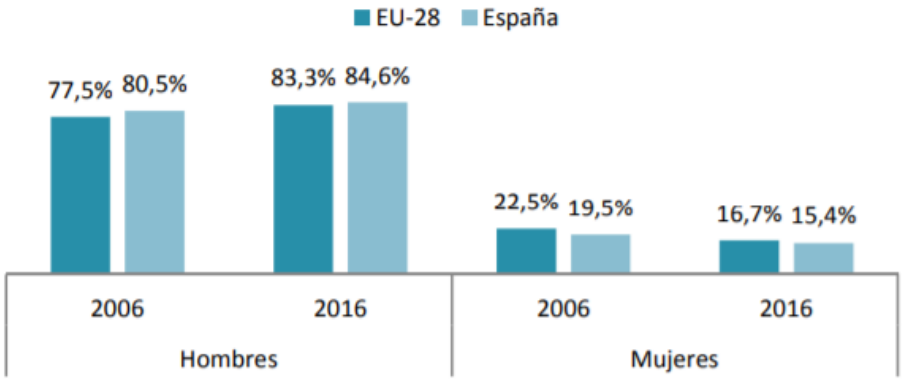
- Restrictive Laws and Regulations
- Unequal Access to Education
- Stereotypes, Biases, and Social Norms
- Safety and Security Concerns
- Discriminatory Workplace Practices

Barriers to digital employment for young women. Source GSMA Connected Women 2015; World Bank 2016, GSMA Connected Women 2018.

It is also true that these opportunities being brought by the tech industry have started to bring curiosity for young women. And when we look at the numbers of a research done by HackerRank we can see that today young women are 33% more likely to study computer science when we compare them to the women born before 1983.

Apart from that, for those women who are already in programming, the most common languages they say to have proficiency in are: Java, JavaScript, C, C++ and Python. The good thing? These are the highest in-demand languages across the industry.

When we look at data, we see that there is space for growth and to keep motivating more women to get into technology. But another interesting piece of data brought by HackerRank's research was that women over 35 years old are 3.5x more likely to be in junior positions than men - to which they bring the following conclusion: either women are starting their careers relatively late in life or are, generally, stuck in junior positions.



Porcentaje de profesionales TIC por sexo. UE-28 y España 2006-2016. Fuente Eurostat 2017

New youth employment programs must integrate digital skills training with enterprise promotion in the private sector. Many governments and civil society organizations are looking to digital jobs to combat growing youth unemployment rates. However, most youth digital employment programs focus primarily on skills-building.

While an emphasis on including digital skills in training programs is crucial it is also critical to address the constraints facing firm growth that will create new jobs that could adequately utilize these newly gained digital skills of the growing youth population. **Youth employment programs must utilize an integrated approach to digital jobs to help young people fully leverage the potential benefits of the digital economy.**

According to the World Bank Data the types of Digital Work are:

1.ICT- Intensive:
Jobs which are directly created through the production of ICT and through the intensive use of ICT. Example: Mobile App Development
2.ICT- Dependent:
Digital technology enables work to such a degree that the job cannot be performed without the technology. Example: Customer Service, Call Center, Online Freelance Work
3.ICT - Enhanced:
The activity is facilitated by using ICT as a tool, but could be used to be performed without the ICT tool. Example: Accounting, Graphic Design.

According to a research by telecoms firms Openreach into the language of its job postings found that ***gender-biased language holds around 50 % of women back from applying for ICT roles***. The findings show that removing e.g. the word "engineering" from job postings for a 'junior engineer' role significantly improved women's interest in the job when replaced by 'trainee network coordinator'.

However, changing the language in job adverts is only one step in narrowing the gender gap in the IT sector. Problems such as stereotypes (approx. 25% of women claiming they believe some careers are better suited to men), lack of role models and unconscious bias in hiring processes and internally within businesses.

2.1.6. Female empowerment and economic autonomy at a general European level

According to the United Nations Women Report, women's economic empowerment is central to realizing women's rights and gender equality. Women's economic empowerment includes women's ability to participate equally in existing markets; their access to and control over productive resources, access to decent work, control over their own time, lives and bodies; and increased voice, agency and meaningful participation in economic decision-making at all levels from the household to international institutions.

The article "Female autonomy generates superstars in long-term development: Evidence from 15th to 19th century Europe", Jörg Baten, **Alexandra de Pleijt 11**

February 2019 says that the empirical results suggest that economies with more female autonomy became (or remained) superstars in economic development.

Women's economic equality is good for business. Companies greatly benefit from increasing employment and leadership opportunities for women, which is shown to increase organizational effectiveness and growth. It is estimated that companies with three or more women in senior management functions score higher in all dimensions of organizational performance.

According to the study "Women in Business: towards real progress" carried out in 2019 by Grant Thornton, the main barriers that the 400 women interviewed in the study state as the problems a woman has in rising to managerial positions are: - Motherhood (49%) - Lack of work-life balance (47%) - Male-dominated culture in the industry (47%) - Male-dominated culture in the company (45%) - Managers are proprietors (39%)

Failure is common in the startup world, and some studies have found that failure rates are especially high for women entrepreneurs. Women entrepreneurs are more likely than their male counterparts to exit voluntarily, and for personal reasons, than as a result of business failure. In the Harvard Business Review study "The different reasons men and women leave their successful startups", they found that when the entrepreneur was a woman, the probability of leaving for personal reasons increased by 15%. In contrast, the probability of actual failure decreased by 13% for women.

In terms of the obstacles to the presence of women entrepreneurs in the ICT sector:

1. **Women's lack of confidence** and insecurity in their potential for entrepreneurship.

2. **Some women are lone entrepreneurs**, which entails much more effort and emotional exhaustion. As far as possible, it is advisable to undertake as a team (co-entrepreneurship and co-leadership).

3. **Having a talented team is key in a start-up.** You have to know how to choose your team members well and make courageous decisions to make changes if things do not go according to plan. Often the main barrier is not being able to hire the desired team due to lack of money.

4. **Not having the right training to launch the project idea.**

5. **Financial instability** in the early stages.

6. **Difficulties in accessing** external financing.

7. **Difficulties in raising adequate capital.** Startups founded only by women tend to raise less money than startups founded by mixed teams (men and women).

8. **The digital sector is highly masculinised** and has its own networking networks to which women do not usually have access. 9. Lack of visibility of leading women in the digital sector.

The place of women in digital technology in France

Women are underrepresented in the functions of developers and technical profiles of the IT department. 33% of women work in the digital sector BUT in sales, communication, administrative positions. 15% of women hold positions as research and IT development technicians

Less than one in ten entrepreneurs is a woman (they often get less money when they raise funds); 11% of women work in cybersecurity; Only 20% of women are found in the CIOs of large French companies."[1] Even though digital technology creates jobs and the absence of women sustains the development of involuntary algorithmic biases (cognitive biases) or voluntary favoring a male vision of the world, the feminization of the profession is an issue raised by many associations in France: Femme @ Numérique, Digital Women's Day, CyberElles, etc.

Why are women not going digital?

On the one hand, **the lack of a female figure of identification with "the image of the associable geek" and on the other a small proportion of girls in engineering school creates a circle** which is maintained because the low professional representativeness of women in digital maintains the scheme. Source: Nathalie Dépret article monster.com

Leadership and successful management skills are frequently and stereotypically associated with men, which adds to the already masculinized association of science and technology, further complicating the presence of women leaders in the industry. In this regard, it is important to note that while measures related to fostering “female” leadership — understood as a type of leadership with characteristics stereotypically associated with women — may have positive impacts in the short term, they do not effectively contribute to diluting gender bias, but they reinforce it by continuing to link stereotypes to gender.

This does not mean that measures or programs aimed at women should be disregarded to promote an increase in their presence in leadership positions, which have proven to be very useful.

Such programs should not be oriented from the perspective of the feminine and the masculine, but it is advisable to encourage good styles in leadership or effective leadership.

[1] Source Article Fedbusiness https://www.fedbusiness.fr/actualites-fed-business/quelle-est-la-place-des-femmes-dans-le-digital

Technology entrepreneurship is also masculinized and the lack of access to funding is presented as the main problem for women who want to start a startup. According to data from the Spanish Association of Startups, in Spain the percentage of startups led by women was 18% in 2017, consistent with the European average.

Women present a greater difficulty accessing funding, particularly when it comes to setting up technology companies. At a European level, ICTs have the highest investment percentages; however, the overall percentage of women companies in the technology sector has decreased by 19% in recent years. Only 7.4% of those who have invested in one or more startups are women. When it comes to the Business

Angels' category, this percentage is 7.2%. **In Spain, according to data provided by the Gender Board for the Digital Environment, Business Angels are barely 10.** The lack of access to funding has a sociocultural component, as well. Associating qualities such as entrepreneurship, leadership, courage and risk to masculine values also impacts the decisions around what and who is funded or what and who is invested in.

The European Commission, based on the needs and with the aim to promote women's economic empowerment has encouraged networking and exchanges of good practices,as well as initiatives that help women build confidence in their abilities.

Wegate-

Online platform that works like a hub for connecting women entrepreneurs with support organisations at local, regional, national and European level, thus facilitating their access to mentoring and business networks across Europe.

EEN-

With **a facebook group that connects women entrepreneurs to the network's business** and innovation support activities and provides concrete services, such as business partnering, access to foreign markets, cooperation with local networks, as well as access to EU funding.

Business Angels-

The European Commission works with 4 pilot projects, but they are pilot projects and they are working to encourage the emergence of more women business angels in the EU and increase access to alternative sources of funding.

Other finance opportunities: the Commission is launching a gender-smart finance initiative under the InvestEU programme, to stimulate funding for female-led companies and funds.

3. Good practices in education competences and Manual of good practices

3.1. Identification of good practices (specific cases)

A)YOUNG WOMEN :

Technovation girls-

Technovation girls was born out of an idea CEO Tara Chlovski had gotten hooked on as an engineer at USC. **Looking around at her fellow grad students, Tara realized how few women and people of color were in the room.** Technovation girls

In France, 41% of students in the S stream are girls. Still under-represented in scientific fields, there are still many debates on the origin of this asymmetry. On the one hand, limiting beliefs and received ideas are singled out, on the other we protest by assuring that in our time there would be a spontaneous appetite for other disciplines.

B) OLDER THAN 30 :

School 42 -

The Villani report aims to increase the number of women in engineering schools to 40% in 2020, currently they are still less than 30%.

"In the 2018-2019 school year, 18% of students from Talents du Numérique member institutions at Bac + 5 level were students." Source https://talentsdunumerique.com/le-numerique-femmes

In France, you can train in many fields after 30 years as part of a professional retraining, for a long time the computer schools claiming the plasticity of the brain to close access after 30 years. And unlike BTS, CAP or university studies offering alternatives and arrangements for over 30s for a professional retraining, computer schools are strict on the age limit.

All IT schools in France limit the enrollment age to 30 years, while more senior profiles would be a real added value for working on the digital transition in France. **Note that School 42 is the first school in 2019 to have removed the age limit.**

C) FOR MIGRANTS :

1.Singa-

Singa's main objective **is to empower refugees and asylum seekers by supporting the creation of their network,** so that they can progressively become more independent and able to establish their own business, relying less and less on Singa's support. The network that Singa aims to establish for refugees and asylum seekers is really broad and its composition is on a case-by-case basis.

Language and cultural sensitivity: **Singa's staff speak 35 languages (different languages from Africa, South America, Bangladesh, as well as Arabic, Farsi, etc.).** On top of this, the practice also employs refugees which helps to expand the languages offered, not only for oral communication but also for the translation of written documents.

2.Salesforce -

As an **example of a company that decided to create a C-suite title of Chief Equality Officer, to work towards closing the gender gap. Equality for them, consists of four core pillars: equal rights, equal pay, equal education and equal opportunity.** Tony Prophet, Chief Equality Officer at Salesforce says:

"We believe businesses need to focus on closing the Equality gap with the same energy put into creating new products and markets."

Another way Salesforce tackles equality is through their "Ohana groups", which are employee-led and employee-organized groups which bring together people with similar life experiences and/or backgrounds. **Apart from a specific Ohana group focused on Gender Equality, other groups are: Ability inclusion, Black Community, Community for Sustainability, Latinx Community, LGBTQ Community, Asian Pacific Community, South Asian Community, Veteran Community and Community for All Faiths.**

3.Thoughtworks -

Apart from having a very well prepared diversity and inclusion policy, Thoughtworks has also been a reference when it comes to nurturing their female talents and supporting their development. That's why they launched WiLD (Women in Leadership Development program), which started in 2012.

4.Paving the path (Good practices worldwide) -

Here is why with the vision of supporting women to increase their impact, empowering them to have an impact not only inside the company but also on a global level.

Awarded with the Anita Borg Institute as the top company for women technologists, they really announce to be doing things differently, challenging stereotypes and trying to keep up their good statistics throughout all levels of the organization.

Thoughtworks keeps a blog to gather their Inclusivity stories since the organization has been on a dedicated journey towards increasing diversity at all levels (from graduate hires to senior leadership) through different programs and initiatives.

Other companies who are also actioning change when it comes to diversity policies and improvements: buffer-transparency-equality or new relic and its diversity and inclusion program.

Model itinerary for social and labor insertion in ICT with a gender focus:

1.Opening circles-

It's common in companies to see that people bring in people who are similar to them. Or keep the conversations with people similar to them during lunch time or even after office hours. **Many times, what it takes is to make new friends. Meet new people. Join networks, organizations and movements who are aligned with what you believe in**. Maybe that can also be a way to recommend new people when it's time for jobs and opportunities.

When you see an open position that can be interesting - forward it to organizations of women and people of color in the field and invite them to apply.

2.The Growth Club -

One of the major challenges facing women in the industry is isolation. By having a networking group, women have an obvious source of support, mentorship and advice. **Mentors, colleagues, allies and sponsors are key to be able to deliver a real impact**. Apart from that, a group of empowered women can also help each other in progressing in their careers.

3.Speak up -

It has happened to you before: someone speaks over you, interrupts what you are saying, ignores what you are saying or even sometimes takes credit for your own idea. It's easier to speak up for other women than to speak up for yourself. When you see that happening to another woman, speak up for her. **When it's about the right to speak, there is no need to mention gender and there is no need to sound offended - be consistent and don't hesitate.** Of course, this isn't limited to standing up for women. You can stand up for all the people commonly spoken over.

4.The hiring process -

During the hiring process there are different moments in which you can intervene to bring more diversity to your company. So get involved in hiring. When preparing the job descriptions, consider language that makes open positions attractive for women to apply for the job. T**here are different tools and resources that can easily be found online in order to use a neutral language on job descriptions.**

Bring candidates from different backgrounds and networks for the interview and don't bring your own stereotypes and judgements to the interview. It is more valuable to be involved in the hiring process of those candidates which you'll be working with personally, or people whose expertise you're particularly able to evaluate. In case your position does not make space for making decisions regarding new hires, you can still support on the first round of resume sorting. **Here's one great idea: Suggest or implement blind resume reading.**

A best practice to avoid workplace discrimination is to implement blind resume reading, where the resumes do not bring forward pictures of the candidates and where the name of the potential candidates are replace by a code like Candidate 01, Candidate 02 and so on.

5.Share your journey -

Some women are still challenged on getting started in tech, others are trying to grow into their positions and others are challenged in everyday situations to keep their roles and have their voices heard. If you are a woman that holds a position of influence in the sector, take the time to talk about your story, sharing about both the challenges and the opportunities you went through on your journey. When you do that, you do it for the next generation of women in tech.

"No industry or country can reach its full potential until women reach their full potential. This is especially true of science and technology, where women with a surplus of talent still face a deficit of opportunity." Sheryl Sandberg, COO @ Facebook"

Practical solutions for the incorporation of female talent in ICT in each country:

IN PORTUGAL :

Some projects and measures **to support startups and new businesses in Portugal:**

1.**Empowered Startups:** Empowered startup is a consultancy that offers an acceleration program for startups in Portugal. It aims to develop and encourage the development of innovative startups in Portugal.

2.**Startup Voucher:** The Startup Voucher is one of StartUP Portugal's initiatives that encourages and supports the development of business projects through various support

instruments made available over a period of up to 12 months.**This measure includes ideas from young people aged between 18 and 35 years.** The submission of applications to the StartUP Voucher is made exclusively through the digital platform available on the IAPMEI website.

3.**Incubation Valley:** Another measure disclosed by the Institute of Support to Small and Medium Enterprises and Innovation (IAPMEI) is the Incubation Valley, **a measure that aims to provide support to projects of companies with less than one year in the area of entrepreneurship, through hiring incubation services.**

4.**Seed Program:** According to the National Incubator Network (RNI), the Seed Program aims to support individual investors who are interested in entering the social capital of innovative startups. T**he program helps to create a more favorable tax regime for startups in Portugal and favors the creation and growth of entrepreneurial and innovation business projects.**

5.**Portugal Ventures**: This is a venture capital firm that invests in startups with a global ambition. **They offer access to a network of contacts with investors and strategic partners and assist in the financing and development of projects.**

In the traditional field of entrepreneurship, there is a great disparity in the presence of men and women, and between 2019 and 2020, in Europe, of all the startups created, only 8% were founded by women. And if we talk about projects that receive financing from investors, the numbers are even lower, with women occupying only 5% in the birth of startups, and in innovation and leadership positions.

In 2019, Portugal was in the 10th place in the ranking that reveals the percentage of female entrepreneurs who own their own businesses. 30.2% of women owned their own business, which is a very relevant indicator of the growth of female entrepreneurship in our country.

Portugal has been distinguished by international institutions for its thriving entrepreneurial ecosystem and constant promotion of technological development and innovation. However, the world, Europe and Portugal need professionals and of course entrepreneurs in all IT areas, engineering, cybersecurity, artificial intelligence, data science, advanced computing, and we can’t waste the talent of half the population: women.

The Portuguese entrepreneurial ecosystem goes far beyond these great technological unicorns. Our country has many startups with international distinctions in different fields of activity. **Lisbon is one of the main Portuguese hubs of entrepreneurship**.

Besides its growing community of innovative foreign companies, such as Fujitsu, Siemens, Amazon, and Microsoft, among others, Lisbon was also classified this year as the 12th best-emerging ecosystem, according to Startup Genome's Global Startup Ecosystem

Report 2020. Another element that strengthened Portugal's image on the international scene is the Web Summit - the largest European technological conference - which has been held annually in the Portuguese capital since 2016. One of the best examples of female entrepreneurs is DefinedCrowd, founded by Daniela Braga, in Seattle, WA and opened an R&D center in Lisbon, Portugal.

All of this contributes to the idea that Portugal is a country that values technological development and innovation. Finding solutions to the problems that arise is essential for any country, especially in difficult times like the coronavirus pandemic. In April 2020, Portugal was classified by the Organization for Economic Cooperation and Development (OECD) the country with the most innovative projects to fight Covid-19.

IN SPAIN

1. Atenea Program. The Institute for Women and for Equal Opportunities, in order to promote the participation of women in the Information Society, increasing their confidence and security in the use of new information and communication technologies, has developed diverse training material and workshops on trust and security in the network aimed at women from the general population. The workshops are co-financed by the European Social Fund.

2. CERES Program. The objective of this program, co-financed by the European Social Fund, is to train trainers to train rural women in basic skills such as the use of computers, information search and e-participation from a gender perspective and, adapting the content of the training to the interests of each group.

3. DIANA Program. The fourth Thursday of April of each year is the International Day of Girls in ICT, an initiative supported by the Member States of the ITU (International Telecommunication Union), with the aim of creating a global environment that encourages and empowers effective for girls and young women to opt for studies related to information and communication technologies (ICT).

The Institute for Women and Equal Opportunities joins this initiative with the development of the Diana Program, the objective of which is to encourage the interest of girls and young people in programming.

The Diana Program proposes, on the one hand, to carry out interventions in educational centers that break gender stereotypes, taking advantage of the potential of programming to promote creativity, the development of logical and abstract thinking, teamwork, or problem solving. . On the other hand, **it makes available to the educational community the didactic material for carrying out didactic programming activities with the students, bearing in mind the gender perspective.**

The workshops are aimed at students from 3rd to 6th grade of Primary, Secondary and Basic and Middle-Grade Vocational Training and last two and a half hours.

4.REA Program. The objective of this program co-financed by the European Social Fund is to train trainers from a gender perspective to train professional women in the basic use of tools for file management, word processing, spreadsheets and databases, presentations , information and communication, collaborative networks and mobile devices.

5.ADA Program. The objective of this ICT training program in the educational field is to promote the interest of girls and young people in the technological branches of study, with this we intend to contribute to a greater presence of women in technological careers in general and in the ICT field in particular.

Within the framework of the program, workshops will be held for students from 3rd to 6th grade of primary school and 1st year of ESO. Ada Byron's life is considered as a common thread in the development of activities, relating them to different milestones in her life in a gradual process of motivation and discovery. Likewise, we make available to teachers, in digital format, the publication “Initiation to technology in Equality. Guide for teachers ”, together with a presentation to project in the classroom during the development of the dynamics and a file for 3D printing.

6.ENISA Emprendedoras Digitales. The Ministry of Economic Affairs and Digital Transformation, MINECO, will allocate up to 51 million euros in the next three years to promote female digital entrepreneurship, through the ENISA Emprendedoras Digitales financing line.

With the aim of supporting and promoting, through financing, female digital entrepreneurship projects and reducing the existing gender gap in this area.

Spain reforms VET in hopes of curbing youth unemployment. The new Spanish VET provides, among other novelties, tailor-made teaching that will be adapted to the needs of the students. Until now, the only option was to complete a complete cycle, whatever the degree the students were doing.

7. Plan Nacional de Competencias Digitales. The Plan distinguishes seven lines of action and a total of sixteen measures, aimed at improving digital skills in seven different areas: **(1) citizenship in general, guaranteeing digital inclusion; (2) reduction of the digital divide due to gender issues; (3) acquisition of digital skills for the education of teachers and students at all levels of the system educational; (4) advanced digital skills of the workforce; (5) digital skills of people at the service of Public Administrations; (6) digital skills for Spanish companies in general, and in particular SMEs; and (7) promotion of ICT specialists.**

IN GERMANY

1. German Acceleration Program. German Accelerator empowers German startups to **scale globally**. We take high-potential companies on a fast-paced learning journey to understand, discover, and access the **world's leading innovation hubs in the U.S. and Asia**. Through highly-customized programs, mentoring from dedicated experts, as well as access to our vast network of business partners and investors, we help startups from all stages and across various industries on their way to international success.

Since launching in 2012, German Accelerator has nurtured over 500 startups which have raised **more than $4.9 billion in funding** so far. German Accelerator is run by German Entrepreneurship GmbH and is proudly financed by the German Federal Ministry for Economic Affairs and Energy (BMWi).

2. Family plays an important role. More than 11,6 million families with children live in Germany. Policy-makers and companies take their interests very seriously. This means that parents have many ways of reconciling work and family life. From the age of one, children in Germany are generally entitled to a place in **childcare**, for example.

A German day nursery (Kinderkrippe) is a place where children under the age of three can play with other children of the same age. Since younger children need greater attention, they are looked after in smaller groups by qualified educators. Appropriate meals, naps and playing outdoors are all part of the programme. M**ost day nurseries are flexible about drop-off and pick-up times. Day nurseries are run by private and public agencies and by churches**. Prices vary considerably and partly depend on the parents' income. Availability differs greatly by region.

Identification of groups of interest in each country (external stakeholders, support networks for women entrepreneurs, chambers of commerce, municipalities, local entrepreneurship entities, local corporations and foundations,)

IN PORTUGAL

- **Association for Citizenship, Entrepreneurship, Gender and Social Innovation (Associação para a Cidadania, Empreendedorismo, Género e Inovação Social)** https://www.acegis.com/ **- Associated Partner in the Project**

- **Mapping Women's Social Entrepreneurship in Europe**
  https://www.womenlobby.org/-WEstart-?lang=en

- **Portuguese Women in Tech**
  https://www.portuguesewomenintech.com/

- **The National Association of Female Entrepreneurs (Associação Nacional de Empresárias)**
  http://www.ane.pt/

- **The ANPME (Associação Nacional das Pequenas e Médias Empresas)**
  https://www.anpme.pt/

- **Engenheiras Por Um Dia**
  https://www.engenheirasporumdia.pt/

- **MUDA**
  www.muda.pt

- **Apps for Good**
  https://www.appsforgood.org/portugal

- **Nau sempre a aprender**
  https://www.nau.edu.pt/en/

- **INCoDe.2030**
  https://www.incode2030.gov.pt/en

INCode 2030 covers the priority lines Inclusion, Education, Qualification, Specialisation and Research. The priorities of Portugal's programme follow the digital skills pillars of the Digital Skills and Jobs Coalition:

1..Digital skills for all citizens:

-**Promote digital literacy and basic digital skills among the general population to increase the number of Europeans** with at least basic digital skills to 80% by 2030 (and reduce the % of citizens not accessing the Internet to 5%), in line with the objectives of the Digital Decade.

-**Create and develop resource and content centres**, as well as user training campaigns, with the aim of improving awareness of the need for digital skills.

-**Increase lifelong l**earning opportunities for citizens.

2.-Digital skills for the workforce:

-**Promote training and upgrading of digital skills** for jobseekers and the unemployed.

-**Increase the number of employees** using computers or the internet for work to 80% by 2030.

-**Increase the overall digital intensity of small and medium-sized** enterprises to 40% by 2030.

3.-Digital skills for ICT professionals:

-**Upskill ICT professionals and increase the ICT t**alent pool to 8% of all employees by 2030.

-**Promote the training of ICT specialists.**

-**Train mid-level technicians in key areas** and economic sectors.

-**Create a network of digital academies and labs, providing internships, and offer spaces** for collaborative training.

4.Digital skills in education:

-**Encourage more professionals** to enter the ICT field and improve the training of existing computer teachers and training providers.

-**Increase the number of people with higher education qualifications in science,** technology, engineering and mathematics (STEM) subjects.

-**Equip new generations with digital skills** including logical reasoning, collaborative working and development (programming) through continuous and coordinated vocational education and training systems.

-**Fully integrate digital skills** and resources into the teaching process and promote greater use of technology in the classroom.

IN GERMANY :

-How a Woman From Stuttgart Built a Global Community For Female Entrepreneurs: Meet Anne Cocquyt, Founder of The GUILD and #GAmentor

https://www.germanaccelerator.com/blog/how-a-woman-from-stuttgart-built-a-global-community-for-female-entrepreneurs-meet-anne-cocquyt-founder-of-the-guild/

-Online portal of the national agency for women's start-up activities and services (bga). The site features an extensive database of regional and local networks for female entrepreneurs and start-ups as well as information resources on the topic.

www.gruenderinnenagentur.de

-Each woman who comes to our service has her own story, challenges and strengths.

www.wwoe.org

-An EQUAL project on innovative concepts in fostering entrepreneurship of women. The site offers information for female entrepreneurs. Highlight is an e-learning guide for starting-up a business targeted at women.

http://www.vdu.de/

-Website of the only German trade association of female entrepreneurs.

http://www.existenzielle.de/

-First and only periodical magazine on female self-employment in Germany. Features interviews and articles about a broad range of topics connected to women and entrepreneurship.

http://www.u-netz.de

-Website of the Unternehmerinnentag Ruhrgebiet, an annual female entrepreneurship conference located in the Ruhr area. The site gives information

about networks and female entrepreneurship in North Rhine-Westphalia. It features a co-operation database.

http://www.expertinnen-beratungsnetz.de/

-Website of the network for career and professional counselling for women. The site offers information as well as contacts to counselling services and advisors

http://www.dgfev.de/

-Website of the nationwide network of experts on the topic of women-led start-ups. http://www.bmfsfj.de Website of the Federal Ministry for Family, Social Affairs, Women and Youth

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-Premis DonaTic, There are eight categories of the DonaTIC 2021 Awards, one of which is for an ICT VET student.ICT FP student: the candidates must be students of any VET training cycle in the ICT field and must have developed a remarkable project and / or initiative in this field.

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-Wibisibizalas

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-Girls in tech spain

https://spain.girlsintech.org/

-Observatori Dona Empresa. 'Observatory of Women, Business and Economy is a forum for reflection, study and proposals with the aim of highlighting professional, entrepreneurial and entrepreneurial women in today's economic world.

https://www.donaempresaeconomia.org/

- Instituto de las mujeres, Ministerio.

https://www.inmujeres.gob.es/areasTematicas/SocInfo/Home.htm

- Plan Nacional de Competencias Digitales

https://portal.mineco.gob.es/RecursosArticulo/mineco/ministerio/ficheros/210127_plan_nacional_de_competencias_digitales.pdf

3.2. Conclusion

Attracting more women into ICT jobs contributes in realising equal opportunities goals and empowers women by enhancing their capacity to participate in the information society and shapes its development.

The number of young people and specific young women studying and choosing ICT careers is not growing, in some countries is decreasing. Women are under-represented at all levels in the ICT sector; Women are especially under-represented in decision-making positions in the ICT sector; Successfully encouraging women to enter and stay in the sector could be a significant part of the solution for the skills gap.

A lack of work / family balance is a problem in Europe at all levels, but especially in the ICT sector.Cultural barriers hurt inclusion of women in tech. **Successfully encouraging women to enter and stay in the sector could be a significant part of the solution for the skills gap.**

1.In education, mainly in secondary (VET education):

- **Organise events which will show role models of women successfully working in ICT** to young girls and break the "geek" stereotype. (Shadowing, Girls Lab and Information Days in secondary schools as well as seminars and career orientation days in cooperation with school authorities;

-**Organise projects for teachers, trainers and parents in order to inform them what technology is about, possible job opportunities** and in general to fight technophobia as well as encourage environments conducive to ICT careers both at home and school.

-**Organise workshops/meetings/school visits to companies for female students in secondary education to make contacts and start mentoring processes** with tertiary education students who have opted for ICT-related engineering studies or with young female engineers who have already qualified.

-**Sponsor initiatives where senior female engineers, as ambassadors for science, will train female students** from major scientific study courses to promote scientific careers in schools, for example in the ways described above

- **Organise sponsorship of school projects, summer technical camps and finance competitions, awards, technology projects, school film productions aiming to break stereotypes, promote role models and show different facets of ICT work.**

If we want to encourage young women into ICT careers and studies in VET Education, they need to see (and their families) that they are in fact recruited into the sector or into specialised ICT posts in other sectors and then remain in the ICT sector or ICT-related work.

2.Recruiting from outside of the organization:

Ensure gender neutral or gender friendly vocabulary when advertising a post, transparency in recruitment processes, ensure that those responsible for recruitment decisions understand the importance and value of selecting female candidates for positions and sectors where women are under-represented, **Analyse the gender statistics within the company and compare them with local and sector market data, using the results of the analysis to help managers design measures to fill the gap.**

3.From internal processes:

-Ensure that Equal Opportunities principles apply for appointments to all posts, not excluding high (management) posts in the company. Prepare female employees for management positions, including offering them appropriate training courses and monitor and encourage the participation of women in such courses; foster visibility of competent women; Apply flexible working practices (e.g. part time or telework) at all levels, including for high management positions where and when possible; Identify and track global talent for critical positions, with a special focus given to the career development of promising women.

-Create a real career development for women in the company and enhancing their potential and finance care expenses when training outside usual working hours.Set up forums and events with other networks/organisations for women and arrange for mentors to communicate their professional contacts and networks.

-**Returning to work after leave and allowing a real work / family balance is important to encourage women to return to the sector.** We should promote a positive philosophy towards paternity / maternity leave in work, school and families.

-Produce guidelines for managers on how to manage employees on leave to ensure inclusion, career development and to maintain a lasting relationship and information flow during leave time.

-**Facilitate return to work by training or retraining**;

-**Set up mentoring mechanisms that apply during leave periods**

-**Set up resource and competence monitoring as well as placement preparations during leave of absence** and ensure self-assessment before, during and after leave to identify personal needs

-Organise/provide child-care facilities for preschool, after school and holidays , creating where necessary in-house child-care service, where parents may also be "shareholders'.

-Ensure flexible work arrangements for mothers and fathers and flexibility at the workplace (office, mobile, at home); Promote women entrepreneurship with role models.

The lack of role models: it's important for young women and young students to find role models for them. The access to finance when starting a company can be solved with education: creating crowdfunding campaigns, networking, business angels womens,..

The language is important in this report. We can find solutions like educational videos with subtitles in the mother tongue of the young women learners, audio with the translations, ...

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5. Discussion, debate and recommendations following the transnational meeting at which the I.O. was presented.

The methodology used should be more valued, which is through the information given by the partners. The best practices given from the partners should be further expanded.

We find all the partners with a lack of information regarding women entrepreneurs in ICT. **We can find data referring to women and entrepreneurship and data referring to women and ICT, but the two things together have made it difficult for us to find information.**

It would be necessary to go deeper into this IO1 on how to create a technology company. This data is noted and more information is sought regarding entrepreneurship and not so much about the role of women in IT. Especially in the manual of good practices, good practices in the teaching of ICT business creation by women will be highlighted.

Some partners emphasize that it would be necessary to link it with the other IOs, but it would also be necessary to know how the other partners are going to carry out their IOs. It may be interesting to end this IO **after the meeting on October 20 in Magdeburg, Germany, since two more IOs will be presented there and we can make this connection.**

Credits

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