



ITs4Women Recommendations

Mapping Girls and Women in IT

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Abbreviations

CEO: Chief Executive Officer

EC: European Commission

EIGE: European Institute for Gender Equality

ELFS: European Labour Force Survey

EP: European Parliament

ESF: European Social Fund

ESWC: European Survey on Working Conditions

EU: European Union

FEI: Female Entrepreneurship Index

GPG: Gender Payment Gap

GSD: Gender Statistics Database

ICT: Information and Communications Technologies

IMF: International Monetary Fund

IT: Information Technologies

ITU: International Telecommunications Union

MEPs: Members of the European Parliament

OECD: Organisation for Economic Co-operation and Development

PC: Personal computer

R&D: Research and Innovation

S&E: Science and Engineering

SME: Small and Medium sized Enterprises

STEM: Science, technology, engineering and mathematics

UN: United Nations



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INTRODUCTION

Participation in society (...) requires a set of competences related to technologies (...) to be understood as "life skills", comparable to literacy and numeracy. They have therefore become "both a requirement and a right". (OECD, 2001).

We are partners from The Netherlands, Sweden, Romania, Spain and Ireland. We have come together to focus on the gender gap in IT. We have come together as partners across five countries to find the 'do's and don'ts' regarding the engagement of girls and women in IT. This report highlights the first phase of this partnership and asks the following questions: -

- What is the situation across our five countries compared to the EU average?
- What examples and initiatives have worked well in our countries and on the international stage?
- What have been the barriers, challenges, and on-going gaps?
- What can we learn from drawing on poor practice examples?
- What are the priorities for ITs4Women to incorporate in the platform?
- What are the recommendations of this first phase that will inform the next phases of ITs4Women?

Following a brief background to the partnership and the origins of ITs4Women we outline in more detail why we have come together to design, develop and implement this project. We set the scene for ITs4Women giving a snapshot of the context, current situation in our five countries and our knowledge and experiences of what has worked and how we have learned from what has been unsuccessful. This research phase presents the case for ITs4Women and helps us to prioritise the critical elements that need to be progressed throughout ITs4Women to achieve the outputs agreed and to ensure maximum impact.

BACKGROUND

Gender equality concerns us all. It is a fundamental right as well as an internationally agreed Sustainable Development Goal. Having gender balance in politics and in the workplace is an essential feature of stable and transparent democracies. It not only encourages economic development but also promotes overall well-being and leads to a more inclusive and fairer Europe for both women and men.

(Věra Jourová, Commissioner for Justice Consumers and Gender Equality, 2019)

ITs4Women is a collaborative project, funded under the Erasmus Plus Programme and involving partners from five countries. Stichting Business Development Friesland (BDF) (Netherlands) is the lead partner for the ITs4Women project and the other project partners include EOLAS S.L. (Spain); Laptify B.V. (Netherlands); Babele Create Together (Romania); Stiftelsen Dalarna Science Park (DSP) (Sweden) and Inishowen Development Partnership (IDP) (Ireland).

This research phase is about combining existing data and research with good practices and will be used to guide partners towards hands-on recommendations and tools to promote IT and digital skills amongst women and girls and fully inform the strategies needed to tackle the gender gap in IT and to offer women more equal opportunities in the IT world. Commencing with our Partnership launch in November 2020 we have all been focused on gathering the data and prioritising for the next phase of programme design and development.

When developing this proposal to Erasmus Plus the partners outlined that numerous EU initiatives have tried to move girls and women to IT, however we expressed concern that for many of these the impact is not sufficiently visible and measurable. This project proposes to identify good practices and gather these in one coherent central platform signposting towards relevant documentation and materials.

Our preliminary scoping told us for example that in the EU more than 90% of girls and boys (16-24) are skilled enough to use digital technologies in their daily lives – they are indeed ‘digital natives’. However, research is telling us that boys feel more confident about their digital skills than girls. In countries where young people have a lower level of confidence in their digital skills (e.g., Latvia & Finland), the confidence gap between women and men is notably wider (EIGE, 2018, bit.ly/2VThkcU). Only 24 out of every 1000 female tertiary graduates have an IT related subject as their major and only 8 go on to work in the digital sector. Moreover, women working in IT earn almost 20% less than men do, there are significant gender imbalances in eLeadership and only 19% of European IT entrepreneurs are women (EC, 2016, bit.ly/2VsSO3f). We know that there are significant skills shortages across the IT sector, yet such gender imbalances still exist in 2020/2021. We are questioning why the “tech” sector has been growing yet women are underrepresented in leadership and in employment.

The IT sector is fast changing and especially so in the past 12 months of the worldwide COVID-19 Pandemic. We are all aware of developments and new emerging areas of work because of the need for connectivity and Cloud Tech. We have seen significant developments and opportunities in areas such as:

Robotics and AI	3D Fabrication	Cyber-risk management
Wearable technology	Printing technologies	Big data/cloud solution
Medical monitoring technology	Information sharing	Remote working - Virtual infrastructures

Yet the gender gap in Science, Technology, Engineering, Mathematic (STEM) prevails from an early age – girls and women continue to dominate biological sciences but are underrepresented in physics, mathematics, engineering, and information technology (IT).

WHY ITs4Women?

“Empowering women remains a common denominator and a global imperative for all those who care about fairness and diversity, but also productivity and growth of societies and economies that are more inclusive. If we can achieve this, we all gain”. (Christine Lagarde¹, March 2019)

The partners involved in the ITs4Women (IT skills for Women) project want to put a spotlight on these gaps and imbalances with the goal to improve the position of women in IT and raise awareness about the opportunities, advantages, and benefits of having a great balance across the IT Sector. Our focus is on the need to support women to build their digital skill capacity, and those working in, and advancing within the IT sector – to ultimately address imbalance, social disparities, and discrimination.

This is happening across three distinct but interconnected phases of the work where we will place a spotlight on girls and women in IT with a focus on how best to decrease this gap. We will prioritise the best way forward for the ITs4Women Programme which will work with girls and women in developing their digital skills as well as how to best move towards the IT world.

¹ The Managing Director of the International Monetary Fund in March 2019 and is now European Central Bank (ECB) President.

In tandem with this work ITs4Women will also capture the learning from and for the regional partnership approach to promoting IT amongst women by providing better support for women on their development of digital skills as well as support for moving upwards and inwards to the IT world. We believe this will be about offering easy access to needed supports – an ITs4Women platform that will turn the current worldwide COVID-19 pandemic into an opportunity and focusing on the fast developing remote and virtual world we now live, learn and work in. Our focus will be girls and women across the age-ranges – starting with their baseline digital skills and supports and interventions needed to offer them pathways, information, advice, and opportunities to reach their fullest potential.

It is anticipated that ITs4Women participants will be selected based on their experience and connection to three major elements: designing of the IT platform, teaching and dissemination of digital skills and working with underprivileged groups which in this case are women.

We will also link with stakeholders relevant to the IT sector such as IT companies, teachers in IT, employers in general, foundations promoting digital literacy etc. We believe that change can happen if ‘all’ can see the real and tangible benefits and opportunities through collaboration, building virtual platforms and promotional alliances.

The overall aims are transfer of information and experience, awareness-raising, identifying best practices, mutual learning and getting feedback. As partners our common purpose has at the core good practice guidelines as recommended by the EU including:

- social inclusion
- equal opportunities
- accessibility
- gender equality
- active and participative citizenship
- innovative methods to target, reach and support

We are fully aware of many Europe-wide initiatives focusing on digital literacy skills for diverse target groups. The project proposes to analyse existing research on how to reach women and move them towards IT/digital skills by drawing on good practices and highlighting success stories and role models in IT. The project will use existing research and good/bad practices to come up with a new, more effective way to reduce the gender inequality in IT and to increase awareness of the importance of digital skills and how women can develop and use them.



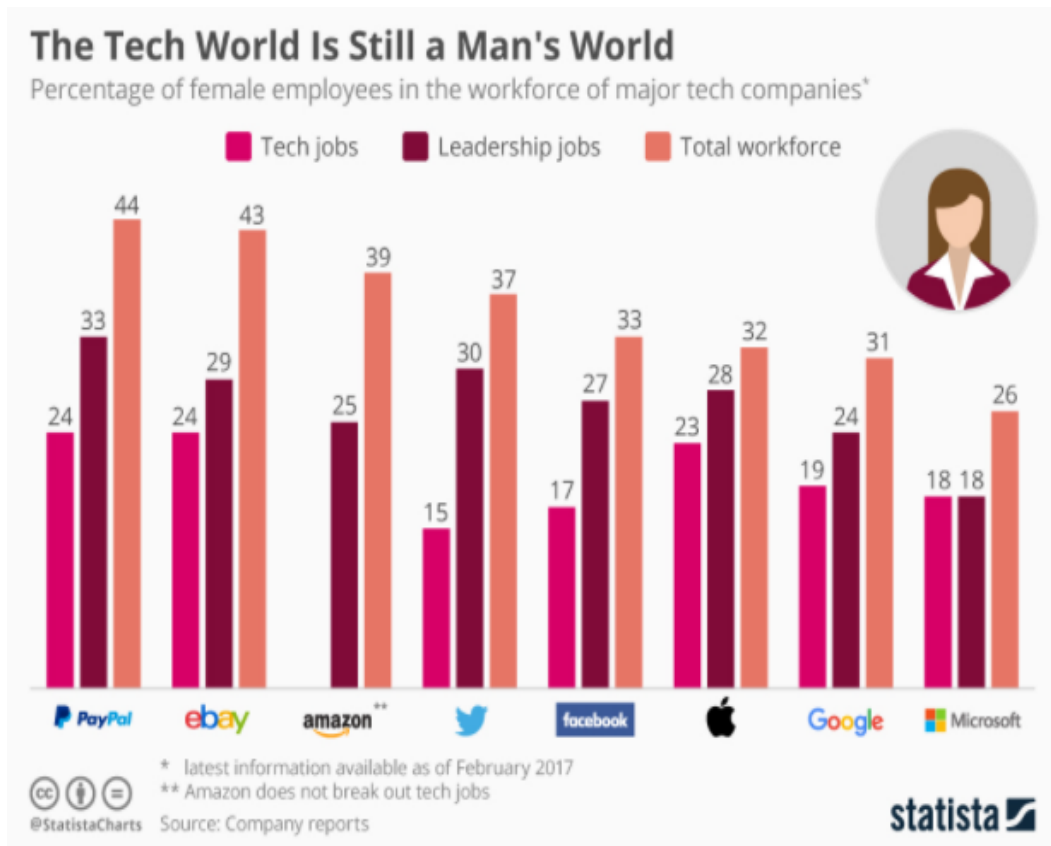
With this research we have examined the pros - best and positive practices - as well as focused on the cons - why the gaps (pay, participation and leadership in particular) are not decreasing and why the imbalances continue. This will inform the ITs4Women Project and programme developments and be incorporated into the outputs of the ITs4Women project.

ITs4Women - SETTING THE SCENE

“Inequalities between women and men violate fundamental rights. They also impose a heavy toll on the economy and result in underutilisation of talent. On the other hand, economic and business benefits can be gained from enhancing gender equality. In order to achieve smart, sustainable and inclusive growth, the potential and talent pool of women need to be used more extensively and more efficiently”.² (EU Commission, 2020)



² Quote from the European Commission’s current Strategy on Gender Equality.



Rapid technological advancements and digitalisation are transforming the world of work and how we live our day-to-day lives. There is an increasing demand for digital skills and higher qualifications across a wide variety of sectors. Information and communications technology (ICT) specialists are in particularly high demand, with employment growth more than eight times higher than the average employment growth in the EU³. The shortage of ICT specialists and the vast under-representation of women in this fast-growing sector are well documented. Taking a snapshot of the data we observe for example that only around 17 % of the almost 8 million ICT specialists are women, and the number of women graduating from ICT studies has been decreasing over the last decade⁴. But it can be done - Bulgaria has the highest proportion of women in technology in the EU: one third of the country's ICT specialists are women⁵.

³ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Main_Page

⁴ European Institute for Gender Equality (EIGE) (2017c), Study and work in the EU: set apart by gender — Review of the implementation of the Beijing Platform for Action in the EU Member States

⁵ This can partly be attributed to historical factors, as the government actively encouraged women to enter technical professions, which were deemed prestigious, during the socialist period. The policy began in the 1960s; within three decades the percentage of women engineers increased from 9 % in 1956 to 44 % by the late 1980s.

All Europeans need digital skills to study, work, communicate, access online public services and find trustworthy information. However, many Europeans do not have adequate digital skills. Boosting the number of women in IT is a major opportunity for the EU. The sector needs highly skilled employees, and women make up the majority of graduates from 3rd level education⁶.

The digitalisation of virtually all sectors of economic activity is providing unique opportunities for economic growth and for a greater inclusion of women in the labour market. The need for IT skills is growing in all sectors, from healthcare to manufacturing, opening up new employment options for everybody. Recent forecasts show there is a shortfall of at least 700,000 IT professionals in Europe⁷. Currently only around 17% of the almost 8 million IT specialists in Europe are women. With the IT workforce ageing rapidly, replacement workers need to be trained up.

Redressing the gender imbalance in the IT sector would also be a good opportunity for women to enter jobs that are more highly paid than those in traditionally female sectors. This would help reduce the persistent gender-based pay gap across the EU, which is a product of longstanding gender segregation throughout the labour market.

In line with the EIGE's study ITs4Women agree that the low proportion of women in the ICT sector is not the result of individual preferences, but of systemic obstacles. In addition, partners support the assumption that the limited participation of women is detrimental for individual ICT companies, the sector, and the wider economy. This study found that it is in fact harmful stereotypes and a lack of digital confidence on the part of women that are the greatest barriers to gender equality in IT. A great deal remains to be done in terms of changing attitudes and adapting legislation to encourage women to choose a career in IT.

Europe faces a shortage of digital experts who can develop cutting-edge technologies for the benefit of all citizens. A strong digital economy powered by Europeans with digital skills is vital for innovation, growth, jobs, and European competitiveness. The spread of digital technologies is having a massive impact on the labour market and the type of skills needed in the economy and in society. Member States, business, training providers, the European Commission and other organisations need to work together to tackle the digital skills gap. Over 70% of businesses have said that the lack of staff with adequate digital skills is an obstacle to investment.

⁶ <https://eige.europa.eu/publications/women-and-men-ict-chance-better-work-life-balance-research-note>

⁷ <https://digital-strategy.ec.europa.eu/en/policies/digital-skills-and-jobs>

If we examine the annual Digital Economy and Society Index (DESI) which looks at digital skills, monitors progress and pinpoints where further efforts are necessary. The DESI shows that four out of ten adults and every third person who works in Europe lack basic digital skills. There is also low representation of women in tech-related professions and studies, with only one in six ICT specialists and one in three STEM graduates being women.

It is complex. What's needed is a combination of positive action, quotas, attitudinal change to tackle gender bias and having enough role models - so that when you see it you can be it. It is also about changing how we educate our children. The European Commission adopted a Communication on the Digital Education Action Plan in 2018 and it outlines how the EU can help individuals, educational institutions, and education systems to better adapt for life and work in an age of rapid digital change by:

1. making better use of digital technology for teaching and learning
2. developing relevant digital competences and skills for the digital transformation
3. improving education through better data analysis and foresight
4. strengthening European identity through education and culture

There will be a significant investment to tackle the digital skills gap. The instruments put in place at EU level for the budget 2021-2027 provide major opportunities for Member States to support the sustainable development of digital skills. These include:

- [The Recovery and Resilience Facility](#): 20% of its funds must be spent on the digital transition of Member States, including on digital skills.
- [The Digital Europe Programme](#): promoting digital skills is a core element of this new funding, which has a budget of around €200 million for 2021 and 2022.
- The [European Social Fund Plus](#): a fund to support EU Member States in reforming national education and training systems to support key skills
- The [European Global Adjustment Fund](#): supports trainings in digital skills to help laid-off workers find another job or set up their own business.
- [Horizon Europe](#): finances grants for master, PhD and post-graduate research activities in all fields including digital through [Marie Skłodowska-Curie actions](#) as well as the [European Institute of Innovation & Technology](#).

We all know that women and girls (especially the teenagers who are natives to IT) are proficient in using IT. Yet the picture shows us that women are not represented in any significant numbers at IT company CEO level (apart from start-ups maybe) or professor level in 3rd level or even teaching IT at 3rd and 2nd level. It's worse now than in 2011 according to the OECD. ITs4Women proposes that given the world we now live in - with 'virtual infrastructure' a plenty and on-line the way we live, work, and learn, change could really happen, and every campaign and pilot project can help to inform that change.

While exploring why this is the case, we see how gender equality in education and in the labour market is a prerequisite for a sustainable society and better-performing economies and that gender segregation in education is a major factor explaining the severe under-representation of women in ICT jobs. Gender segregation in the labour market is a well-known reality in Europe today and there is still an urgent need to focus on what needs to change. We believe that 2021 is the right time for real change to happen – focusing on recovery and growing resilience as we ascend from a worldwide emergency together. We need to focus on gender stereotypes and sexism - these are recognised as the greatest obstacles to achieving gender equality, as they affect the self-image and decisions made by girls and boys. Proactive and preventative approaches can tackle this. For example, we need to;

- ✓ highlight ROLE MODELS – because aspirations play a major motivational role in choosing an ICT career.
- ✓ amplify WIN WIN – because imbalances narrow the life choices, education and employment options of women and men and determines the status and prestige of their jobs.
- ✓ question WHY – because there continues to be vast under-representation of women in ICT and this is a waste of highly qualified human resources and has larger implications for the wider economy.
- ✓ advocate for RESOURCES – because the fast-changing nature of ICT jobs and digital innovations demands continuous professional development and lifelong learning
- ✓ make the CASE – because increasing the number of women in ICT jobs would contribute to reducing the gender pay gap and improve GDP
- ✓ focus on RE-BALANCING – because the imbalance and unequal sharing of caring roles between women and men continues to be a serious impediment

More than eight out of 10 ICT jobs go to men.⁸ (EIGE, 2018)

Addressing all of these issues requires radical changes in working practices, including tackling the long working hours' culture which has become so prevalent in recent years, equality of responsibility within the home and equal uptake of parental leave. In short, it requires a major organisational and societal transformation. It will also require the gathering and analysing comprehensive gender disaggregated data, developing a Gender Action Plan with clear targets, ensuring gender balance in committees and teams, including appointment and promotion committees, addressing unconscious bias, promoting female role models, and providing support to women returning to work after periods of leave.

“We employ least, those we educate most”⁹(Minister of State, Ireland 2013)

Workplace gender equality is a “win” for all. The equal involvement of women in the workplace contributes to meaningful returns on investment, and is associated with:

- Increased Profitability and Organizational Performance
- Improved National Productivity and Economic Growth
- Resilient Workplaces and National Economies That Can Withstand Shocks
- Enhanced Organizational Reputation and Ability to Attract Talent and Retain Employees
- Innovation Creativity and Openness

The research and many EU wide innovations tell us that these are needed for the business case for eliminating gender inequality to be proven and accepted. There are gaps that can only be addressed by mandating the publication of gender disaggregated data about staff by all larger companies - as is done in Australia under the Workplace Gender Equality Act 2012 or in Scotland where there are outcome agreements between funding councils (which fund higher education in Scotland) and the higher-education institutions. These contain targeted actions for gender balance, including target percentages on a per-course basis. Another measure could be if progress towards the elimination of gender inequality was part of the scoring system for public procurements.

⁸ European Institute for Gender Equality, 2018

⁹ Minister of State with responsibility for Disability, Equality, Mental Health and Older People Ms. Kathleen Lynch T.D. (2013)

ITs4WOMEN – Research Phase

Resilient, reliable, and commercially viable companies and organizations fuel economic growth, bolster economies, catalyse social development, and support nations on their journey to self-reliance. Women represent half of the world's employment potential, and developing their talent increases an organization's competitive advantage. Research shows that gender equality pays dividends, and a recent McKinsey study of 1,000 companies across 12 countries found that gender diverse companies were more profitable than their national industry average. Tapping into women's unique contributions and experiences can strengthen organizations in male-dominated industries and add trillions to global GDP¹⁰. (USAID, 2020)

What this phase involves: -

This first phase has been about identifying the needs and gaps by setting the scene as well as focusing on good and poor practices and what learning is there for ITs4Women under development. Across five countries, we as partners have examined the current situation in each country, gathered information about positive and good practices as well as identifying what may be learnt from unsuccessful or 'poor' practices. This research will be used to guide us in developing best practice approaches and supports with the goal of underpinning women and girls to reach their full potential within the IT sector. It may be that:

- more open-source digital literacy and skill development opportunities and 'IT hubs' are needed – designed specifically for women and girls.
- Role Models can highlight the opportunities and benefits of a career in the IT sector or act as mentors and supporters for other women.
- girls and women need 'positive action' measures and legislation to boost their involvement and advancements in IT
- question why a career path needs to be linear – in this virtual world where recognition of prior learning and experience can be counted in - should childbirth, caring and rearing be considered and recognised as experience and not 'breaks' that coincide with key points in career development and advancement

¹⁰ <https://www.usaid.gov/energy/engendering-utilities/business-case-guide>

Data Gathering: -

Each partner country (#5) has provided available data from their country to the questions such as – what is the gender pay gap in 2018? - or what is the gender balance in IT Management? With these answers we could draw comparisons on what the current situation is, share examples and knowledge on successful models of good practice and learn from practices that may not have been so successful. This has helped us with mapping how best to facilitate access for women into IT.

What the Quantitative Data tells us:-

The comparative data gathered by each partner (national figures are used for comparative purposes) highlights data from 2018 or thereabouts from the five countries. This tells us the percentage of women in each country, employment data, gender pay gaps and positions within leadership/eLeadership. The comparable data is presented on the table overleaf.

Baseline data across five countries (where possible national figures have been used from 2018)

Research Questions	EU	Netherlands	Ireland	Spain	Romania	Sweden
What percentage of the total population in your country are women and girls?	51	50.37	50.39	50.9	51.8	49.73
What percentage of the population who are in paid work in your country are women?	67.4	46.68	45.10	52.4	43.6	48
What percentage is the gender pay gap between women's and men's average gross hourly earnings in your country?	14.4	15.6	14.40	21.5	5.5	10.7
What percentage of those working in ICT in your country are women?	17.2	14.55	21	35.3	25.7	28
What percentage of the Level 1 Leaders/CEOs or Head of ICT Companies in your country are women?	15.6	14	17	15.6	12	17

We also asked about Middle management in ICT companies and management levels across the 3rd level IT programmes/institutions to see if there are more men than women at different management levels (e.g., Professor/Head of School v lecturer). We all know there are less women at Professorial level - for example in Ireland it is estimated to be 19% and there is a more balanced picture at lecturer level of 49%. But data is not specifically for the leadership or teaching of IT. In 2nd level there are more women than men teaching at 2nd level - and 49% are in 2nd level leadership roles yet IT programmes are not offered in all 2nd level schools and subjects such as Technical Graphics are predominantly taught by male teachers.

Unfortunately, this data is not gathered in all countries or publicly available and is not gender disaggregated - it can be very challenging to make the case for gender balance and equality.

The learning for ITs4Women - without appropriate and detailed gender disaggregated data we cannot be expected to make key policy and practice decisions and prioritise when the gaps are at best anecdotal. There remain significant gaps in available gender disaggregated data. Quite apart from the economic cost of having such a waste of highly trained individuals against a background of a global skills shortage, these figures paint an unacceptable picture of a loss of talent, undermining creativity, and innovation— and ultimately profitability and success. Across our five countries there are clear commonalities and differences which would indicate we will indeed have learning from each partner. But the question must be posed - How can a business case be made if the data is not available or consistent?

What the Qualitative Data tells us:

Partners have provided insights into good practice at a national level across 5 countries as well as internationally. Partners have also provided information on - 'what works' i.e., the key success factors to address the gender imbalance in the IT sector as well as the 'what not to do' i.e. examples of poor practices from home and abroad. From examining the poor practice examples¹¹the learning is clear.

¹¹ These are detailed in [Appendix i](#).

What is offered must be: -	The numbers do count: -	We need to do IT differently by: -
<p>Engaging and well marketed</p> <p>Relevant and current for the audience</p>	<p>Making the business case has its challenges – data being the main one</p> <p>Increasing the numbers of women in eLeadership and decision making is win-win</p> <p>Not having the full picture with the facts and figures dilutes the imperative</p> <p>Change needs to be resourced appropriately</p>	<p>Recognising experience and learning</p> <p>Understanding that career paths are not that always linear</p> <p>Doing nothing is a cost to society and the economy</p> <p>Reforming education and training in IT is integral</p> <p>Changing the narrative and telling the story - to show the potential and diversity benefits</p>

ITs4Women – Initial Findings

The initial findings indicate the need to invest in building skill sets and changing mindsets.

Building Skill Sets	Support women to reach their full potential offering accessible training and development opportunities that invest in their IT skills and digital literacy – build capacity and competencies.
Changing Mindsets	Raise awareness and advocate for a change of mindset – both aspirations of young girls and those policy makers that can influence and change the key systemic blockages.

Data trends and qualitative analysis suggest that gender inequality in the digital sphere is essentially a result of the persistence of strong unconscious biases about what is appropriate and what capacities each gender has, as well as about the technologies themselves which requires a fundamental cultural change. Our research signposts to the need to build upon what has been successful and what has been achieved and continue to advocate for resources and investment in change as well as inspiring and connecting women to convince and advocate for that need for change.

The themes that are coming from this scoping research presents four further questions as follows:

What must happen?	What must happen for imbalance to become balanced.
When is the optimum time for this to happen in the lifecycle of girls and women?	Thinking about the life-cycle some approaches will be needed through the lives of girls and women and some are more appropriate at different stages from childhood to youth to adulthood
Who needs to be involved in the change process?	The stakeholders in this age and stage – who can have the maximum impact – who can help to make change happen.
How can this be done?	What measures are needed to create and sustain the change – grow confidence, shift biases, raise awareness, gets the number right, leadership, investment, etc.

ITs4Women will start to answer these as follows:

What	When	Who	How
Show it to be it Start early – with IT ‘natives’ Media and Story telling Training and exposure to tech Personal development Digital Literacy Call-out attitudes and unconscious bias of gender stereotyping	Childhood to Youth	Role models eLeaders Educators Peers Family Influencers	Raise Awareness Breaking the mould Change aspirations Grow confidence
Make the business case for change Reform ICT Education – e.g. who teaches, flexibility, micro-credentials, RPL, Network Mentors and sponsorship Leverage Transparency and inclusive Reach a world stage	Youth to Adulthood	Role Models Educators ICT Sector Peers	Investment Connected in Support and Underpin eLeadership Facts and figures Use innovative Platforms

What	When	Who	How
Build capacity and mind-sets Data Gender Disaggregated Business case made Quotas and Standards Remote work opportunities Connectivity Positive action measures	Adulthood	Educators Knowledge sector IT Sector Community Government	Invest in skillsets at all levels eQuality Standards Certification Data available
Sustain change and adapt to respond Awareness Raising Personal Development and confidence building	Throughout the life-cycle	Role Models Educators Agility and flexibility	Life-long learning pathways Accessible training – micro-credentials and CPD Recognise experience and knowledge

What this research is telling us:

These findings are in line with the OECD study Empowering Women in the Digital Age – Where do we stand? (2018)¹², launched by the European Commission, found that, despite the growing demand of ICT specialists and digital profiles, the percentage of Europeans with ICT-related education is decreasing. Although this is a common trend for both genders, there are less women than men who are taking up ICT related jobs and education. The main findings of this study are:


- There are four times more men than women in Europe with ICT-related studies. There is a decrease in women taking up ICT related higher education in 2018 compared to 2011.
- The share of men working in the digital sector is 3.1 times greater than the share of women.
- The annual productivity loss for the European economy of women leaving their digital jobs to become inactive is calculated to be about EUR 16.2 billion
- Although female owned start-ups are more likely to be successful, there is decrease in participation, leadership, and investment in the entrepreneurial digital sector.

¹² <https://www.oecd.org/social/empowering-women-in-the-digital-age-brochure.pdf>



Women face a facet of the digital gender divide: the systematic under-representation in information and communication technology (ICT) jobs, top management, and academic careers. The first Draft Report of this research phase has been circulated to partners having received partners' reviews Draft 2 is now presented. The research and partners will fully inform the way forward as well as focus on the gaps and information still needed. Drawing on our proposal, discussions and this data gathering process we are proposing to design and develop ITs4Women Programme that will incorporate these critical features across the four participant groups as outlined on the table overleaf.

Suggested Participant Groups

 ITs4Women	Not so Digital Citizens	Digital Citizens	Digital Workers	Digital Makers
Build capacity at all levels – from the younger generations who have grown up with IT to those casual IT users, to those working in IT workers	Those who have no access or limited ability with intergenerational possibilities to support grandparents/older citizens connect	Those who can communicate and conduct transactions	Those who can configure and customise	Those who can create and code
What they might need	Learning by doing Basic IT How to join a zoom or attend a webinar Personal banking Paying bills on-line	Enhancing an existing skillsbase Useful tools – optimise your use of excel or publisher Communications using social media Research skill set	Building your virtual infrastructure and skillset Continuing professional development RPL and APL Micro-credentials	Amplifying balance Asking the questions Data visualisation Platforms for good and for change Presenting the business case
Cover critical components - to be included in any training offered	Common sense - practical and functional skills Cultural & social understanding	Communications and information sharing Collaboration	Creativity Continuous development	Cyber & e-safety Critical Thinking and evaluation

ITs4Women - IO1 Recommendations FINAL

Spotlight role models – podcasts, blogs, profiles, articles	Women who have done IT – ‘if I can see IT – I can be IT’	Those who would mentor and support others	Nurturing and underpinning incubator supports	Networks that embrace and act as an ‘advancement angel’ to others
Promote and profile positive action that has worked well – highlighting that it can be done – success factors in breaking down barriers and advocate for	Investment in accelerator and ambition style measures and programmes for women and girls	Investment in addressing the imbalance – incentives for stakeholders – employers, educators, etc.	Legislation until the balance has been achieved – quotas – targets	Dismantling gender barriers – change the way we do work
Learn from best and poor practices	What has worked well to address a gender imbalance	What not to do – learning from poor practices	Scoping what’s happening internationally – is the sector concerned?	Where are women clustered? - Pink Collar ¹³ role such as “Digital Media Specialist”
Respond to new opportunities and emerging needs – especially learning from the COVID-19 Emergency	Health and safety – including e-safety and ergonomics	Social innovations – Work life balance, doing our work and education differently	Remote working opportunities due to COVID-19 environmental, social and personal impacts	Data visualisation in a virtual world

¹³ England, K and Boyer, K. (2009). Women’s Work: The Feminization and Shifting Meanings of Clerical Work. Journal of Social History, Volume 43, Number 2, pp. 307-340

ITs4Women - Towards IO2 and agreeing the personas

The feedback from partners tells us that the project will progress now to IO2 focusing on personas based on professional and life pathways for example guiding women with basic digital competencies towards a job in the tech world or starting up their own business. Partners will agree whether this would be on multiple target groups by picking different levels of existing training resources and/or guiding girls and women to tech jobs rather than addressing digital skills in everyday life. ITs4Women is about making the case and advocating for change and developing a platform that could be sustainable and accessible for 'all'. Working with those of varying skills bases, ITs4Women has the capacity to challenge digital gender stereotypes – by learning and promoting digital skills and education. It is about advocating for changing the story and moving from imbalance to balance – within the digital sector in education, use, career, and entrepreneurship.

For IO2 it is proposed that there will be 2 main characters (personas 1 and 2) and as they move along their training and career ladder move towards their respective end-goals (i.e. Starting up a company, tech job in a company, either from the tech or other sectors, or working as support staff in a tech business/company). ITs4Women will use storytelling/narrative techniques to tell the stories of these two women as they advance.



Data Gathered by ITs4Women Partners 2020/2021

Appendix 1

Baseline data across five countries (where possible national figures have been used to draw a comparative

	Research Questions	Netherlands	Ireland	Spain	Romania	Sweden
1	What percentage of the total population in your country are women and girls?	50.37	50.39	50.9	51.8	49.73
2	What percentage of the population who are in paid work in your country are women?	46.68	45.10	52.4	43.6	48
3	What % is the gender pay gap (women's & men's average gross hourly earnings) in your country?	15.6	14.40	21.5	5.5	10.7
4	What percentage of those working in ICT in your country are women?	14.55	21	35.3	25.7	28
5	What percentage of the Level 1 Leaders/CEOs or Head of ICT Companies in your country are women?	14	17	15.6	12	17
6	What percentage of Level 2 Senior Management of ICT Companies in your country are women	5.2 ¹⁴	28.3	13.6	23	29
Below this line we do not have a comparative across the 5 countries						
7	What % of Level 3 Middle Management of ICT Companies in your country are women?	-	40	13.5	15	-
8	What % of 3rd level ICT Programmes Level 1 Professor/Head of School are women?	-	19 ¹⁵	41.3	-	54 ¹⁶
9	What % of 3rd level ICT Programmes Level 2 Senior Lecturer/Head of Department are women?	-	28 ¹⁷	65	-	-
10	What percentage of 3rd level ICT Programmes Level 3 Lecturer are women?	-	49 ¹⁸	-	-	28.79 ¹⁹
11	What % of 2nd level teachers of ICT are women?	-	70.3 ²⁰	71.9 ²¹	-	-

¹⁴ General ICT Managers

¹⁵ Generic 3rd level

¹⁶ In Sweden, the statistics don't differentiate between senior and middle management. Sweden is quite non-hierarchical. (54%) This is the percentage of women as Head of School/Principals/CEOs in total in Sweden. Not all schools offer an ICT-programme, and most schools teach ICT within another programme.

¹⁷ ditto

¹⁸ ditto

¹⁹ (28.79%) The figure shows the percentage of female teachers in total (not just lecturers) who partly, mostly or full time, teach ICT in level 3 schools. In level 2 schools, there are no specific ICT-programmes apart from some private or free schools. ICT is mostly taught in other programmes or subjects.

²⁰ teaching population that are female - 49% are in 2nd level leadership roles yet Technical Graphics (IT) predominantly taught by males teachers

²¹ teaching population that are female

Good practice in five partner countries – Netherlands, Ireland, Spain, Romania and Sweden

Netherlands

1. VHTO (www.vhto.nl)
More girls and women in Science, Technology, Engineering and Mathematics
 - breaking (implicit) stereotypes concerning gender & STEM,
 - increasing the growth mindset and self-confidence of girls and young women regarding STEM subjects.
 - Gathering Data
 - ‘coding’ activities ,
 - inspirational, creative activities and tasks
 - ‘Girlsday’.
2. Fe+male Tech Heroes <https://www.hightechcampus.com/female-tech-heroes>
 - create more diversity in the tech world.
 - creates awareness in the media
 - Informs diversity policy of companies.
3. Platform Talent for Technology www.ptvt.nl
 - explore their technological talents in education - for youth

Ireland

4. Triple FS, which has been developed by EY, MetLife and BNY Mellon <https://eyfinancialservicesthoughtgallery.ie/females-fast-forward-financial-services/> - gives women the chance to network with — and leverage the experience of — senior leaders.
5. Diversity in Tech Awards/Women in IT Awards - <https://womeninitawards.com/ireland/>
6. Western Development Commission - Research and funds - <https://www.wdc.ie/women-men-and-the-jobs-recovery/>
7. Connecting Women in Technology <https://cwit.ie/> Connecting Women in Technology (CWIT): a collaborative initiative made up of women from sixteen technology companies in Ireland, which aims to attract and retain women to the technology sector. The CWIT network is formed by women working at Accenture, BT, Dell, Eir, Ericsson, Facebook, Google, HPE, HP, IBM, Intel, Microsoft, Twitter, LinkedIn and Vodafone and runs a regular series of seminars to facilitate networking;
8. WITS Women in Technology and Science www.witsireland.com :
 - supports and promotes women in STEM.
 - It is a voluntary membership organisation,
 - which holds regular events for members. Members come from across STEM, including the public and private sectors.
 - It has free third-level STEM student membership.



9. Other positive action examples

- i. Girls Hack Ireland, which runs fun and creative technology workshops for teenage girls and their parents in community settings around Ireland;
- ii. Coding Grace, who provide female-friendly coding workshops and support networks;
- iii. Tech4Moms, an initiative aimed primarily at 25-plus year-old women who may have left the workforce after becoming moms but now have an interest in becoming aware of the new web technologies;
- iv. Rails Girls Galway, which is part of a worldwide movement to teach women how to build web applications, and comprises an annual summer weekend of workshops for females of all ages;
- v. I-WISH (Inspiring Women In STEM), an initiative to inspire, encourage and motivate young female students to pursue careers in STEM, which features a conference with engaging talks by women and men who have seen the opportunities for a great career in STEM as well as interactive STEM-themed exhibitions;
- vi. Improving Gender Balance Ireland: DCU and the Institute of Physics is extending the Improving Gender Balance project, originally run by the Institute of Physics in the UK in 2014, to Ireland. Initially regional in nature, working with six schools in the Dublin area, the project creates a framework for encouraging girls to study physics / STEM subjects, which can be replicated throughout Ireland;
- vii. CodePlus Mentoring: Coding Better Futures for Girls exploits the network and expertise of the Bridge21 project in Trinity College Dublin, which focuses on developing skills of students and teachers in the area of technology-mediated, 21st century teaching and learning, in order to promote awareness and interest in computer science in the female secondary school cohorts through a series of related activities. Since 2007 the project has worked with over 12,000 students and 1,500 teachers. Female volunteer mentors are recruited and engage in a range of activities aimed at the target audience.
- viii. The STEPS programme of Engineers Ireland and the Smart Futures Programme of SFI place a particular emphasis on seeking to attract more girls into careers in STEM. Ibec also runs a number of events and provides supports to companies seeking to improve their gender balance.

Spain

10. "Digitalizadas" – <https://www.digitalizadas.org/> project to facilitate and enhance the participation, employability and entrepreneurship of rural women through the acquisition of digital skills
 - Develop technological skills
 - increase their personal and professional influence on the Internet
 - Promote the social and labor insertion of women, as well as protect their rights and security in digital environments.
 - Generate a network of digitizers, a community of women with greater interest in the use of technology to promote entrepreneurship and self-employment.
11. Centros de Competencias Digitales de Extremadura (Digital Competence Centers Extremadura). <https://www.nccextremadura.org/>
 - training courses,
 - information sessions,
 - individual advice and coaching.
12. eMayores – <https://emayores.com/>
created with the aim of facilitating the use of ICTs for older adults, because being able to use these technologies brings independence, self-esteem and integration.



13. EDYTA - <http://www.fundacionorange.es/mujer-y-tecnologia/edyta/> is a national program on education and digital transformation, aimed at women and third sector associations that work with groups of women at risk of exclusion and low employability.

- the goal being the digital education of women.
- promoting and supporting their digital transformation.
- equipping the association with different technological devices such as computers, tablets, etc.,
- pedagogical program adapted to the situation and training of the participating women. Thus, in the Classroom a course with training on digital skills is taught, from learning to navigate and search for information online, preparing a curriculum, online job search ...
- Currently, 8 Digital Classrooms are operating in Madrid, Córdoba, Valencia, León, Málaga and Badajoz.

Romania

14. Code for Romania civic tech NGO - after Code for America, Code for Romania is the 2nd largest NGO in the world, in terms of impact and community engagement, with an inclusive and diverse community of more than 2000 members. The COO of the organisation is a woman (Olivia Vereha) and she is actively talking about women in tech and women in business in general with an empowerment goal. <https://code4.ro/ro/comunitate>

15. Codette <https://codette.ro/> Codette is the community for all people interested in technology, regardless of gender, age, level of experience or the tech branch in which it operates. This romanian organisation promote diversity and education at all levels and create opportunities for women to reach their full potential.

16. EveryGirl <https://www.everygirl.ro/> Everygirl Everywhere is an umbrella project by Smart Everything Everywhere

- turning the gender gap in the digital sector into a national conversation and by consolidating, increasing, and leveraging Romania's performance within the European Union in this regard.
- connect our members with the industry and facilitate women's integration into the digital workforce by giving them the tools they need to succeed;
- showcase inspirational role-models and success stories, combating stereotypes and encouraging women to enter the digital workforce;
- support women entrepreneurs, building a gender-balanced new generation of digital leaders;
- work with the industry to ensure the digital labor market moves towards gender parity.

Sweden

17. <https://www.tjeerkodar.se/om-oss/> Initiative aimed at getting girls/women to learn coding/programming. Since 2015 over 4000 women have been educated.

18. <https://www.womentor.se/about/> Womentor is a tool to support companies in the IT and Telecoms sector who want to work systematically to increase the proportion of women in management positions. What separates Womentor from other mentorship and leadership programmes is that it is not exclusively aimed at specific individuals but instead requires that the company as a whole signs up to actively participate in the process of change.

19. <https://www.sogeti.se/om-oss/sogeti-csr/match-and-go/> "Match & Go Mentorship initiative" led by Sogeti/Capgemini, the #addher-network (5000 members) and DataTjej (2800 members) and they are matching IT-mentors and women adepts all over Sweden.

NB:- This is not an exhaustive list of examples and practices simply those known to the partners involved in ITs4Women.

Good practice examples from elsewhere

<p>Django Girls https://djangogirls.org/ example from Germany</p> <p>helps women to organize free, one-day programming workshops by providing tools, resources and support.</p> <p>volunteer run organization with hundreds of people contributing to bring more amazing women into the world of technology.</p> <p>making technology more approachable by creating resources designed with empathy.</p> <p>Organizer’s Guide available on the internet,</p> <p>Free and remote</p> <p>very active platform, where a big stage is created for inspirational stories from successful women in tech, informative blogs and a great network of stakeholders involved in the big tech world.</p>	<p>Women in Tech www.womenintech.org</p> <p>The organization focuses on 4 primary areas that are a call for action: Education, Entrepreneurialism, Social Inclusion, Science & Innovation.</p> <p>Women in tech is made up of members, partners and an ecosystem of networks that share their values and that have the same mission of striving for an Inclusive Tech industry. The issue of women empowerment in Tech is of major importance.</p>
<p>https://www.europeanwomenintech.com/</p>	<p>New Zealand and Finland – women role models</p>
<p>The Aurora Leadership Programme is a leadership development programme for women, designed by the UK’s Leadership Foundation to encourage and support females to move into leadership roles in universities by embedding a leadership mindset whereby women identify as leaders and seek appropriate opportunities to develop capabilities, skills and networks to support them in their careers. Participants are matched with a mentor for the duration of the programme;</p>	<p>Inspirefest is Europe’s leading sci-tech and arts festival, unique in that it has diversity at its heart. It is an annual event which connects sci-tech professionals with fresh perspectives on leadership, innovation and diversity, including addressing gender imbalance issues;</p>

Good practice examples from elsewhere

<p>ESF NOW Programme 1990s – EU Wide positive action investment – New Opportunities for women http://www.fao.org/3/v3327e/v3327e.htm#P1_0</p>	<p>We are tech women https://wearetechwomen.com/about/</p> <p>An organization that wants to help women working in technology to maximize their potential</p>
<p>The common thread for diversity leaders is a systematic approach and bold steps to strengthen inclusion. Drawing on best practices from these companies: -</p> <ul style="list-style-type: none"> ● Ensure the representation and advancement of diverse talent – with data driven targets ● Strengthen leadership accountability and capabilities beyond the HR function or employee resource-group leaders and more emphatically hold all leaders to account for progress on I&D. ● Enable equality of opportunity through fairness and transparency highlighting true meritocracy ● Promote openness and tackle micro aggressions with a zero-tolerance policy with every level living up to that standard. <p>Foster belonging through unequivocal support for multivariate diversity - a true sense of community and belonging.</p>	<p>Dynamic Signal - a strong female culture with 40% of their women being in leadership roles. McKinsey Diversity and Inclusion</p> <p>Some of their initiatives include</p> <ul style="list-style-type: none"> ● an active women focused employee resource group named Women of DySi - Women from every department as well as every level of seniority are actively involved in their internal women-focused group ● promoting their women employees across their social media platforms ● partnering with organizations such as Path Forward dedicated to helping women returning to work find jobs in tech. ● internal events featuring powerful female leaders throughout Silicon Valley to speak to their female employees on topics about empowerment, career pathing, leadership, investing and mentorship. ● The Head of Communications also delivers training and support to nurture the development of her female colleagues.
<p>The Ardmore Network of Community Resource Centres on the Scottish Hebrides - http://www.rcss.ed.ac.uk/sigis/public/displaydoc/full/D03_2.08_UEDIN2</p>	<p>The country Estonia with its model of digital governance, government e-services, e-voting, e-banking, e-healthcare, focus on education, and the first paperless government in the world. Also with the digital tech</p>

Good practice examples from elsewhere

- commitment of volunteer computer enthusiasts in the communities in which it operated. Whilst bridging digital divides associated with remote and rural areas was the primary goal of the Ardmore network, it nevertheless worked in a de facto way to include more women than men.

champion Kersti Kaljulaid as president and role model. One of the major government strategies since 2018, is increasing the number of women in ICT-professions.

Several countries have measures to engage women and girls in STEM across education systems, for example:

The Australian Government is investing AUD 13 million over five years from 2016/17 to initiatives focused on women's participation in STEM. The National Innovation and Science Agenda is contributing to ongoing efforts across the Australian Government to encourage more girls and women to study STEM and pursue STEM-based and entrepreneurial careers.

Meninas Digitais in Brazil aims to promote technology and STEM subjects by motivating female high school students and by developing their skills with short computing courses.

The Japanese Government is carrying out the Riko Challenge to inspire women to choose careers in STEM and increase the number of female science and engineering professionals.

The OECD Mexico initiative, NiñaSTEM PUEDEN, launched in early 2017, invites Mexican women who have prominent careers in science and mathematics to act as mentors encourage girls to choose STEM subjects.

Codigo X in Mexico is a programme to orientate women to disciplines related to STEM and to promote the inclusion of girls and women in ICT sectors.

South Africa's initiative, including South Africa's Women's Net, provides tailor-made training on basic digital skills, advocacy and lobbying online.

Germany launched in 2008 the National Pact for Women in MINT (STEM) Careers to increase interest in scientific and technical studies. The initiative brings together politics, business, science and the media to improve the image of STEM-related professions in society.

In the United States, the Department of Education's programme, Race to the Top, launched in 2009, prioritises improving STEM in the grants it awards to states. The Investing in Innovation programme seeks to increase the number of STEM teachers from groups traditionally under-represented in STEM; and the National Science Foundation awards grants to support the ADVANCE programme, which aims at increasing the participation and advancement of women in academic science and engineering careers.

Russia's Love2Code course teaches the creation of mobile applications.

Good practice examples from elsewhere

<p>Alongside the G20 German Presidency's eskills4Girls initiative,¹ endorsed by G20 Leaders in 2017, there are a range of national programmes that aim to support girls and women in improving their digital literacy and boosting female employment rate in the digital economy.</p>	<p>Germany has initiatives and public-private partnerships to address the need for improving gender equality in the workplace by raising the digital skill levels of women in South East Asia.</p>
<p>Furthermore, G20 countries have programmes in place supporting efforts in other countries, particularly developing ones, for example:</p> <p>Canada has four different initiatives, including increasing access to education and training in selected Commonwealth countries with a high prevalence of child marriage, and improving the skills and employability of girls and women in Haiti and African countries.</p>	<p>Argentina's Ellas Hacen (They Do) programme, in conjunction with the National Plan for Digital Inclusion and the Digital Educators Network of Argentina, aims to increase digital literacy among unemployed women and provide the most vulnerable sectors of the population with the necessary skills, motivation and confidence to use new technologies for their own benefit, through courses for the creation of basic Internet use capabilities.</p>
<p>Code for America - as an example of code for diversity and inclusion https://www.codeforamerica.org/diversity</p>	<p>https://www.shegetsshitdone.com/ example of organisations supporting women entrepreneurship in a simple and straightforward manner</p>

NB:- This is not an exhaustive list of examples and practices simply those known to the partners involved in ITs4Women.

Success Factors

Expanding the current organizational network through webinars/awards/game element	Inspirational words and stories from successful (wo)men in the field.
<p>STEM Incentives and Awareness raising - https://outboxjourney.com/app/</p> <p>Women in tech start-ups - https://irishtechnews.ie/future-of-irish-women-in-tech-is-looking-very-bright-mary-carty-co-founder-of-outbox-incubator/</p> <p>BT young scientist - https://www.irishtimes.com/news/science/bt-young-scientists-research-on-gender-bias-in-children-wins-2020-prize-1.4136227</p>	<p>Role Models https://www.irishtimes.com/advertising-feature/huawei/female-role-models-will-help-create-an-open-diverse-and-inclusive-ict-industry-1.4398792 in tech sector</p> <p>But also in Leadership/politicians (NZ and Finland)</p> <p>https://scopeblog.stanford.edu/2020/05/12/women-leaders-shine-during-covid-19-pandemic/</p> <p>https://www.forbes.com/sites/margiewarrell/2020/10/09/seeing-is-believing-female-role-models-inspire-girls-to-rise/</p>
<p>Legislation for quotas - Buckley, F, Galligan, Y and McGing, C (2016) 'Women and the Election: Assessing the Impact of Gender Quotas' in M Gallagher and M Marsh (eds), How Ireland Voted: The Election that Nobody Won (Basingstoke, Palgrave Macmillan), 185-205. https://www.dfa.ie/irish-consulate/sydney/news-and-events/latest-news/irelands-experience-of-parliamentary-gender-quotas.html</p>	<p>Positive Action investment - such as the Enterprise Ireland tech fund for women (HPSU) - There is a strong interest in investing in scalable, female-led tech companies participating in the broader human health space - https://www.enterprise-ireland.com/en/start-a-business-in-ireland/startups%20led%20by%20ambitious%20women/</p>
<p>Tech for Good Dublin @Tech4GoodDublin</p> <p>We care about how technology can enable positive impact locally and globally.</p> <p>Join our community for free events #tech4good #socialimpact #Dublin</p>	<p>Networking for women - such as AwakenHub's mission is to promote and support entrepreneurs and a vibrant start-up culture across the island of Ireland. https://www.awakenhub.com</p>
Education – also attention paid to TECH in early education	Adaptation to the specific context and circumstances of the target groups.



Success Factors

Efforts to raise female participation rates in ICT studies (and, consequently in careers) should be person-centered rather than technology-focused

Development of activities which actually raise the interest of (rural) women, and which are perceived as useful either for everyday life, professional development or getting a job,

Support from other women and female role models
Support and mentorship from major IT-companies.

Walk the talk - Inspire and Empower so that people start Acting and become Autonomous

Increase women in IT as part of business and governmental strategy.

Clear and straightforward set of rules / or communication, enabling the deployment of the community operational manner

NB:- This is not an exhaustive list of examples and practices simply those known to the partners involved in ITs4Women.

Poor or Unsuccessful Practices or Blockages/barriers ²²	
PP1 – lessons in engaging and marketing	Engaging entrepreneurs in a community about health – <ul style="list-style-type: none"> ● not their ‘cup of tea’, ● not enough marketing efforts, ● entrepreneurs don’t have the time to be part of such a community in the COVID crisis, ● already lots of supply regarding the vitality of entrepreneurs nowadays - duplication
PP2 – must be relevant and current for the audience	‘Serious Gaming’ development organization, who recently developed, for a client, a game called a game for kids, focused on cleaning up litter and the importance of it. <ul style="list-style-type: none"> ● The game was developed and ready to use, ● no great audience was reached. ● The client was convinced he could do the marketing himself, however, in the end he wasn’t able to this. ● Marketing is a big issue regarding a successful start of a new initiative.
PP3 – making the business case has its challenges – data being the main one	Where businesses want to encourage gender diversity but Directors do not see the importance of gender diversity within a company <ul style="list-style-type: none"> ● it is sometimes hard for the top level (managers, directors, etc.) of the organization to fully admit the problem ● the commitment to actually change the gender diversity rate within their organization stagnates ● The reasons why gender diversity is vital to business are not communicated. ● Gender diversity within businesses is then a side issue, or even (in some cases) left behind since it isn’t the ‘most important task to do’ at the moment.

²² Poor practices are not generally recorded. Partners asked connections in the IT field

Poor or Unsuccessful Practices or Blockages/barriers ²²

<p>PP4 – change needs to be resourced appropriately</p>	<p>One organization encouraging women in tech (mostly coding) has failed due to the lack of financing.</p> <ul style="list-style-type: none"> organizes short bootcamps to educate minorities, long term unemployed and mostly women in coding to find a job in the tech industry. didn't manage to create a big network, to keep a constant flow of new people who wanted to learn coding and join the bootcamp.
<p>PP5 – increasing the numbers of women in eLeadership and decision making is win-win</p>	<p>Women in politics – without quotas - why we need them.....</p> <p>https://www.ihrec.ie/citizens-assembly-told-gender-quotas-for-state-and-company-boards-need-statutory-backing/</p>
<p>PP6 – not recognising experience and learning and only considering linear career paths is a cost to society and the economy</p>	<p>Not recognising Part-time, gaps or care as prior experience/learning - the cost of taking time out to care or downsizing ambition - https://hbr.org/2005/03/off-ramps-and-on-ramps-keeping-talented-women-on-the-road-to-success</p>
<p>PP7 – not giving the full picture and providing the facts and figures</p>	<p>Not acknowledging gender differences or reporting on gender such as Peoplink http://www.peoplink.org - a well-known and successful example of artisans, the majority of whom are women, in developing countries using e-commerce to market their wares. Yet the Peoplink project proposal to the World Bank Group's made no single mention of women or gender.</p>
<p>PP8 – reform of the delivery of IT essential so that girls and women have the same opportunities</p>	<p>Time a resource needed to match the ways women learn with Digital Literacy teaching is often seen as something imparted, in a didactic way, to women and men, through the use of exercises and primers.</p>
<p>PP9 – putting bias through a prism to show the potential and diversity benefits</p>	<p>Beliefs and attitudes towards the roles women may or can play, as well as what, where and how they might learn, are often entrenched. Deeply internalized beliefs of inferiority and incapability are difficult to change in the women themselves, as well as in the men. This is especially so in rural and isolated settings. Projects that failed have not considered this in the design of the programme.</p>
<p>PP10 – changing the narrative and telling the story</p>	<p>https://www.statista.com/statistics/1181108/romania-number-of-employees-by-economic-activity-and-gender/</p>



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ITs4Women - IO1 Recommendations FINAL

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