FEMIN–ICT

POLICY
ROADMAP

Comprehensive findings, discoveries and initiatives
undertaken within the framework of the Femin-ICT initiative.

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Executive Summary

This document describes the comprehensive findings, discoveries, and initiatives undertaken within the framework of the Femin-ICT initiative. This collaborative effort, funded by the Erasmus+ Program of the European Union and executed by seven partners from six EU countries, focuses on identifying barriers, obstacles, legal gaps, and challenges impeding women's effective and successful pursuit of careers in Information and Communication Technology (ICT).

The primary objective of this policy roadmap is to outline actionable steps for each participating country to address gender disparities within the ICT industry, and to establish urgent, important, and needed actions to advance into a better representation of Women in ICT towards Europe's Digital Decade digital targets for 2030.

A full version of the work can be found on our site www.femminictproject.eu

"I think it's very important to get more women into computing. My slogan is: Computing is too important to be left to men."

Karen Ida Boalth Spärck Jones FBA
Pioneering British computer scientist

About Femin-ICT

Feminising the ICT sector by supporting and encouraging more women to take up ICT-related careers

What is FEMIN-ICT?

The gender gap in ICT courses, jobs and functions is a well-documented global phenomenon. FEMIN-ICT was a program that started in February 2022 and ended in February 2024, funded by the Erasmus+ Program of the European Union. It aimed to fight stereotypes and other barriers within institutions that can enable or hinder the participation of women and femininities in the ICT sector, equipping the ICT sector with the necessary skills, tools and knowledge to empower women in ICT and better integrate both sexes in all functions and levels of responsibility, as well as assisting all structural, law-making, academic and grass-roots efforts towards closing the gender gap within the ICT sector.

Our mission

The underlying idea of the project was that by training and supporting the wider ICT ecosystem to embrace gender equality measures and offer spaces, products and services that respond to womens' and femininities' needs, then the ICT sector will be able to attract, absorb, retain and empower more of them and thus become more diversified, equitable and inclusive.

To that end, FEMIN-ICT offered a unique training and support programme, equipping, on the one hand, ICT Businesses, ICT business ecosystem and public authorities with those skills and tools, to empower women in the ICT sector and integrate the gender dimension in all their practices and, on the other hand, women who are either employed in the ICT sector, or already running ICT businesses, or even unemployed but interested in pursuing an ICT career to initiate or advance their careers in the digital economy.

Our goals

① Support for ICT Businesses

Both existing and potential employers in the ICT sector received support and training to cultivate a more inclusive working environment. Business support ecosystems underwent training to enhance their ability to offer gender-responsive services, adopt effective gender communication and outreach strategies, and provide more effective support to women ICT entrepreneurs. This, in turn, aimed to address and rebalance the existing gender gap.

② Empowerment Initiatives in Academic Institutions

Academic institutions, municipalities, and prefectures underwent training to better design and implement women-friendly empowerment initiatives and structures. These initiatives encompassed upskilling programs, networking activities, co-working spaces and hubs, and community-led ICT projects.

③ Empowering Women in ICT Careers

The overall goal was to empower women to pursue careers in ICT. The support provided aimed to enable women to not only enter the field but also to continue their work, fostering productive and rewarding careers comparable to those experienced by their male counterparts.

Theoretical Framework

The digitalization of various economic sectors creates opportunities for women in the labor market, particularly in STEM and ICT roles, addressing the gender pay gap. However, persistent gender stereotypes, lack of role models, and environmental factors contribute to the underrepresentation of women in STEM fields. The academic journey, workplace challenges, and societal burdens, especially unpaid labor, further hinder women's progress in STEM careers.

This work was focused on the challenges and opportunities for women in the ICT sector, as outlined in a report by the **European Institute for Gender Equality** (EIGE). The European Union faces difficulties in achieving gender parity in the digital sector, with only **17%** of **digital job** employees being **women** in 2016.

The World Economic Forum's Global Gender Gap Report emphasizes **the need to support female STEM graduates' transition into the workforce, noting a significant drop in the retention of women in STEM one year after graduating**. Statistical representation reveals that 8 out of 10 digital jobs in the EU are held by men, emphasizing the persistent gender gap in the digital sector. The report also highlights the underrepresentation of women in leadership roles within STEM fields.

Theoretical Framework

The legal framework for gender equality at the international and European Union levels is discussed in this work, by encompassing various commitments, declarations, and resolutions. Key legal instruments analyzed include EU treaties, the European Convention for the Protection of Human Rights and Fundamental Freedoms, the Council of Europe Convention on preventing and combating violence against women and domestic violence, and local laws and regulations in each partner country.

The EU has adopted directives and regulations addressing equal treatment, violence against women, and protection of victims' rights. Challenges in achieving gender equality were analyzed taking also into account the lens of the World Bank's report "Women, Business and the Law".

Theoretical Framework

The full document offers a thorough analysis of legal considerations specific to all partner countries.
Some highlights include legislative changes in **Belgium** that aim to combat discrimination and recognize multiple forms of discrimination, including intersectional discrimination. **Cyprus** focuses on equal treatment legislation, and **Greece**, while lacking specific regulations for the ICT industry, has broad legislation prohibiting discrimination in employment.

Italy introduces laws promoting gender equality, equal pay, and representation in corporate boards. **Spain** implements initiatives to address the gender gap in ICT, while **Sweden** has had comprehensive laws against workplace gender discrimination since 1980, including measures to prevent harassment and promote equal pay.
The legal frameworks reflect each country's approach to gender equality in the employment and ICT sectors.

FEMIN-ICT Discoveries

The Femin-ICT consortium conducted surveys, focus groups, and activities in partner countries to explore the situation of women in the ICT sector. The objective was to identify gaps in implementing gender-related laws and regulations and understand the discrepancies between policy and reality. The key findings for each country are summarized below:

1 Belgium

Women face challenges in ICT due to self-perceived limitations, internal doubts, and low self-confidence. Employer bias and negative workplace attitudes contribute to underestimating the importance of women in ICT. Flexible working hours, telecommuting, and socio-economic provisions are suggested to address these challenges. More training funding, government support, and increased interest from employees are needed to create gender-responsive environments.

FEMIN-ICT Discoveries

2 Cyprus

Internalized misogyny and a lack of role models are primary barriers for women in the ICT sector. Initiatives exist to promote inclusion, but COVID-19-induced flexibility has both positive and negative impacts. Resistance to gender equality plans in academia persists; stronger governmental support is required. Solutions include systemic change, visible role models, flexible working arrangements, and enhanced networking opportunities.

In an interview held by **Femin-ICT** with Ms. **Loukia Vasileiou**, a Software Developer in Cyprus, she anticipated positive shifts in gender representation with the new remote work bill. She emphasized the need for legislation changes, visible role models, and early exposure through workshops for women in ICT. She expects that the remote work bill will empower women, fostering a more diverse ICT sector.

FEMIN-ICT Discoveries

3 Italy

Structural changes are needed to eliminate gender stereotypes in the ICT sector.

There are high skill-mismatch in the Italian labor market, especially in electronic and information engineering. Policies should focus on reshaping recruitment and training methods, supporting startups, and fostering work-life balance. Challenges in parental leave impact gender equality in hiring selections; support for women without degrees is crucial.

> Italy's inadequate parental leave policies impact care roles and employment choices. We need digital education, ongoing support for women in business, and targeted digitalization investments beyond mere rhetoric on equal opportunities, actionable steps, workplace improvements, and gender-inclusive urban planning are essential.

Femin-ICT Interview with **Cecilia Del Re**, Lawyer and former City Council Officer for business and digital innovation in the City of Florence, Italy.

FEMIN-ICT
Discoveries

4 Greece

The "Leaky pipeline phenomenon" is observed, with women studying STEM but not transitioning into relevant careers. Few women in STEM result in a scarcity of women in ICT careers; gender stereotypes and discrimination are barriers. Strategies involve promoting women to higher positions, endorsing work-life balance, and engaging men in efforts against sexism. The importance of family, role models, and education was highlighted; collaboration for data gathering and implementation of laws was urged.

In a Femin-ICT interview, **Dr. Zefi Dimadama**, General Secretary of Equality and Human Rights of Greece stressed the need for a unified data platform and collaborative actions for robust gender law enforcement in the EU. Priorities encompass countering stereotypes, enhancing childcare, having more representation of Women in Politics, involving men on the gender discussion, advocating gender-inclusive urban planning, and confronting media biases.

FEMIN-ICT Discoveries

5 Spain

We observe the disparity in the presence of women in ICT roles based on the size of companies and the need to focus on the digital gender skills gap. Women face societal expectations and gender-based stereotypes, affecting their career choices and progression. Flexibility in work hours, knowledge of female role models, and confidence in women's abilities are essential for change. External pressure, networking, and awareness campaigns are motivators for gender equality in the workplace.

"Despite advancements, Spain must address the declining female presence in STEM, influenced by deep-seated societal norms. Legal affirmations, early tech education, and focused efforts are imperative to rectify this imbalance." – **Femin-ICT** Interview with **Dr. Silvia Rueda Pascal,** Cabinet of the Minister of Science Advisor, Innovation and Universities. Director of the Women and Science Unit

FEMIN-ICT Discoveries

6 Sweden

Companies recognize the need for greater diversity, driven by legal requirements and external factors.
Despite Sweden's high ranking in gender equality, gaps persist. Businesses have been **slow** to **prioritize building diverse teams**, with women still taking more parental leave and men predominantly holding senior positions. The challenge of recruiting women quickly is compounded by the speed-focused nature of the startup scene, where diversity and inclusion may be deprioritized.

The language used in job advertisements and the **lack of diverse role models** present significant obstacles. Women are **not sufficiently encouraged** to pursue tech careers from their early education, where the industry is perceived as complicated and time-consuming.
Discrimination in Sweden is often **subtle**, with women taking on more parental workload. The journey of motherhood can act as a setback to career advancement, despite a supportive childcare system, which does not affect men in the same way.

Scenarios for changes and innovation

The **Digital Decade policy program** outlines specific targets and objectives for 2030, steering Europe's digital transformation. It aims to achieve a digitally skilled population and highly skilled digital professionals, to achieve gender balance, where: at least 80 % of those aged 16-74 have at least basic digital skills; at least 20 million ICT specialists are employed within the Union, while promoting the access of women to this field and increasing the number of ICT graduates.

Reach level per country

Belgium

- Nearly half the population lacks basic digital skills.

- The share of ICT specialists is **5.6%**, slightly above the EU average.

- Efforts are needed to improve digital skills coordination.

Scenarios for changes and innovation

Cyprus

- **50%** of the population has basic digital skills.

- Cyprus reached the EU average of ICT specialists (**4.6%**).

- Special focus on training for **people over 55** and vulnerable groups is recommended.

Italy

- Only **46%** of Italians have basic digital skills.

- ICT graduates are significantly below the EU average (**1.5% vs. 4.2%**).

- Efforts needed to increase capacity for training ICT specialists.

Scenarios for changes and innovation

Greece

- ✓ More than half the population has basic digital skills.

- ✓ The percentage of ICT specialists is **2.5%**, among the lowest in the EU.

- ✓ Brain drain and lack of specialization are challenges.

Spain

- ✓ **Over one-third** lacks basic digital skills.

- ✓ Spain performs well in basic and above basic digital skills.

- ✓ Efforts needed in upskilling and reskilling, particularly in advanced technologies.

Scenarios for changes and innovation

Sweden

✅ Sweden has a high level of digital skills (67% with basic skills).

✅ The share of ICT specialists is 8.6%, well above the EU average.

✅ Efforts needed to meet the demand for ICT specialists and encourage more students to specialize in ICT.

Policy Roadmap

Call to action and suggestions of priorities for each partner country

The document proposes a policy roadmap with specific recommendations and priorities for each partner country to **enhance** the **representation of women** in the field of Information and Communication Technology (ICT) in Europe.

The suggested strategic steps at the European Union level include addressing stereotypes, promoting government support for childcare, examining existing laws' effectiveness, and shifting responsibility for diversity initiatives to collective efforts within companies.

The full document can be found on our project page, femminict.com

Policy Roadmap

We suggest some of the following strategic next steps to boost the number of women working in ICT, aiming for a more inclusive and diverse landscape in this rapidly evolving field.
The complete list can be found on the Policy Roadmap full document.

European Union Level

☆ Government support is crucial in strengthening childcare systems and addressing care duties.

☆ Need to address persistent stereotypes surrounding women that still hinder their progress.

☆ Women migrants are still more likely to be unemployed or economically inactive than any other group in the European Union labor market.

☆ There is a need for a critical examination of laws and regulations that do not independently foster progress as expected.

☆ Women entrepreneurs face a disparity in funding compared to their male counterparts and, additionally, are subject to heightened criticism and scrutiny.

☆ Shifting the responsibility for diversity and inclusion initiatives from a sole manager to a collective effort involving all company members is crucial.

☆ In the pursuit of gender equality, it's essential to broaden the conversation to include men actively and discuss their role in unpaid caregiving and household responsibilities.

Policy Roadmap

Belgium

☆ Promote digital literacy and the benefits of ICT careers.

☆ Empower women in ICT through mentorship programs and awareness campaigns.

☆ Advocate for legislation recognizing and compensating unpaid caregiving.

☆ Review and modify laws to address gender pay gaps.

☆ Strengthen ICT education for women and increase women's representation in leadership roles.

☆ Foster increased interest and engagement from employees in creating gender-responsive environments.

☆ Enhance women's representation in leadership roles by adding quotas or any other affirmative action measure.

Policy Roadmap

Cyprus

☆ Implement flexible working hours for women.

☆ Address unpaid caregiving at a cultural level.

☆ Recognize and address obstacles faced by women in the ICT sector.

☆ Implement legislation and programs for women's inclusion in ICT.

☆ Promote role models for women in ICT at a national level.

☆ Embed ICT education in national curricula.

☆ Adopt blind hiring practices for bias mitigation and include women as gatekeepers for hiring purposes.

Italy

☆ Add ICT assignments to national curricula.

☆ Encourage dialogues on unpaid caregiving.

☆ Address changes to parental leave.

☆ Promote awareness of ICT careers' benefits.

☆ Investigate barriers to women's career advancement in ICT.

☆ Combat workplace gender-based discrimination.

Policy Roadmap

Greece

☆ Embed ICT assignments and education into national curricula.

☆ Address changes to parental leave policies.

☆ Improve access to childcare facilities.

☆ Elevate female employment rates with gender parity quotas.

☆ Combat workplace gender-based discrimination.

☆ Establish policies for employees with caregiving responsibilities.

☆ Address career drop-outs among women.

☆ Engage men in efforts against sexism and stereotypes

☆ Highlight role models

☆ Engage local authorities to expand STEM initiatives beyond urban centres.

Policy Roadmap

Spain

⭐ Promote higher enrollment of women in ICT-related degree programs.

⭐ Encourage dialogues on unpaid caregiving.

⭐ Combat workplace gender-based discrimination.

⭐ Highlight role models in challenging ICT positions.

⭐ Address the gap between policies and their implementation.

⭐ Bridge the enforcement gap between public and private sectors.

Sweden

⭐ Integrate migrant women into ICT with parity quotas.

⭐ Promote higher enrollment of women in ICT-related degree programs.

⭐ Combat workplace gender-based discrimination.

⭐ Challenge gendered norms and advocate for intersectional policies.

⭐ Engage men in efforts against sexism and stereotypes.

Shift responsibility for diversity initiatives to collective efforts.

⭐ Strengthen the conversation on equitable parental leave practices.

Thank you!

You can find the complete Policy Roadmap document on our site by scanning the following QR Code

FEMIN−ICT