



Institute of Sociology
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gender & science

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Women in Research and Innovation

Recent numbers, persistent barriers, and opportunities for better innovation

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THE TALENT POOL IS THERE

Good news at the entry level

- Women represent **48% of doctoral graduates** in the EU
- Gender balance is broadly achieved among Bachelor's, Master's and Doctoral students and graduates
- But the picture changes sharply by field, sector and career stage

Source: She Figures 2024

THE FIRST FRACTURE: STEM FIELDS

Overall balance hides field segregation

- Women remain underrepresented among doctoral graduates in
 - ICT
 - Engineering
 - Manufacturing
 - Construction

These are fields closely linked to deep tech, patents, business R&D and high-growth innovation

Source: She Figures 2024

CROSSING INTO SCIENCE AND TECHNOLOGY OCCUPATIONS

Qualifications do not automatically translate into careers

- Women account for **3.4%** of scientists and engineers in the total female labour force
- Men account for **5%** in the total male labour force
- Women make up only **25%** of self-employed professionals in science, engineering and ICT occupations

Source: She Figures 2024

THE BUSINESS ENTERPRISE SECTOR GAP

The largest R&I sector is where women researchers are least present

- **Women researchers**
 - **44%** in higher education
 - **45%** in government
 - **22%** in the business enterprise sector
- **The business enterprise sector employs 57% of EU researchers**

Source: She Figures 2024

FROM RESEARCH TO RECOGNISED INNOVATION

Women remain marginalised in patenting

- Women comprised only **9% of patent applicants** in 2018–2021
- No significant increase over the previous decade
- Most patents are still submitted by all-men teams

Source: She Figures 2024

WOMEN IN ENTREPRENEURSHIP

Untapped entrepreneurial potential

- Only **14.8% of start-up founders** are women
- Women remain underrepresented in technology, innovation and entrepreneurship ecosystems
- EIT frames women as one of Europe's largest untapped entrepreneurial and leadership potentials

Source: She Figures 2024

DEEP TECH: IMPROVING BUT STILL UNEQUAL

Women founders in European deep tech

- Women founders represented **17.4%** of deep tech start-ups on average, 2010–2022
- In 2022, less than **one quarter** of deep tech start-ups had at least one founder who identifies as a woman
- Women-founded deep tech start-ups receive less funding, smaller first rounds and lower valuations

Source: EIT, EIF, EIB Advisory Study

ACCESS TO CAPITAL: THE FUNDING CLIFF

Who gets funded to grow?

- Women-founded deep tech start-ups receive **11.4%** of total funding
- At seed stage, women-led deep tech start-ups secure only **15%** of funding
- In early and late-stage VC, women-founded start-ups receive **11%** of investment

Source: EIT

WHAT ARE THE BARRIERS?

Not one barrier but an ecosystem

- Gender stereotyping and gendered field choices
- Limited transition pathways into business R&D
- Unequal access to networks, mentors and sponsors
- Bias in recruitment, promotion and leadership
- Care penalties and unsustainable working cultures
- Harassment, microaggressions and exclusion
- Investor bias and unequal access to capital

SEX/GENDER ANALYSIS AS AN INNOVATION TOOL

**Gender dimension = better research,
better products, better markets**

- Helps innovators ask better questions
- Reduces risk of biased or harmful products
- Improves social relevance and market fit
- Opens overlooked innovation opportunities

Source: European Commission Gendered Innovations 2, Criado Perez 2019

AI AND INCLUSIVE DESIGN

AI: bias is a design and data problem

- AI systems learn from existing data
- If data are incomplete or biased, outputs may reproduce inequalities
- Facial recognition has shown higher error rates for darker-skinned women than lighter-skinned men
- Inclusive datasets and testing improve product quality and reduce risk
- Implications for law enforcement, healthcare allocation, automated hiring and recruitment, generative AI and stereotyping

Source: Gendered Innovations 2, MIT study

HEALTH INNOVATION



Health: ignoring sex and gender can be costly

- Sex and gender differences can affect symptoms, diagnosis, treatment and safety
- Women's health needs have often been under-researched
- Better sex/gender analysis supports safer and more personalised innovation
- Implications for diagnostic tools and medical devices, clinical risk scoring, medication dosing

Source: Gendered Innovations 2, ERA Forum Sub-group 2026

WHAT HELPS

Fixing the innovation ecosystem

- Better STEM-to-industry transition pathways
- Mentoring, sponsorship and role models
- Inclusive accelerator and incubator design
- Transparent recruitment and promotion
- Gender-sensitive investment criteria
- Sex/gender-disaggregated monitoring data
- Gender Equality Plans
- Integration of gender dimension in R&I content
- Safe and inclusive organisational cultures



THE EU POLICY FRAMEWORK

Horizon Europe strengthened provisions for inclusive gender equality in R&I

- Gender Equality Plans as an eligibility criterion for certain organisations – but not private research organisations and SMEs
- Gender dimension in R&I content as a default requirement under Excellence
- Gender balance in boards, expert groups and evaluation processes

THE EU POLICY FRAMEWORK

Targeted EU support for women in tech and deep tech

- **Women TechEU** supports women-led early-stage deep tech start-ups with targeted funding, coaching and mentoring.
- **EIC Women Leadership Programme** offers skills development, mentoring, coaching and networking for women researchers and entrepreneurs.
- **EIT Girls Go STEM** builds digital, entrepreneurial and circular-economy skills among girls aged 14–19.
- **European Prize for Women Innovators** gives visibility and recognition to women entrepreneurs behind disruptive innovations.

Sources: Women TechEU; EIC Women Leadership Programme;
EIT Girls Go Circular; European Prize for Women Innovators.

FROM LOST TALENT TO BETTER INNOVATION

Imagine what European innovation could become if women's talent were fully recognised, funded and scaled.

- More women moving from STEM into business R&D, deep tech and entrepreneurship
- More women-led start-ups accessing accelerators, networks and investment
- More inclusive technologies, products and services shaped by gender analysis
- More visible role models through EIT and EIC women innovator initiatives
- Stronger innovation ecosystems where equality supports excellence, competitiveness and responsibility

THANK YOU

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