GENDER IN RESEARCH AND INNOVATION

“She Figures” report
from the European Commission

GRUPO spri TALDEA

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“SHE FIGURES”
REPORT ON GENDER IN RESEARCH AND INNOVATION FROM THE EUROPEAN COMMISSION

- The She Figures publications, first released in 2003 and updated every three years, presents data on gender equality objectives in the field of R&I policy.

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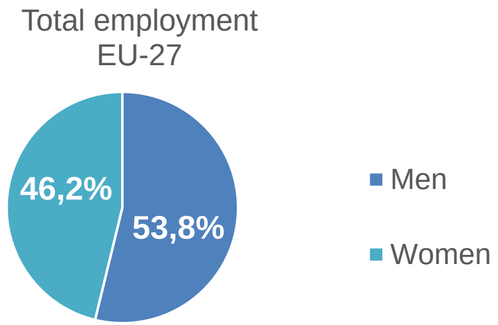
PARICIPATION OF WOMEN IN KNOWLEDGE-INTENSIVE ACTIVITIES

- In 2019, women continued to represent a lower proportion of **total employment** at EU-27 level compared to men (46.2%).



- At both European and country level, the proportion of women employed in KIA, **Knowledge-Intensive Activities** (43.7%) was higher than the corresponding proportion of men (28.1%) when considering all sectors of the economy, as women are over-represented in sectors such as education and health.

- Despite women's over-representation in Knowledge-Intensive Activities overall, women were less represented in KIABI **Knowledge-Intensive Activities in Business Industries/Private Sector** (13.5%) compared to men at European level (14.2%).

Knowledge-Intensive Activities (KIA) **and Knowledge-Intensive Activities – Business Industries** (KIABI):

- An activity is classified as 'knowledge-intensive' if tertiary-educated people employed in this activity represent more than 33% of total employment in the activity. The definition is based on the average number of employed persons aged 25–64 at the aggregated EU-27 level.
- Two aggregates of KIA are presented in this section: total KIA and KIA – business industries (KIABI).

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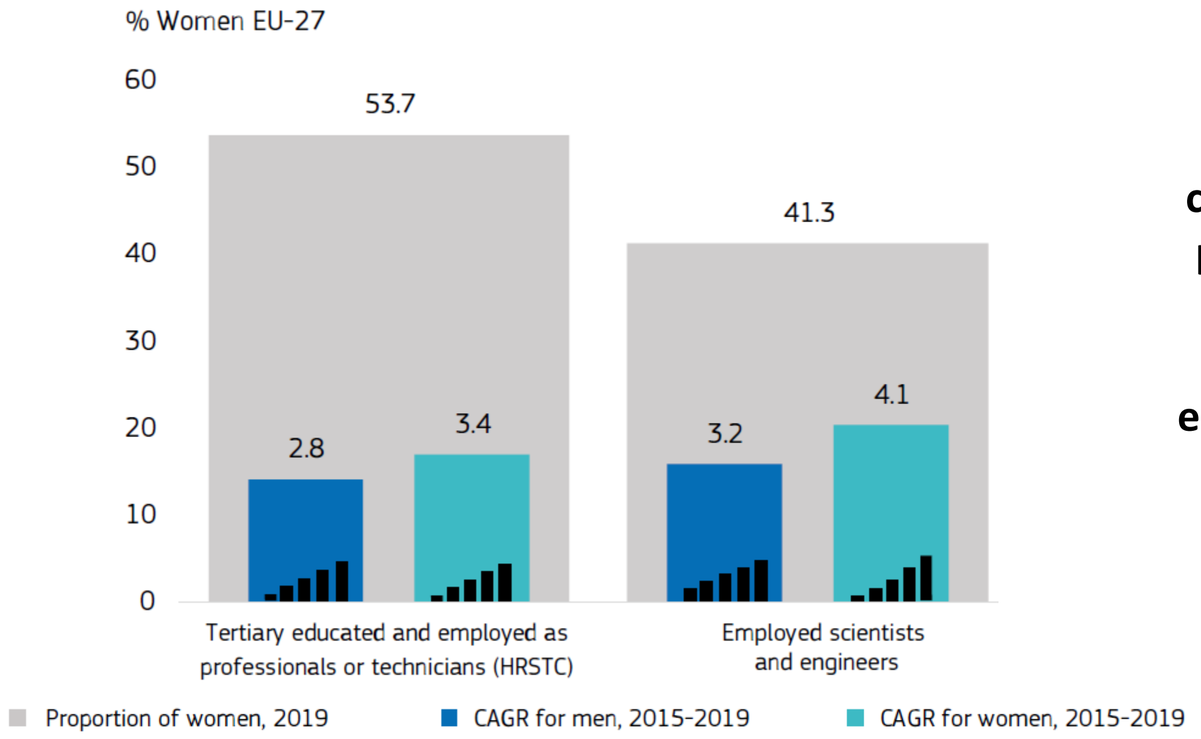
PARICIPATION OF WOMEN IN SCIENCE AND TECHNOLOGY OCCUPATIONS

- In the fields of **science and technology**, women represented most of the population that is tertiary educated and employed as professionals or technicians (53.7%), but they were less represented among the population employed as scientists and engineers (41.3%).



In the majority of countries, a greater proportion of men are employed as scientists and engineers compared to women.

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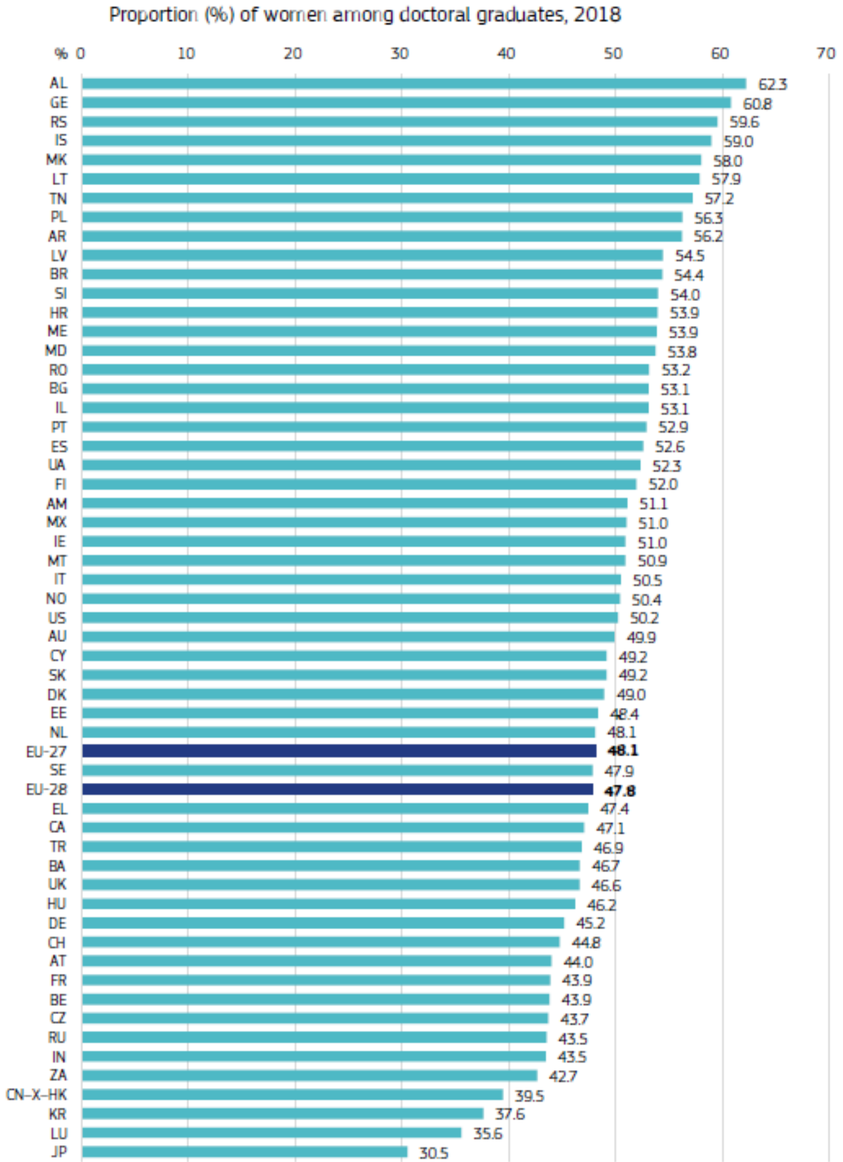
THE POOL OF GRADUATE TALENT

- Since 2010, the proportion of **women among Doctoral graduates** has increased, moving the pool of Doctoral graduates closer to gender parity (48.1% of doctoral graduates were women in 2018 at EU-27 level), with important **gaps at country level**.

- Besides, there are **important gender gaps in specific fields of study**. At both European and country level, women doctoral graduates were over-represented in the field of Education (67%) and under-represented in the broad fields of Information Communication Technology (22.4%) and Engineering, Manufacturing & Construction (29.4%).



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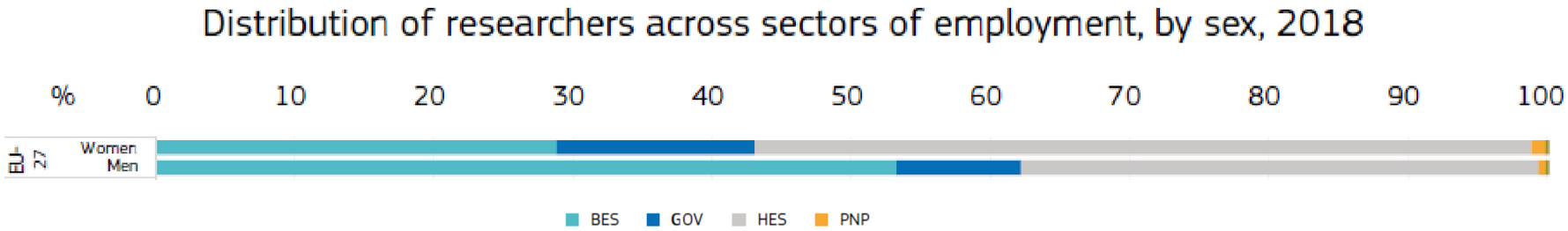
LABOUR MARKET PARTICIPACION OF RESEARCHERS AND WORKING CONDITIONS

- **Women represent only one-third (32.8%) of the total population of researchers at European level.**
- In 2018, women researchers were more likely to work in the Academia /Higher Education Sector (55.9%). In contrast, men researchers were more likely to work in the Business Enterprise Sector - BES (53.3%).



- Horizontal **gender segregation persists across fields** of R&D, even in sectors where women researchers tend to be better represented.
- Despite improvements in the proportion of women researchers between 2010 and 2018 across fields of R&D, the proportion of men researchers in Natural Sciences and Engineering & Technology exceeded the corresponding proportion for women researchers in most countries.
- Similar to the trends observed in previous years, in 2019 the proportion of women researchers **working part-time** was higher than the corresponding proportion of men researchers by 3.9 p.p. (11.1% for women and 7.2% for men) at European level.
- A higher proportion of women researchers who were in a couple with children worked under a **precarious contract** in 2019, although the situation was more varied at country level.

Data from higher education sector (HES) comprises universities, colleges of technology, research institutes and other institutions providing formal tertiary education programmes, whatever their source of finance or legal status. It does not comprise researchers of the government sector (GOV) and the business enterprise sector (BES).

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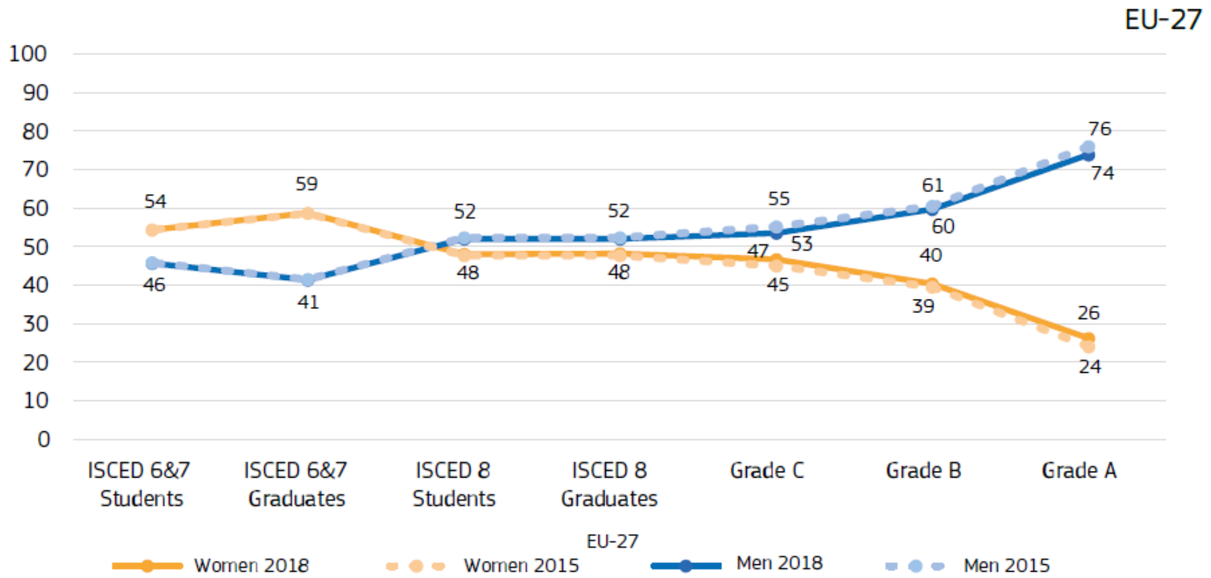
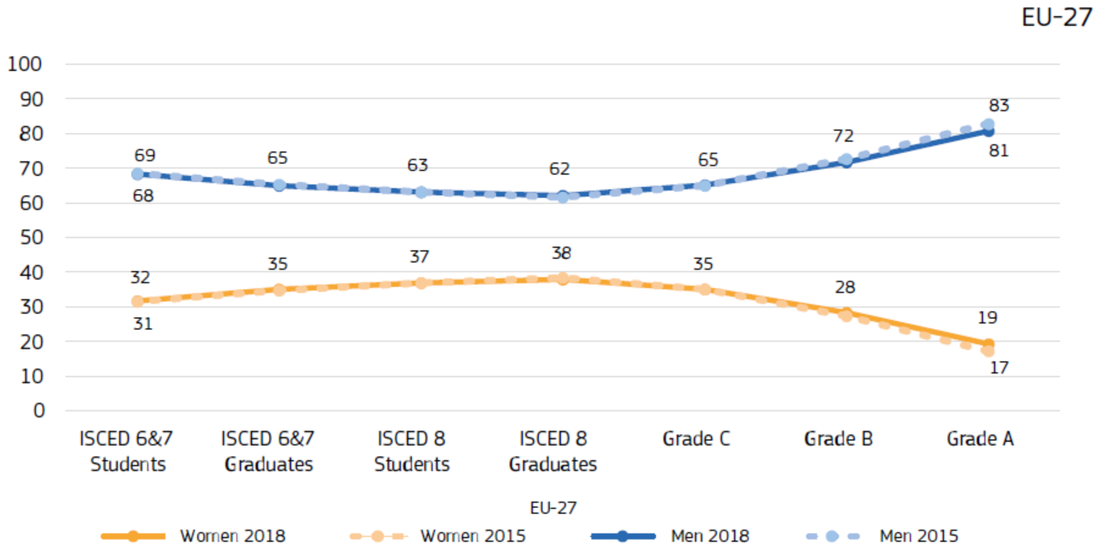
CAREER ADVANCEMENT OF RESEARCHERS

- There are more women than men in junior **researcher positions** and more men than women in senior researcher positions.
- In each **field of R&D**, women represented no more than around one-third of grade A staff at European level in 2018. In **STEM fields**, the share of women is even smaller at all levels. The lowest representation is observed in the fields of Engineering & Technology and Natural Sciences.

Proportion (%) of men and women in a typical academic career, students and academic staff, EU-27 & EU-28, 2015-2018



Proportion (%) of men and women in a typical academic career in science and engineering, students and academic staff, EU-27 & EU-28, 2015-2018

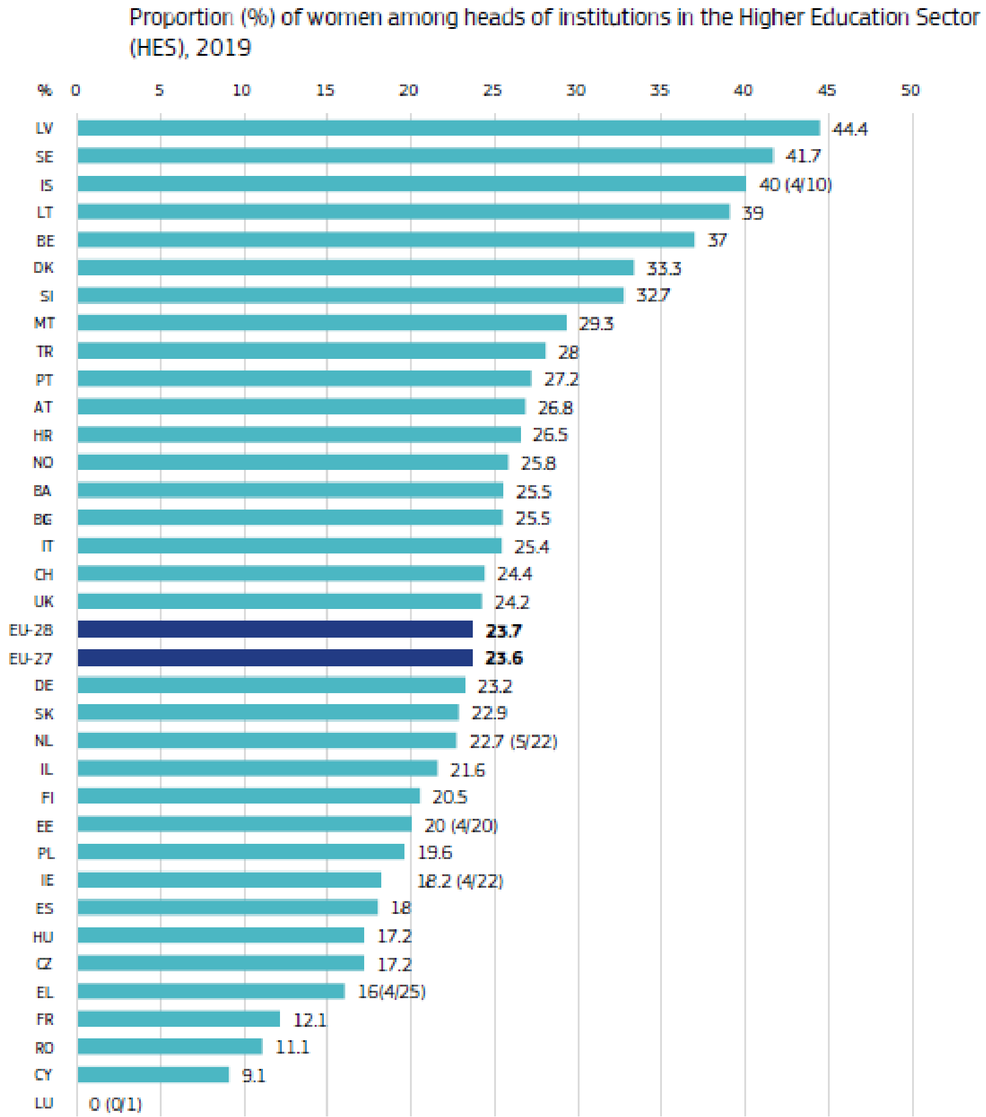


Grade A:The single highest grade / post at which research is normally conducted within the institutional or corporate system
Grade B: All researchers working in positions that are not as senior as the top position (A) but definitely more senior than the newly qualified PhD holders (C)
Grade C: The first grade/post into which a newly qualified PhD (ISCED 8) graduate would normally be recruited within the institutional or corporate system
Grade D: Either postgraduate students not yet holding a PhD (ISCED 8) degree who are engaged as researchers (on the payroll) or researchers working in posts that do not normally require a PhD.

PARTICIPATION IN DECISION-MAKING AT RESEARCH INSTITUTES

- The data show that 23.6% of women were **heads of research institutes** in 2019 at European level, 2.4 p.p. higher than in 2016 (21.3%).
- There are important **gaps between countries**.

- Just over 3 in 10 **board members** of research organizations were women (31.1%) and under one-quarter of board leaders (24.5%) were women at European level in 2019, far from meeting the 40% gender balance target for members on advisory bodies set in Horizon 2020 (European Parliament and the Council, 2013).



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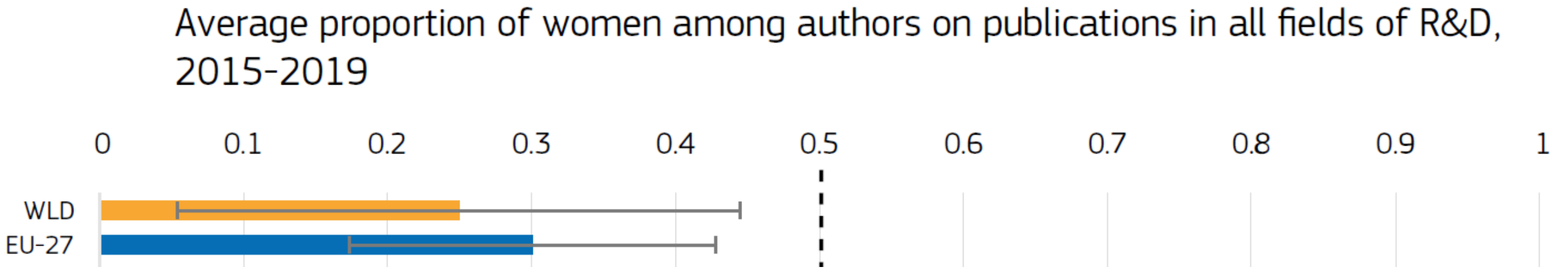
RESEARCH AND INNOVATION OUTPUT

- Among the pool of authors actively publishing, the number of men authors exceeded the number of **women authors** at all fields of R&D and seniority levels between 2015-2019.

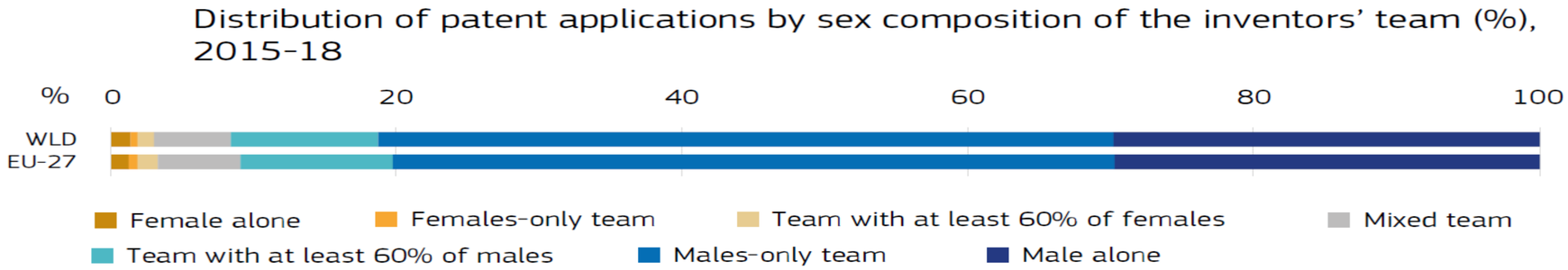


- The ratio of women to men for active authors was closest to gender parity among early-stage authors (0.8), and furthest for senior authors (0.5). These data show a **widening gender gap** among active authors **as their level of seniority increases**.

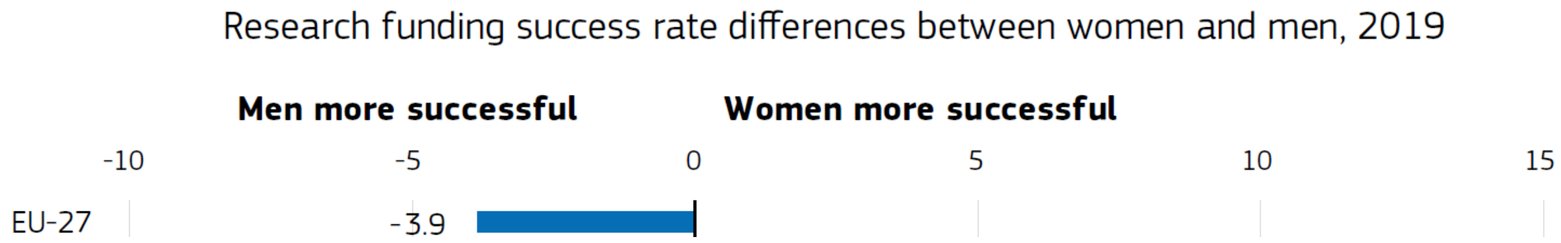
- When data are disaggregated by **field of R&D**, gender gaps in active authorship are particularly evident in the fields of Natural Sciences and Engineering & Technology.

RESEARCH AND INNOVATION OUTPUT

- There is also a considerable gender gap in **inventors' teams:**



- Besides, women are less likely to be successful in **access to funding** than men. They are less likely to benefit when applying for research funds in all but two fields of R&D: Agricultural Sciences and Humanities & Arts.



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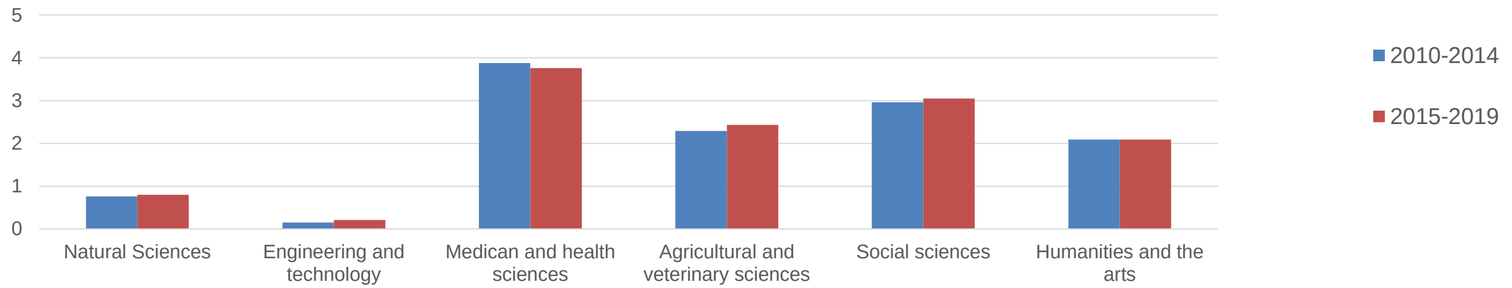
GENDER DIMENSION IN RESEARCH & INNOVATION CONTENT

- ewer than 2% of **publications** included a **gender dimension,** with a small growth of only 1 p.p. since 2010.
- Publications in Medical & Health Sciences were the most likely to contain a gender dimension, while publications in Engineering & Technology were least likely.



- At European level, around 1.7% of all **Horizon 2020 projects** integrated a **gender dimension.**
- Considering the low shares of projects that integrated a gender dimension, Horizon Europe offers an opportunity for improvement as the integration of a gender dimension becomes a default requirement in R&I content across the whole programme.

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