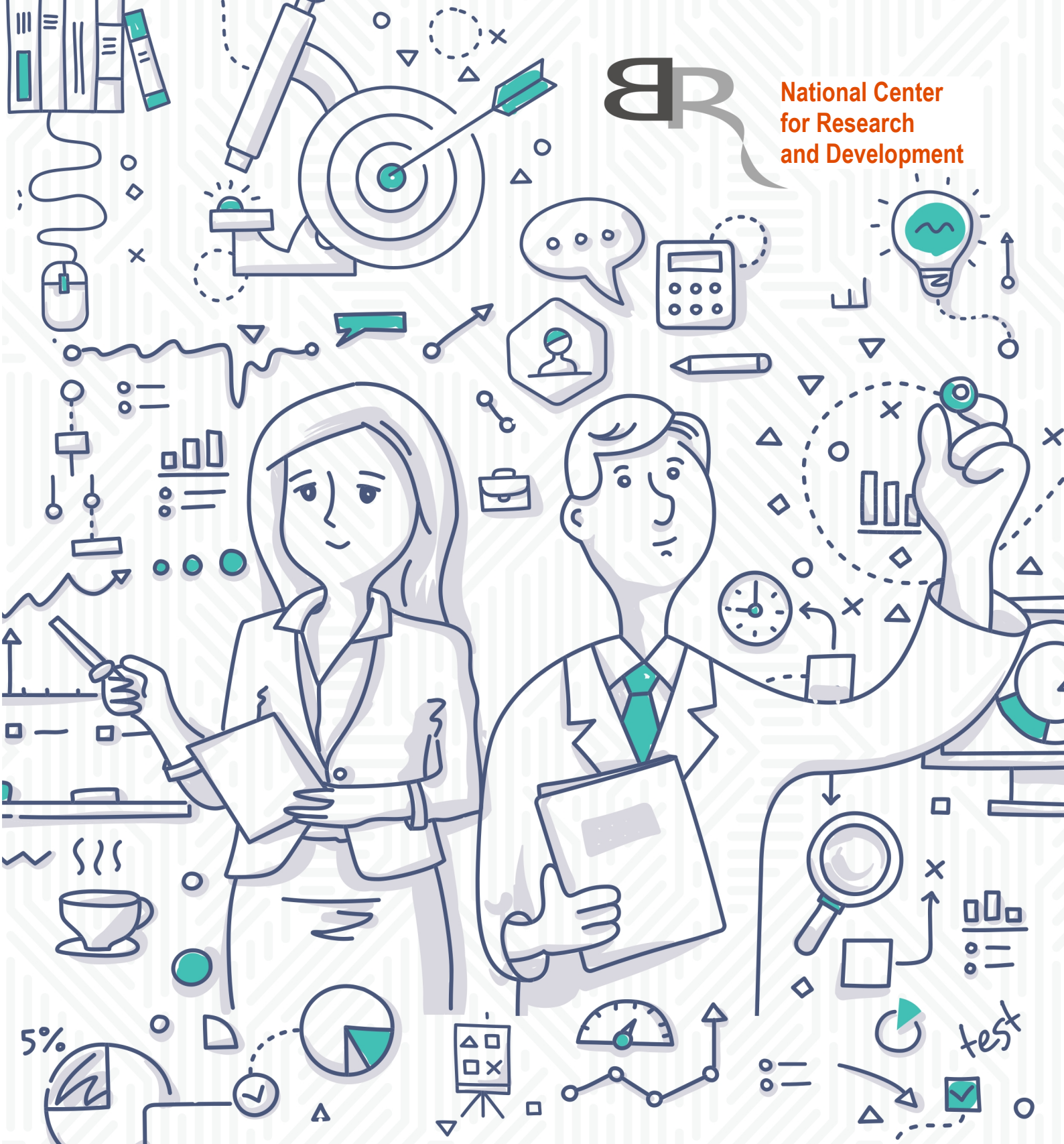




National Center
for Research
and Development



MEN AND WOMEN EQUALITY PLAN

FOR THE NATIONAL CENTER FOR RESEARCH AND DEVELOPMENT

THE EQUALITY ACTION PLAN FOR 2022-2025 WAS ADOPTED BY ORDER 41 / 2022
OF THE ACTING DIRECTOR OF THE NCBR, DOCTOR REMIGIUSZ KOPOCZEK

Men and Women Equality Plan

for the National Center for Research and Development

NCBR 2022

Contents

1	Introduction	3
2	Appointment of the Project Team and the allocation of resources	4
3	Diagnosis	5
3.1	The NCBR's authorities	5
3.2	The NCBR as an employer	5
3.2.1	Recruitment at the NCBR	5
3.2.2	Teleworking	6
3.2.3	Employment status – detailed explanations, research hypotheses	6
3.2.4	General information on the structure of employment	7
3.2.5	Shares of men and women in individual positions	8
3.2.6	Salaries levels by sex and level in the job hierarchy	9
3.2.7	Use of maternity and parental leaves by men and women	11
3.2.8	Analysis of overdue holidays depending on sex	12
3.2.9	Job seniority and position level by sex	13
3.2.10	Mobbing – the scale of occurrence	16
3.3	NCBR as an institution financing projects in the area of R&D and social policies	17
3.4	NCBR as an institution cooperating with external experts	23
4	Objectives	28
4.1	The NCBR as an employer	28
4.2	NCBR as an institution financing projects in the area of R&D and social policies	30
5	The monitoring of the implementation of the MWEP	32
6	Conclusion	32

1 Introduction

The National Center for Research and Development (“**NCBR**”) is an executive agency of the Minister of Education and Science, whose aim is to connect the world of science and business, among others by co-financing R&D projects and innovative ideas dormant among Polish entrepreneurs and scientists. These activities serve to solve specific civilization problems and, thus, support social and economic development of Poland. The NCBR also acts as an intermediary institution in operational programs distributing EU funds and – within the Department of the National Contact Point, located in the International Cooperation Office – it conducts information, education, mentoring and advisory activities for domestic entities applying for co-financing their projects from the Horizon Europe program.

Horizon Europe is the largest Framework Program for Research and Innovation in the EU’s history. A total of EUR 95.5 billion will be allocated to innovative research and innovative solutions over 7 years (2021-2027). From 2022, having a “men and women equality plan” is a qualifying criterion for applying for funding from Horizon Europe 2021-2027 by public institutions including research funding organizations, ministries, other public authorities, for-profit organizations, universities and research institutions, both public and non-public. Due to the need to adopt such plan by the NCBR, it was first planned to examine the current state and define key areas for change as part of the implementation of this plan.

As an employer, NCBR is guided by the principle of equality both in the recruitment of job applicants and in the HR / payroll policies.

Recognizing the diversity of points of view and experience as values supporting the development of science, NCBR attracts clients representing various social groups, actively supports equality of men and women in Polish academic centers and participates in international initiatives in this area. Creating equal opportunities in applying for funds at the disposal of the NCBR, while giving priority to the criterion of scientific excellence in the process of evaluating applications for funding, has been an overriding principle in the NCBR’s activities since its inception.

The Men and Women Equality Plan (“**MWEP**”) for the NCBR based in Warsaw has been developed with the entire NCBR community in mind.

The MWEP for the NCBR is based in particular on the following legal acts:

- 1) Constitution of the Republic of Poland of 02/04/1997 (*Journal of Laws* 1997/78, item 483);
- 2) Regulation (EU) 2021/695 of the European Parliament and of the Council of 28/04/2021 establishing Horizon Europe, the Framework Program for Research and Innovation, and the rules for participation and dissemination applicable therein and repealing Regulations (EU) 1290/2013 and (EU) 1291/2013;
- 3) Directive 2006/54/EC of the European Parliament and of the Council of 05/07/2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (*OJ L ...*, p. EU L 2006.204.23);
- 4) Family and Custodial Code of 25/02/1964 (*Journal of Laws* 2020, item 1359, as amended);
- 5) Civil Code of 23/04/1964 (*Journal of Laws* 2020, item 1740, as amended);
- 6) Labor Code of 26/06/1974 (*Journal of Laws* 2020, item 1320, and 2021, item 1162);
- 7) Criminal Code of 06/07/1997 (*Journal of Laws* 2021, items 2345 and 2447).

The MWEP also takes into account good practices provided for in other documents such as the MWEP of the EU Member States, while the objectives, activities and indicators were adapted to the needs and capabilities of the NCBR.

The main goal of the MWEP is to make the NCBR a workplace safe for everyone, regardless of sex¹, age or nationality, free from discrimination, thus enabling everyone to grow professionally and personally without any obstacles. The implementation of the MWEP contributes to the development of clear procedures and a better working environment which can attract and retain

¹ Whenever “sex” is mentioned in this document, it should also be understood as referring to “non-binary” persons.

talents. Also, the MWEP will eliminate barriers to balancing professional and private lives, prevent career slowdown and support the involvement and use of the potential of diverse (specifically in terms of sex and age) teams by improving quality of workplaces, teaching process and employee development, which will strengthen the NCBR in its competitive domestic professional environment. The NCBR's MWEP is the result of an analysis of employment and development. This is a strategy planned for 4 years (from 2022 to 2025).

In the initial phase of the implementation of the MWEP for NCBR it is envisaged to write it as a coherent document containing a summary of necessary actions, amendment or introduction of new procedures and mechanisms for reporting irregularities, protecting whistleblowers and proposing corrective measures focused on the search for consensus and mediation.

The MWEP aims to involve the professional community in the process of promoting equality and equal growth opportunities. This approach is also reflected in the fact that this document had been widely consulted with the NCBR's staff in general before it took its final form.

The MWEP for NCBR:

- includes the diagnosis containing the most important conclusions from the hitherto analyses of the current situation and
- defines the key areas of the plan with recommended measures.

Equality is a value that contributes to the professional development of the whole community. The starting point for the MWEP are good practices translated into measures and communication improvements in our community, so that good examples and equality solutions can disseminated be more effectively. This makes it possible to combine the development of a climate of safety and equality in the workplace and improve the effects of the tasks carried out. The mission of NCBR is to provide all its employees with access to professional development and skills acquisition tools, while counteracting discrimination through an early response system.

According to the hitherto studies and consultations, some people face all sorts of prejudices and institutional obstacles that make it impossible for everyone to equally benefit from professional development opportunities. These barriers often take the form of sex discrimination, sexual harassment and difficulties in balancing work with family life. Such obstacles can hinder professional growth, especially for women some of whom may lose interest in pursuing their careers. Barriers to the healthy balancing of professional and private lives can also discourage fathers trying to engage in both of these spheres of life. Among a number of benefits of equality at NCBR, we have the positive impact on the quality of work, the stronger position of the NCBR in its competitive environment, improved dialogue and exchange of ideas with respect for diversity, and a sense of community and organizational efficiency, especially in the rapidly changing external environment. Equality also translates into well-being at work.

Equality policies support the implementation of clearer procedures, which contributes both to creating a better working environment and to attracting and retaining talents. This strategy will facilitate the integration of the process of building the climate of safety and equality in the workplace while preventing discrimination thanks to the early response system.

The MWEP will help us recruit personnel and develop professional careers regardless of sex, sexual orientation, ethnicity, cultural affiliation or disability for the benefit of the NCBR's development. In addition, it should be emphasized that numerous teams have been involved in the development of the MWEP – because we take into account more than just one perspective, which is extremely beneficial for the results of the process. Besides, we are committed to creating an environment oriented on long-term goals and on solving problems and conflicts. NCBR not only does not accept, but actively combats all manifestations of unequal treatment or discrimination.

2 Appointment of the Project Team and the allocation of resources

The NCBR has appointed a Team for the development and implementation of the MWEP. The Team comprises members of the HR Department, the Strategy and Development Office, the National Contact Point Department, the Security and Compliance Management Department and

representatives of our Trade Union and our subsidiary (NCBR+ Sp. z o.o.). The term of office of the Team includes the pre-implementation and implementation periods of the MWEF. The Team members represent different levels of the NCBR's job hierarchy. Decisions made collegially, based on the predefined model.

3 Diagnosis

3.1 The NCBR's authorities

The NCBR's authorities include the NCBR Director, the NCBR Council and the Steering Committee for scientific R&D work in the area of state security and defense. The Minister supervising the NCBR appoints and dismisses members of the NCBR Council and the Steering Committee. On 31/12/2021, the NCBR Council was composed of 3 women and 28 men, while the Steering Committee comprised 1 woman and 6 men.

The NCBR Director established a Think Tank on 28/06/2021. It is an analytical center supposed to support the NCBR Director and the Minister supervising the NCBR in the making of strategic decisions, setting directions for activities and proposing programs in the broadly understood sphere of innovation and R&D. The appointment of this expert team is the next stage in the implementation of the NCBR's strategy which, in addition to the financing of R&D, also assumes active participation in the development of the innovation-oriented ecosystem.

The NCBR's Think Tank associates outstanding representatives of the world of science and business. On 31/12/2021, the Think Tank had 10 members: 3 women and 7 men.

3.2 The NCBR as an employer

3.2.1 Recruitment at the NCBR

The recruitment process at the NCBR consists in gathering the right number of candidates for a given position, short-listing them and, finally, selecting the person best qualified for the job. Usually, this is a multi-stage process which allows us to carefully check qualifications of applicants. The functioning of the recruitment process is regulated by the NCBR Act. Announcements regarding vacancies are published in the Careers section of the NCBR's website, in the Public Information Bulletin (BIP) and in the NCBR's Intranet. The wording of our advertisements avoids the use of "politically incorrect" language which could imply any preferences, bias or stereotypes. The advertisements take into account matters important to the balancing of the professional and private lives (such as flexible working hours, teleworking, private medical care, sports and recreation package, group insurance and remuneration rules). At the beginning of the recruitment process, the candidate is asked to complete a short form that allows us to check whether they meet the formal criteria for the job in question. After closing our recruitment procedure, we add the list of candidates who meet our formal criteria to the BIP website (the list contains the first and last names and addresses of the candidates). This complies with the NCBR Act. Each recruitment process has a dedicated supervisor with whom candidates can contact with additional questions or doubts regarding the job or the recruitment process.

Candidates whose applications meet the recruitment criteria are called and invited for job interviews. In certain cases, we ask questions about the previous experience or expectations towards the future employer during these telephone conversations. All our questions related to the recruitment concern only to the nature of the work and the candidates education and professional qualifications. At the first meeting, the candidate meets their future supervisor, and sometimes a future colleague. During the interview, the recruiter also tells the candidate more about the NCBR Group, our values, team and future responsibilities. Regardless of the outcome of the recruitment, each candidate receives a feedback from us. Selected candidates who have successfully passed the entire recruitment process and who best meet our expectations are presented relevant job offers.

3.2.2 Teleworking

The opportunity or necessity to work remotely, outside the NCBR's headquarters, has been generally sanctioned by the NCBR Director. Decisions in this respect for individual employees are made by managers of NCBR's organizational units, taking into account the organization's rules. Employees responsible for providing social services or performing other tasks (provided for under the law or ensuing from the requirements of the NCBR) which cannot be dealt with remotely are exempt from the teleworking. If the head of an organizational unit decides that some work needs to be performed at the regular place, the head and his or her reports make arrangements regarding the teleworking and stationary working and the weekly schedule. This schedule is sent to the NCBR's HR Department. The direct supervisor of each teleworker is required to stay in touch with, and monitor the performance of, the teleworker at all times. The introduction of this form of work has turned out to be very beneficial for the NCBR community. Undoubtedly, remote and hybrid work have become the preferred form for a significant part of the NCBR's employees. In July 2021, the NCBR surveyed its employees and 80% of them were in favor of maintaining the remote and hybrid work, i.e. combining the stationary work with the teleworking. 90% of the surveyed praised the teleworking. 66.4% of the respondents said that time savings on commuting was the biggest advantage. The second greatest plus, with a score of 36.8%, was the more flexible working time, which was especially important for employees who are parents.

3.2.3 Employment status – detailed explanations, research hypotheses

In 2019 the average number of employees at NCBR was 435.57 people including 325.25 women (74.33%). In 2020 this average number grew by 27.13 people, so the NCBR had 462.70 employees. Another 76.43 people joined in 2021. The number of people employed in 2021 was 539.13, including 382.83 women (71.01%).

For the purpose of developing the MWEF, an analysis of the proportion of men to women was carried out, taking into account the splits into occupational groups, sexes and managerial positions (see sections from 3.2.5 to 3.2.9).

In addition, as part of the MWEF, the phenomenon of unequal treatment and sex discrimination was examined in terms of:

- i. salaries at the individual levels of the job hierarchy;
- ii. use of maternity / parental leaves;
- iii. overdue holidays;
- iv. job seniority and position;
- v. shares of men and women in individual roles.

Also the phenomenon of mobbing in the organization, split into employee groups, was examined in terms of:

- i. effectiveness of anti-mobbing policies;
- li. impact on business relations and job satisfaction.

This analysis is complete, based on a set of 570 personal files held the HR and payroll system, containing details of job seniority, position, remuneration and use of annual, maternity and parental leaves in 2021.

The survey on the mobbing situation was an incomplete survey conducted among 113 employees. The survey was voluntary.

The result of the survey reflects the situation on 31/10/2021. The data was taken from the HR and payroll system (QNT) of the HR Department and from the internal survey.

Several research hypotheses were put forward after the statistical analysis of the employment, leaves, mobbing and discrimination:

- 1) The shares of men and women among the employees are equal.
- 2) The structure of salaries is unrelated to job positions.
- 3) The use of maternity and parental leaves does not depend on sex.
- 4) The days of overdue leaves are not sex-specific.

- 5) The job seniority is not dependent on sex.
- 6) The shares of men and women in particular positions are equal.
- 7) There is no relationship between the employees' perception the occurrence of mobbing and their well-being in the workplace.
- 8) There is no relationship between the employees' perception of being exposed to mobbing and their perception of the atmosphere in the workplace.

3.2.4 General information on the structure of employment

The starting point for the analyses aimed at developing the MWEP was to check the shares of men and women among the regular employees, regardless of the full- or part-time employment. On 31/12/2021, the NCBR employed 570 people: 70% women and 30% men.

Table 1: Shares of men and women among the NCBR's employees

Sex	Number	Cumulative number	Percentage	Cumulative percentage
F	399	399	70	70
M	171	570	30	100
Total		570		100

Table 1 shows that the shares of men and women among the full-time employees were not equal. There were significant disproportions. Women definitely predominated among the total number of the NCBR's staff. The shares were similar in the most numerous groups of job positions. The ratio of 70% of women to 30% of men was also reflected in the "R&D staff" and "managers" groups of positions. This trend was not visible for the "executives" group of positions, as shown in Table 2.

Table 2: Shares of men and women among the NCBR's employees by position

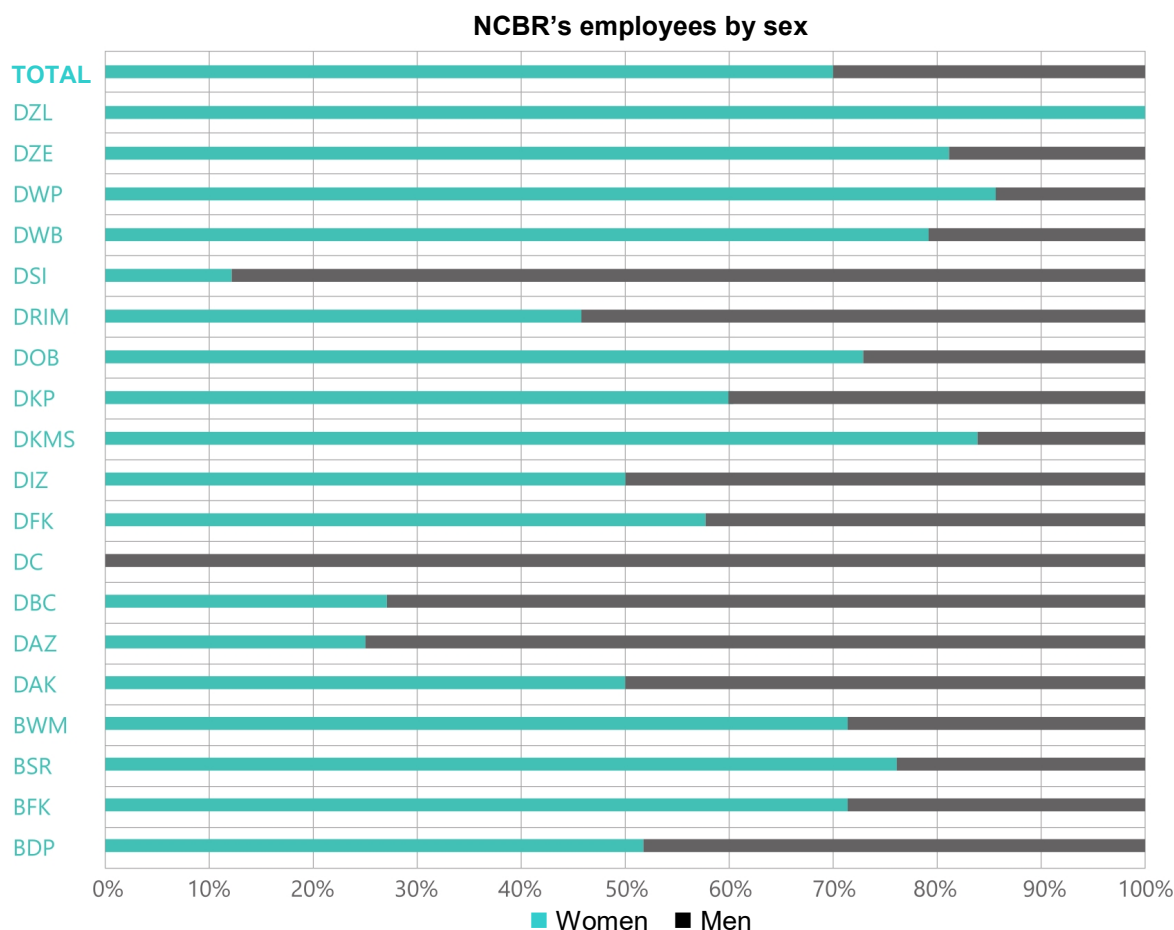
Aggregated results

Count table: Sex (badanie_v2.sta)

Class	Position – employee type	Number	Cumulative number	Percentage
F	R&D staff	328	328	70,38627
M	R&D staff	138	466	29,61373
Vacancies	R&D staff	0	466	0.00000
F	Managers	69	69	69,00000
M	Managers	31	100	31,00000
Vacancies	Managers	0	100	0.00000
F	Admins	1	1	100,00000
Vacancies	Admins	0	1	0.00000
F	Executives	1	1	33,33333
M	Executives	2	3	66,66667
Vacancies	Executives	0	3	0.00000

Significant differences between the shares of men and women were also found in the individual departments of the NCBR, as shown in the chart below.

Figure 1: Shares of men and women among the NCBR's employees by department



The situation among the NCBR's employees in individual departments is diverse. Women prevail in most departments. The HR Department is fully feminized. Other departments with large groups of women are the Project Selection Department and the Strategic Communication and Marketing Department. In turn, the departments where men prevail are the NCBR's Board of Directors, the Department of IT Systems and the Department of Administration and Purchasing.

3.2.5 Shares of men and women in individual positions

Table 3: Shares of men and women among the NCBR's employees in individual positions

Count table: Sex (badanie_v2.sta)

Flagged cell count > 10 (no boundary totals determined)

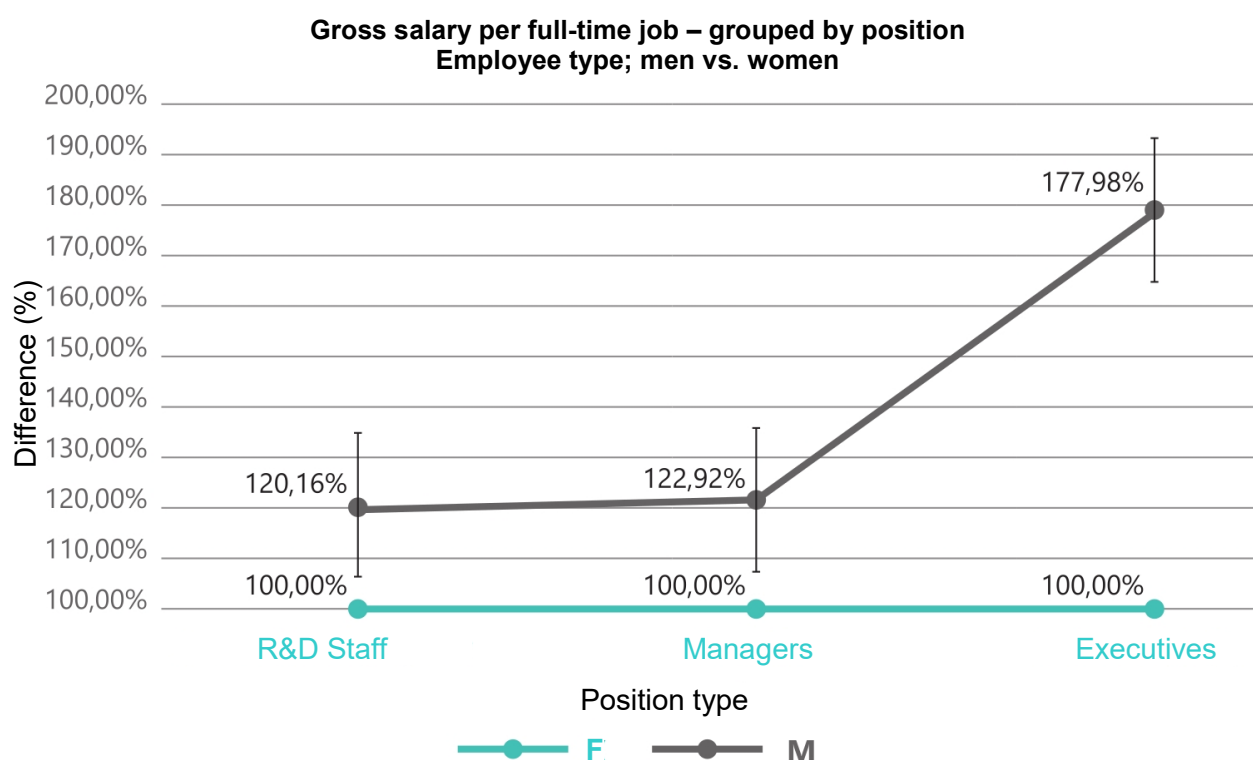
Position – employee type		Sex: F	Sex: M	Row total
Number	Managers	69	31	100
% of the column		17,29%	18,13%	
% of the row		69,00%	31,00%	
% of the total		12,11%	5,44%	17,54%
Number	R&D staff	328	138	466
% of the column		82,21%	80,70%	
% of the row		70,39%	29,61%	
% of the total		57,54%	24,21%	81,75%
Number	Admins	1	0	1
% of the column		0,25%	0,00%	
% of the row		100,00%	0,00%	
% of the total		0,18%	0,00%	0,18%
Number	Executives	1	2	3
% of the column		0,25%	1,17%	
% of the row		33,33%	66,67%	
% of the total		0,18%	0,35%	0,53%
Number	Total	399	171	570
% of the total		70,00%	30,00%	

There are no significant differences in the shares of men and women in the “managers” and “R&D staff” groups of positions, which is indicative of the absence of inequality. If we look at the “manager” group of positions, we will see that 17.29% of them are staffed women and 18.13% by men. A similar trend is observed for the “R&D staff” group of positions: women – 82.21%, 80.7% – men. Despite the large general disproportion in the employment of men and women in the NCBR, there is no significant percentage difference in these two groups of positions. The situation is different in the “executive” group but it is difficult to analyze it due to the small size of this group. There is no uniform distribution of men and women among the employees: women definitely prevail among all the employees and among the “managers” and “R&D staff” groups of positions.

3.2.6 Salaries levels by sex and level in the job hierarchy

Taking into account the shares of men and women, the figures on the difference between the mean monthly gross salaries earned by men and women at the NCBR, depending on their job positions, were also analyzed.

Figure 2: The mean gross salary depending on position



Note: The vertical lines represent outliers

Figure 2 shows that, on average, men earn more than women per job at the NCBR. This difference is most visible among the “executives” group of positions: 77.98%. Smaller differences in earnings are visible among employees in the “managers” group of positions, and even smaller in the “R&D staff” group. The selection of control variables in the analysis shows that, regardless of the employee’s position, women earn less. A deeper analysis of the salary data presented in Table 4 shows that, in the case of gross salaries of the “R&D staff”, the standard deviation from the mean salary is 21.29% for women and 39.76% for men.

Table 4: Descriptive statistics – salaries by sex and position

Aggregated results

Cross-sectional table of descriptive statistics (badanie_v2.sta)

Inclusion condition v14 > 0

Position – employee type	Sex	Gross salary per full-time job – mean	Gross salary per full-time valid	Gross salary per full-time job - % valid	Gross salary per full-time job – min.	Gross salary per full-time job – max.	Gross salary per full-time job – standard deviation	Gross salary per full-time job – variation coeff.	Gross salary per full-time job - skewness
R&D staff	F	94,42%	315	70,16	52,83%	187,68%	21,29%	22,55	0,93
R&D staff	M	113,12%	134	29,84	55,61%	333,66%	39,76%	35,15	1,9
R&D staff	Total	100,00%	449	100,00%	52,83%	333,66%	29,34%	29,34	2,19
Managers	F	94,37%	69	69,7	55,78%	188,81%	32,35%	34,28	1,28
Managers	M	112,96%	30	30,3	60,07%	188,81%	36,97%	32,73	0,60
Managers	Total	100,00%	99	100,00	55,78%	188,81%	34,70%	34,7	1,01
Executives	F	69,21%	1	33,33	69,21%	69,21%	0,00%		
Executives	M	115,34%	2	66,67	103,81%	103,81%	16,31%	14,14	
Executives	Total	100,00%	3	100,00	69,21%	69,21%	28,97%	28,97	-0,58

If we look at the standard deviation for the “managers” group of positions, we will see even greater differences. The standard deviation from the mean salary in the “managers” group of positions is 32.35% for women and 36.97% for men.

The dispersion analysis indicates that it is small in each position for both sexes and, therefore, the mean is a good indicator of the average level of remuneration well. Here, too, we see, in the case of the “R&D staff” group of positions, that the coefficient of variation is lower for women than for men, which is also confirmed by the comparison of the mean salary. In the case of the “managers” group of positions, the dispersion is very similar and the mean salary very well characterizes the level of remuneration for men and women in this position.

Throughout the analysis of salaries, there is an asymmetry in relation to both women’s and men’s earnings. In the case of the R&D staff, this is a right-sided asymmetry of distribution, while in the case of women this asymmetry is smaller: more women’s salaries are closer to the average salary in this position. In the case of men, the skewness is 1.9, which indicates that more their salaries deviate from the mean one. In the case of the “managers” group of positions, we are also dealing with a right-hand asymmetry of the distribution of remuneration, but here we see a situation opposite to that for the “R&D staff” group of positions, because in the case of women the skewness is 1.28 and is greater than in the case of men, which indicates that there are more employees with a salary higher than the mean one. The skewness cannot be calculated for the “executives” group of positions due to the small number of employees. In general, we observe a left-sided asymmetry of distribution here.

When using the truncated mean, or the winsorized mean of 5%, in the calculations, after rejecting the most extreme salaries at both ends of the range, the mean salaries from the other observations differ the most in the case of the male R&D staff. This means that the largest deviations in salaries from the mean occurred in this group .

Table 5: Student’s t-test – comparison of the mean salaries of men and women in individual positions

Aggregated results

Cross-sectional table of descriptive statistics (badanie_v2.sta)

Inclusion condition v14 > 0

Variable	Position – employee type	Mean M	Mean F	t	df	p	Nvalid M	Nvalid F	Standard deviation M	Standard deviation F	Quotient F variations	p variations
Gross salary per full-time	Executives	115,34%	69,21%	2,304	1	0,261	2	1	16,31%	0%	0,00	1,000
	R&D staff	113,12%	94,42%	6,403	464	0,000	138	328	39,76%	21,29%	3,426	0,000
	Managers	112,95%	94,37%	2,489	98	0,014	31	69	16,31%	32,35%	1,268	0,415

Finally, the hypothesis on the pay gap is confirmed by the statistical Student's t-test where it is clearly visible that the mean salaries of men and women in similar positions differ.

We cannot use this test for the "executives" group of jobs due to its small size. For the "R&D staff", the value of the test was 6.402847 and the hypothesis that there is no difference between the mean salaries among men and women in this position should be rejected. By rejecting this hypothesis, we make a Type I error with a probability of 0.

In the case of "managers", the value of the test was 2.489676 and the hypothesis of equal salaries should also be rejected. However, in this case we make a Type I error with a probability of 0.014473.

On average, women earn less on each job than men. This difference is most visible in the "executives" group of positions but it is not possible to conduct a statistical test due to the small sample size. What we can do is just to compare the salaries. For the "managers" and "R&D staff" groups of positions, the difference in average salaries was proven on the basis of statistical tests.

3.2.7 Use of maternity and parental leaves by men and women

Childcare involves maternity, paternity and parental leaves. These leaves are granted to the NCBR's employees as parents or other persons caring for children.

Table 6: The use of birth and child-rearing leaves by men and women

Count table (badanie_v2.sta)

Flagged cell number > 10 (no boundary totals determined)

	Child leave	Sex F	Sex M	Row total
Number	Parental leave 80%	13	0	13
% of the column		3,26%	0,00%	
% of the row		100,00%	0,00%	
% of the total		2,28%	0,00%	2,28%
Number	Paternity leave	0	10	10
% of the column		0,00%	5,85%	
% of the row		0,00%	100,00%	
% of the total		0,00%	1,75%	1,75%
Number	Child-rearing leave	22	1	23
% of the column		3,26%	0,58%	
% of the row		100,00%	4,35%	
% of the total		3,86%	0,18%	4,04%
Number	Maternity leave with 80% allowance	13	0	13
% of the column		3,26%	0,00%	
% of the row		100,00%	0,00%	
% of the total		2,28%	0,00%	2,28%
Number	Maternity leave	3	0	3
% of the column		0,75%	0,00%	
% of the row		100,00%	0,00%	
% of the total		0,53%	0,00%	0,53%
Number	Parental leave	1	0	1
% of the column		0,25%	0,00%	
% of the row		100,00%	0,00%	
% of the total		0,18%	0,00%	0,18%
Number	None	347	160	507
% of the column		86,97%	93,57%	
% of the row		68,44%	31,56%	
% of the total		60,88%	28,07%	88,95%
Number	Total	399	171	570
% of the total		70%	30%	

The possibility of using this group of leaves varies for men and women, and the decisions of employees to take them are also influenced by cultural and other considerations, not necessarily related to the NCBR's policy. Nevertheless, 13.03% of women used their entitlements rights related to parenthood, compared to 6.43% of men, almost twice fewer.

3.2.8 Analysis of overdue holidays depending on sex

Table 7: Descriptive statistics – leaves by sex and position

Aggregated results

Cross-sectional table of descriptive statistics (badanie_v2.sta)

Inclusion condition v14 > 0

Position – employee type	Sex	Outstandin g leave days – mean	Outstandin g leave days – valid	Outstandin g leave days – %N valid	Outstandin g leave days – min.	Outstandin g leave days – max.	Outstandin g leave days – standard deviation	Outstandin g leave days – variation coefficient	Outstandin g leave days – median	Outstandin g leave days – truncated mean	Outstandin g leave days – winsorized mean
R&D staff	F	15,812	308	70,159	0	78	10,744	67,951	14,0	14,809	15,071
	M	14,023	131	29,840	0	35	9,014	64,281	13,0	13,726	13,916
	Total	15,278	439	100,000	0	78	10,281	67,293	14,0	14,475	14,729
Admins	F	0,000	1	100,000	0	0	0,0	0,000	0,000		
	Total	0,000	1	100,000	0	0	0,0	0,000	0,000		
Managers	F	19,391	69	70,408	0	54	10,084	52,002	20,0	18,936	18,942
	M	18,62	29	29,592	5	41	9,135	49,061	17,0	18,296	18,414
	Total	19,163	98	100,000	0	54	9,772	50,995	19,0	18,738	18,765
Executives	F	24,000	1	50,000	24	24	24,0	24,000	24,000		
	M	13,000	1	50,000	13	13	13,0	13,000	13,000		
	Total	18,500	2	100,000	13	24	7,778	42,044	18,5	18,500	18,500

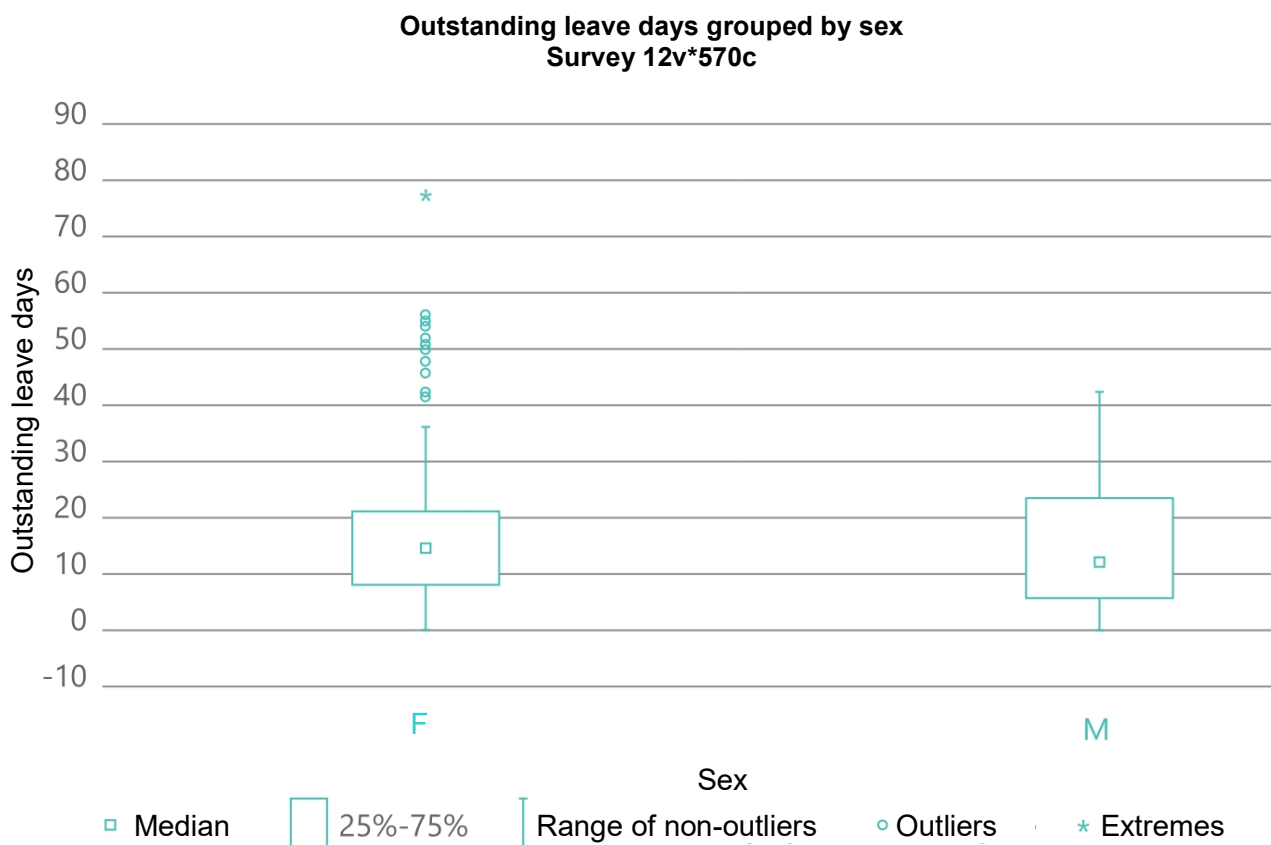
A more thorough analysis of overdue leaves shows that the number of overdue annual leave days is higher for women from the “R&D staff” group of positions: up to 78 days. We also see higher values of overdue leaves in for women from the “managers” group. This is also confirmed by the value of the standard deviation. The highest values of variance above 10 days of annual leave are observed for women in the “R&D staff” and “managers” groups.

For men and women, there are similar trends in the number of days of overdue leaves for 50% of men and women. In women we see a large number of outliers and extreme values, which we do not observe in men. The research hypothesis has been confirmed: the days of overdue leaves do not depend on sex.

Dispersion is high for women in the “R&D staff” group of positions. The 67.95 rate is high and indicates that the average value of the rest leave has little cognitive value. This state is also confirmed by the skewness factor. It is 1.76, which indicates that there are large values of the rest leave that deviate from the average and there is a large right-sided asymmetry of distribution.

Due to the use of the truncated mean or the 5% winsorized mean for calculation of the overdue leaves, after rejecting the most extreme values of at both ends, we observe mean values of the annual leave in women in “R&D staff” positions and they no longer have high deviations from the mean values.

Figure 3: Job seniority of men and women in the "R&D staff" and "managers" groups of positions



All conclusions from the analysis of Table 10 are confirmed by Figure 3. The general conclusion is that for men and women there are similar trends in the days of overdue leaves for the representation of 50% of men and women. In the case of women, we see a large number of outliers and extreme values, which we do not observe in men.

3.2.9 Job seniority and position level by sex

Table 8: Job seniority of men in each position

Sex = M, Flagged cell number > 10

Count table (badanie_v2.sta) (no boundary totals determined)

	Position – employee type	Group seniority – up to 2 years	Group seniority – 2-4 years	Group seniority – 4-6 years	Group seniority – more than 6 years	Row total
Number	R&D staff	88	21	11	18	138
% of the column		87,13%	84,00%	64,71%	64,29%	
% of the row		63,77%	15,22%	7,97%	13,04%	
% of the total		51,46%	12,28%	6,43%	10,53%	80,7%
Number	Managers	12	3	6	10	31
% of the column		11,88%	12%	35,29%	35,71%	
% of the row		38,71%	9,68%	19,35%	32,26%	
% of the total		7,02%	1,75%	3,51%	5,85%	18,13%
Number	Executives	1	1	0	0	2
% of the column		0,99%	4,00%	0,00%	0,00%	
% of the row		50,00%	50,00%	0,00%	0,00%	
% of the total		0,58%	0,58%	0,00%	0,00%	
Number	Total	101	25	17	28	1,17%
% of the total		59,06%	14,62%	9,94%	16,37%	171

Table 9: Job seniority of men in each position

Sex = F

Flagged cell number > 10

Count table (badanie_v2.sta) (no boundary totals determined)

	Position – employee type	Group seniority – up to 2 years	Group seniority – 2-4 years	Group seniority – 4-6 years	Group seniority – more than 6 years	Row total
Number	R&D staff	145	58	38	87	328
% of the column		88,96%	85,29%	70,37%	76,32%	
% of the row		44,21%	17,68%	11,59%	26,52%	
% of the total		36,34%	14,54%	9,52%	21,80%	82,21%
Number	Managers	13	10	16	25	69
% of the column		11,04%	14,71%	29,63%	21,93%	
% of the row		26,09%	14,49%	23,19%	36,23%	
% of the total		4,51%	2,51%	4,01%	6,27%	17,29%
Number	Admins	0	0	0	1	1
% of the column		0,00%	0,00%	0,00%	0,88%	
% of the row		0,00%	0,00%	0,00%	100,00%	
% of the total		0,00%	0,00%	0,00%	0,25%	0,25%
Number	Executives	0	0	0	1	1
% of the column		0,00%	0,00%	0,00%	0,88%	
% of the row		0,00%	0,00%	0,00%	100,00%	
% of the total		0,00%	0,00%	0,00%	0,25%	0,25%
Number	Total	163	68	54	114	399
% of the total		40,85%	17,04%	13,53%	28,57%	

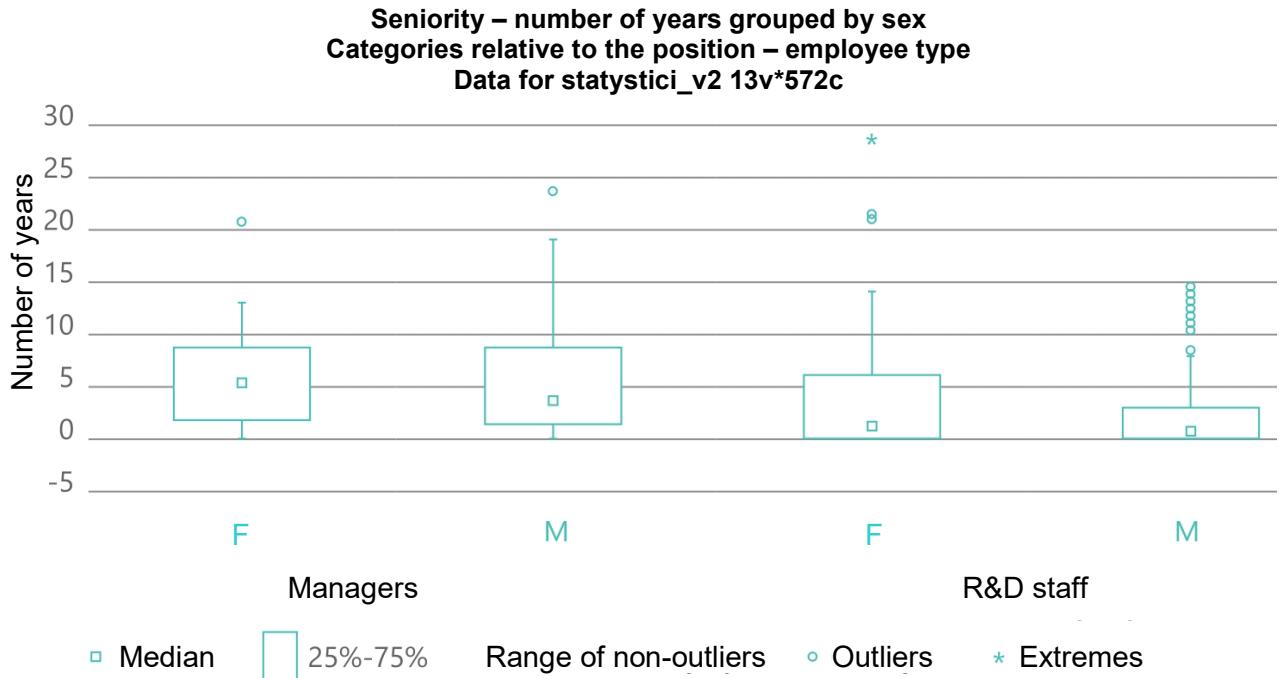
The analysis of the general employment trend at NCBR, measured by the overall length of service, allows us to observe that, in the case of men and women, the group with a seniority of up to 2 years is the most numerous. Interestingly, as many as 59.06% of men and 40.85% of women have a seniority of up to 2 years.

The group of the “R&D staff” with the length of service of up to 2 years is the largest group with a prevalence of men, because as much as 51.46% of the population of men employed in NCBR is in this seniority group. Next, 12.28% of the men is in the 2-4 years of seniority group. Another large group among men in this position have a seniority of 6 and more years. In the case of women, the second most numerous seniority group in the “R&D staff” group of positions is the group with more than 6 years of service (21.80%).

The analysis of the “managers” group of positions indicates that in the case of men and women there is a trend opposite to the one identified for the “R&D staff”. The largest group (7.02%) of men working as “managers” have a seniority of up to 2 years. The largest group of women working as “managers” have a job seniority of 6 and more years.

Figure 3 shows that the mean seniority in the “managers” group of positions is similar for both men and women: about 5 years. Only the greater right-sided skewness of the distribution in the case of men can indicate that there are more men than women among the “executives” with shorter seniority.

Figure 4: Job seniority of men and women in the "R&D staff" and "manager" groups of positions



50% of men and women in the “managers” group of positions have approximate seniorities ranging from 1 year to 9 years. In the case of men, the maximum is much higher than that for women: 19 years. For both men and women, there are outliers in the overall seniority in the “managers” group: 21 years for women and 23 years for men. No extreme values were recorded.

While analyzing the seniority in the “R&D staff” group, we see that 50% of women have a work experience from 0 to 6 years, and men from 0 to 3 years. The median has a similar value, slightly higher value for women: 2 years. In the case of both men and women in the analyzed position, seniority takes on outlying and extreme values. The extreme value for women has the highest value for the “R&D staff” group: 28 years.

Table 10: Student’s t-test of men’s and women’s equality in terms of working time in the “R&D staff” and “managers” groups of positions

Aggregated results

T-tests; grouping: sex (badanie_v2.sta)

Group 1: M; Group 2: F

Variable	Position – employee type	Mean F	Mean M	t	df	p	Nvalid M	Nvalid F	Standard deviation M	Standard deviation K	Quotient F variances	p variances
Seniority in months	Executives	26,000	171,000	-	1	0,030	2	1	5,657	0,00	0,00	1,000
	R&D staff	33,362	51,521	-3,486	464	0,001	138	328	44,144	54,062	1,450	0,007
	Managers	72,000	69,058	0,231	98	0,818	31	69	72,388	51,966	1,940	0,025

Table 11: U-Mannna-Whiney test of equality of the mean seniority in "R&D staff" and "managers" groups of position for men and women

U Manna-Whitney test (adjusted for continuity) (badanie_v2.sta)

Variable of reference: Sex

Flagged results are significant with $p < 0.05000$; inclusion condition: v5='Managers'

Variable	Sum.rang M	Sum.rang F	U	N	P	Z adjusted	P	N valid M	N valid F	2*1str dokt. P
Group seniority	Executives	1520,000	3530,000	-0,335	0,737	-0,350	0,726	31	69	0,739

Based on the Student's t-test, it can be concluded that the average seniority of men and women in the "managers" group of positions is the same (with a 0.828009 probability of making a Type II error). This conclusion is also confirmed by the Mann-Whitney U test.

The situation is different for the "R&D staff" group, for whom we have grounds to conclude that the mean length of service is not the same (with a 0.000536 probability of making a Type I error) and – which results from the mean value – the seniority of women in this position is longer. The size of the "executives" group makes it impossible to conclude on the basis of the test. The seniority of employees in the "managers" group of positions for men and women can be considered the same, however, for the "R&D staff" group the mean times for men and women are different. There are no significant statistical differences in the share of men and women in the "managers" and "R&D staff" groups of positions. Based on the analysis, no deviations were found indicating significant differences in terms of sex.

3.2.10 Mobbing – the scale of occurrence

The purpose of the anonymous survey conducted among employees was, among others, to examine the phenomenon of mobbing at the NCBR. The survey consisted of 50 closed and open questions. However, depending on the answers given, the employee could answer fewer questions. The survey was attended by 113 people working for NCBR. When analyzing the results of the survey, it is necessary to take into account that some bad experiences may not be considered mobbing in the legal sense of the word. On the other hand, they can cause stress, discomfort or anxiety in employees, which may have affected the responses.

Table 12: Awareness of mobbing among the NCBR's employees

Aggregated results

Count table: Have you heard about mobbing?

Class	Sex	Number	Cumulative number	Percent
Yes	F	70	70	93,33333
No	F	5	75	6,66667
Vacancies	F	0	75	0,00000
Yes	M	36	36	94,73684
No	M	2	38	5,26316
Vacancies	M	0	38	0,00000

The surveys show that both men and women are aware of the problem of mobbing in the work environment. 93.33% of the female and 94.73% of the male respondents declared that they had heard about mobbing.

Table 13: Observation of mobbing by employees depending on seniority

Aggregated results

Count table: Have you noticed that mobbing was used against someone in the NCBR / Company?

Class	Seniority	Number	Cumulative number	Percent
Yes	< 1 y	4	4	16,66667
No	< 1 y	20	24	83,33333
Vacancies	< 1 y	0	24	0,00000
Yes	1-3 y	16	16	51,61290
No	1-3 y	15	31	48,38710
Vacancies	1-3 y	0	31	0,00000
Yes	> 3 y	32	32	55,17241
No	> 3 y	26	58	44,82759
Vacancies	> 3 y	0	58	0,00000

The analysis of Table 14 shows that 83% of NCBR's employees, working for less than a year, did not notice any mobbing in the organization. More than half of people employed longer than 1 year and longer than 3 years of age believed that mobbing had been used.

Table 14 describes the awareness of the anti-mobbing policy.

Table 14: Awareness of anti-mobbing policies among company employees

No division into groups

Count table: Do such policies exist in the NCBR / Company?

Class	Number	Cumulative number	Percent
Yes	81	81	71,68142
Don't know	27	108	23,89381
No	5	113	4,42478
Vacancies	0	113	0,00000

According to the anonymous survey conducted among employees of the NCBR Group, 71.68% of employees know that NCBR has policies to counteract mobbing. However, this awareness is greater in the group of employees with the shortest seniority. Interestingly, as many as 87.5% of employees with less than 1 year of service declare that they know that anti-mobbing policies exist. Only a small percentage of employees believe in effectiveness of the anti-mobbing procedures implemented in the NCBR, regardless of seniority. People working at NCBR for less than a year represent the largest percentage of staff who believe in the effectiveness of the anti-mobbing policy. Women who noticed that mobbing is used in relation to other employees claim that it negatively affects the working atmosphere at NCBR (33.33% of all the women). Another 33.33% of all the women who took part in the survey say that their working conditions at NCBR are neither good nor bad. Only 28.21% of all the women who noticed mobbing say that they are comfortable with working at NCBR. Men who have not noticed the mobbing claim that they are comfortable with working at NCBR (as much as 52% of all the male employees). Another 32% say that they definitely comfortable. 46.15% of the men who took part in the survey say that they would notice if mobbing was used against other employees and declare that they are uncomfortable.

The hypothesis of the lack of relationship between the feeling of being a victim of mobbing and the perception of the atmosphere in the workplace has been confirmed. The hypothesis about the effectiveness of the anti-mobbing policy was rejected. The analyses show that mobbing phenomena are observed in the company and that policies to counteract this phenomenon are known. However, the vast majority of employees working for more than 1 year consider them ineffective or have no opinion on this subject.

3.3 NCBR as an institution financing projects in the area of R&D and social policies

As an agency providing support for research and development, the NCBR offers a number of programs, primarily of a grant nature. The NCBR's offer includes European programs (financed from EU funds), national programs (including, inter alia, strategic, security and defense programs) and international programs (including, inter alia, Norway Grants and bilateral cooperation programs). The programs, regardless of the sources of their funding, are addressed

to various types of entities. The two most important groups of these are enterprises and research institutions.

The issue of equal opportunities for men and women (including the mitigation of equality barriers) in projects, i.e. at the level of the grant application, is addressed by evaluation criteria defined as “horizontal”. They mainly concern applications submitted under European programs (OP IR, OP WER and, in the next perspective, FENG and FERS²). This wide range of the NCBR’s programs and many sources of financing for R&D projects make it important to unify standards in this area, both within the framework of the EU programs (in the face of the next EU financial perspective), and within the framework of the national programs implemented by the Center. It should be emphasized here that the NCBR, as an intermediate body, acts in consultation with other bodies responsible for the implementation of programs financed from European funds and is accountable to the managing authorities which supervise the entire implementation process. Thus, in the area of the EU-funded programs, the NCBR’s activities are aligned with the guidelines of the managing authorities and require mutual consultations.

Taking into account the specificity of the NCBR’s activities and the area of R&D, the monitoring of phenomena related to ensuring equal opportunities for men and women in supported projects is limited. This is due to three important reasons:

- 1) The applicants under the programs are organizations (enterprises, research institutions, scientific and industrial consortia) and not individuals (“natural persons”). The exception is the LIDER program addressed to young scientists.
- 2) The NCBR’s wide offer and the many sources of funding make it difficult to monitor the situation in a systematic way.
- 3) The absence of the “sex” variable in the IT systems capturing data on grant applications, or other variables enabling the identification of sex (regardless of ensuring the appropriate quality and validation of data).

These barriers significantly hinder the diagnosis and, at a later stage, the monitoring of R&D projects in terms of the representation of men and women in research teams described in applications for funding and in teams participating in the co-financed projects. Only in some of the contests organized by the NCBR is it possible to distinguish between men and women based on the national personal identity (PESEL) numbers. This is the case in certain activities of under the OP IR and national programs.

The analysis of the shares of men and women among the R&D and administrative staff was possible only for the applications that included PESEL numbers in the part concerning the project staff. The analysis uses internal data obtained from grant applications submitted, and from contracts signed, until 31/12/2021. It should be noted that the data presented below are only for reference. The analysis was limited to the grant applications for which it was possible to identify male and female participants based on correctly entered PESEL numbers. Therefore, this is an approximate picture of the structures of project teams in terms of sex. The analysis covered a total of 7,759 applications submitted in 2018-2021. Of this pool, 1,958 were funding (until 31/12/2021). The vast majority (97%) of the grant applications concern European programs (OP IR), and the area of research is focused on engineering and technical sciences (75% of the applications submitted and 77% of the co-financed ones).

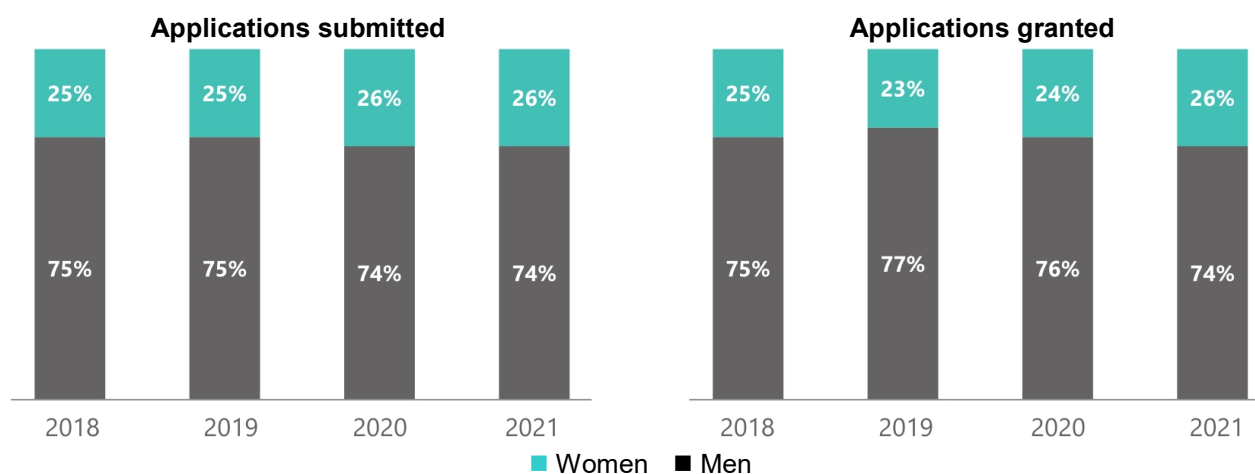
Table 15: The number of applications submitted and co-financed in 2018-2021 and the number of staff in projects under the NCBR’s programs covered by the analysis

	2018	2019	2020	2021	Total
Number of applications submitted	1,619	1,925	2,997	1,218	7,759
Number of applications granted	114	509	571	768	1,958
R&D staff: applications submitted	10,577	12,329	22,402	9,093	54,401
R&D staff: applications granted	864	3,435	4,168	6,098	14,565

² OP IR – “Smart Growth” Operational Program for the years 2014-2020, OP WER – “Knowledge Education Development” Operational Program for the years 2014-2020, FENG – “European Funds for the Modern Economy” Program for the years 2021-2027, FERS – “European Funds for Social Development” Program for the years 2021-2027

Grant applications for funding contain information about the project staff, split into two groups: R&D staff and project managers. In each of these groups an “R&D manager” and a “managing manager” can be found, with the proviso that a single person can act in the both roles. The chart below shows the project staff regardless of their roles in the project.

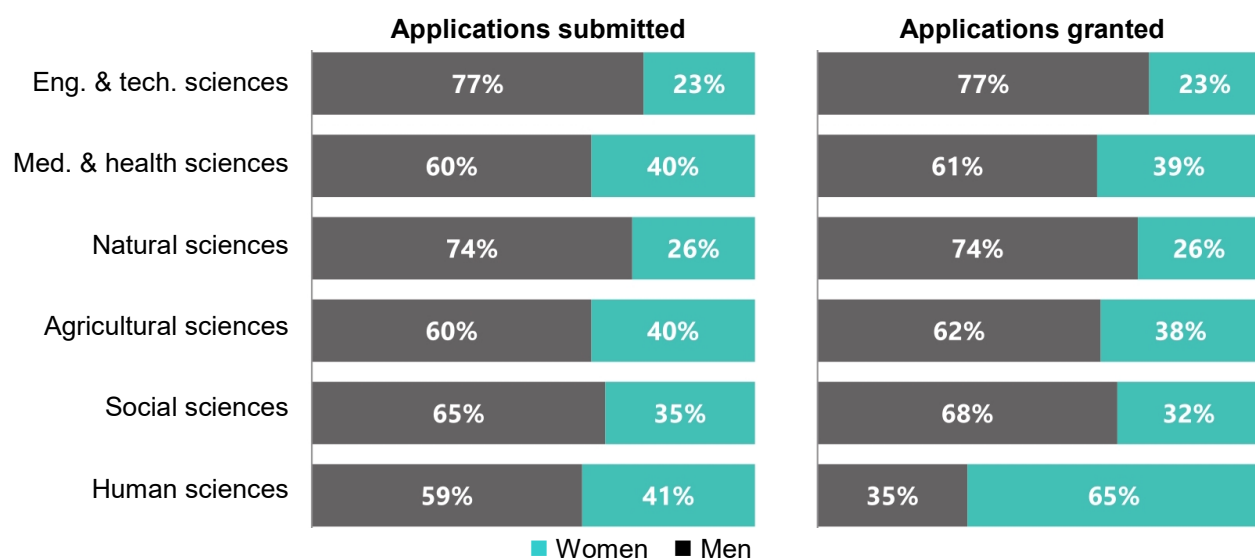
Figure 5: The % shares of men and women in project teams in grant applications and in ongoing projects under the NCBR’s programs in 2018-2021



Men prevail in project teams (both in the submitted applications and in the projects underway). This trend has persisted in subsequent analyzed years. Women usually have an about 25% representation in the teams described in the project documentation.

Taking into account the leading area of science of submitted and granted applications (assigned to the application), most of the project team conducts research in projects in the area of engineering and technical sciences (in accordance with the specificity of the R&D area). The analysis of the sex structure indicates that the greatest imbalance among the entire project team occurs in the aforementioned research specialization. In other areas of sciences (except natural sciences) we can talk about a better balance or, in the case of humanities, about the prevalence of women in projects implemented in this area (i.e. the granted ones).

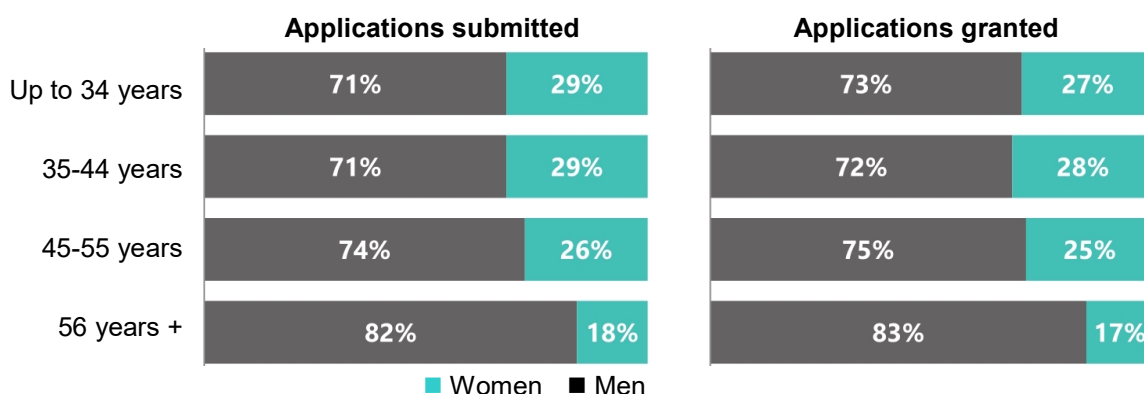
Figure 6: The % shares of men and women in project teams by area of research specified in the grant applications and in projects being implemented under the NCBR’s programs in 2018-2021



The average (median) age of women and men in the project teams described in the submitted applications is 42 years (mean 43.5 years) and 44 years (mean 46 years), respectively. In the case of the ongoing projects, the median ages are similar: 42 (43) and 44 (45), respectively.

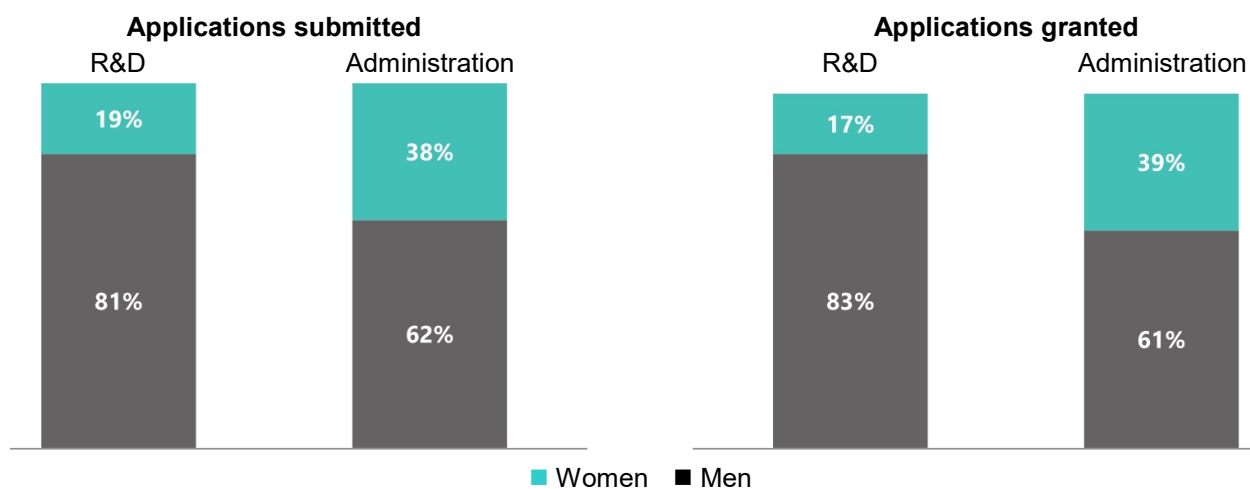
Imbalances occur in every age range, but the biggest disparity can be seen for the most experienced staff aged at least 56.

Figure 7: The % shares of men and women in the project teams described in the grant applications and in ongoing projects under the NCBR's programs by sex and age in 2018-2021



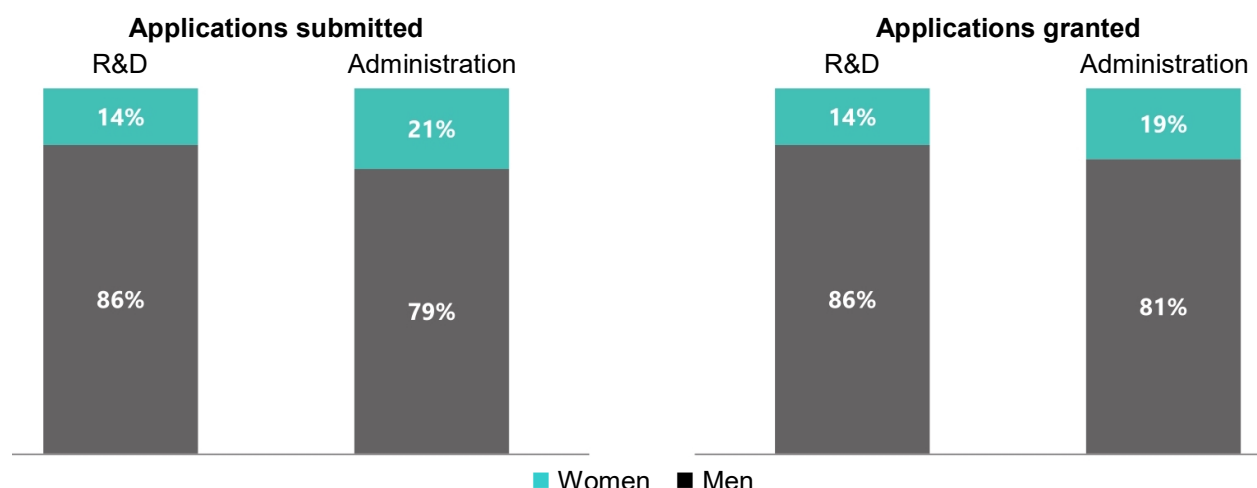
The next graph shows the shares of men and women by type of staff, taking into account two groups: R&D staff and administrative staff (regardless of their roles). R&D is the domain of men. In the case of management, we can talk about a balanced distribution because the share of women is higher: 39% of them deal with administrative activities in the R&D projects underway.

Figure 8: The % shares of men and women in the project teams, split into the R&D and administrative staff, described in the applications for funding and in the ongoing projects under the NCBR's programs in 2018-2021



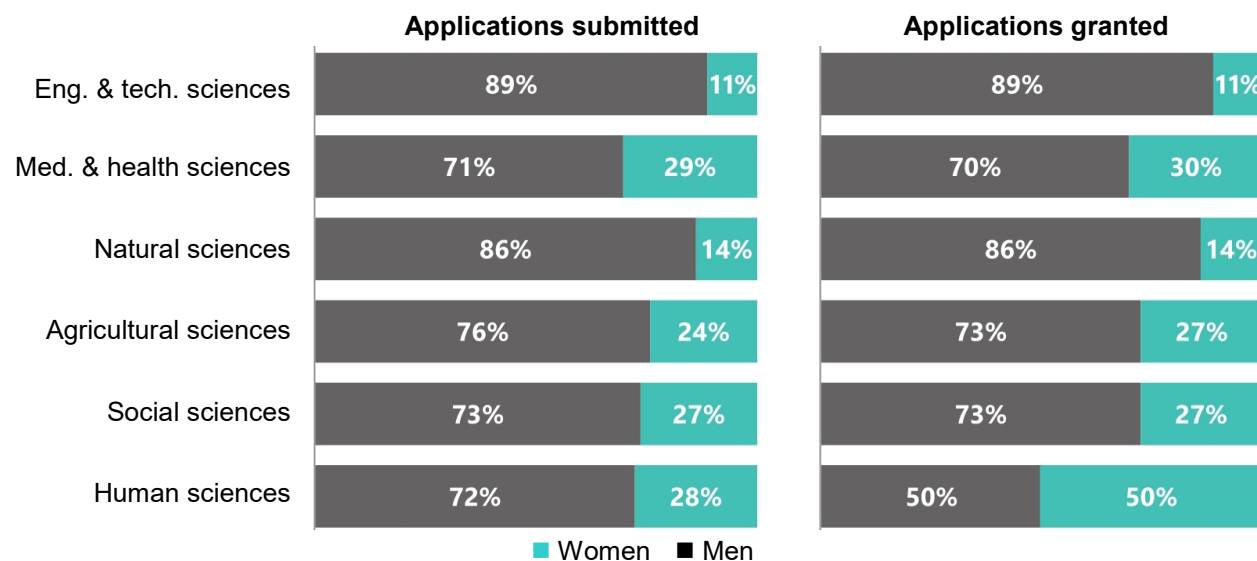
A similar sex structure can be observed for project managers performing this function in both R&D and administrative aspects. The proportion of women among “managing managers” is slightly higher than among “R&D managers”, but the imbalance in both areas has persisted over the past few years.

Figure 9: The % shares of men and women, split into "R&D managers" and "administrative managers", described in the grant applications and in ongoing projects under the NCBR's programs in 2018-2021



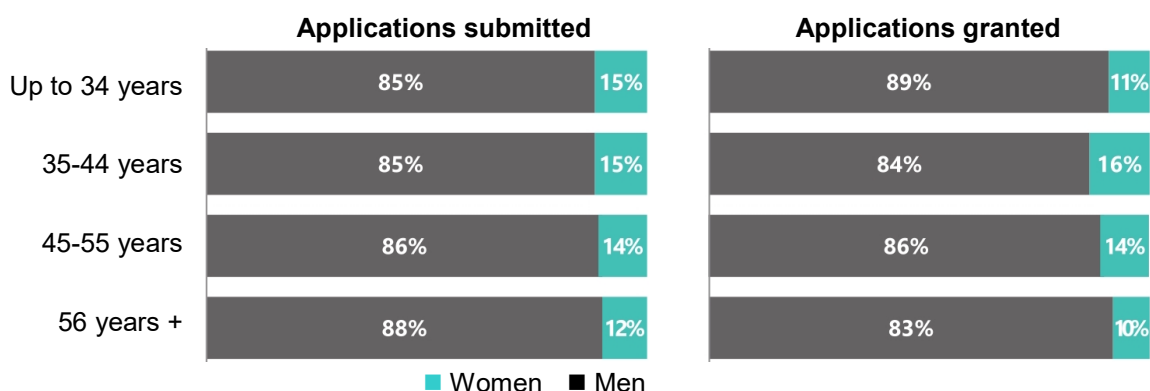
Taking into account the leading area of the project, as in the case of the project teams, women are a minority also in the group of "R&D managers". The greatest disproportion can be seen in projects in the field of engineering and technical sciences. The relative balance exists only in projects implemented in the field of humanities (declared as the leading area of research in the application for co-funding).

Figure 10: The % shares of men and women among "R&D managers" described in the grant applications and in ongoing projects under the NCBR's programs by the project's leading area of science in 2018-2021



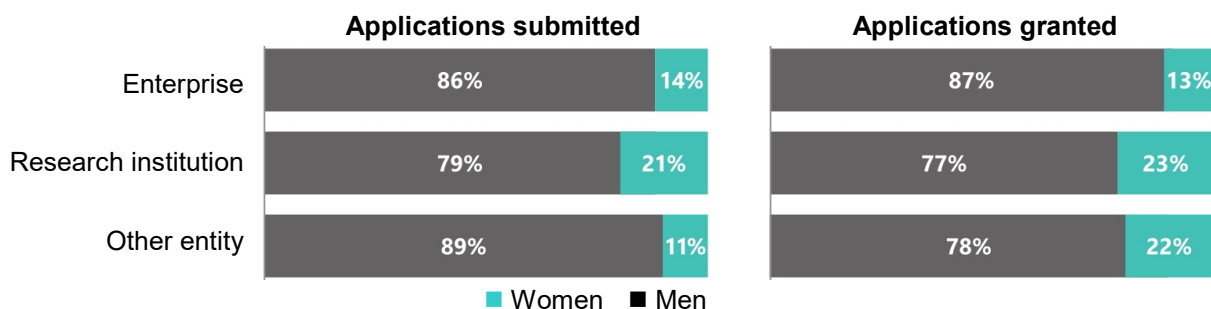
Regardless of sex, the average (median) ages of "R&D managers" are as follows: according to the submitted applications – 46 years (mean 49 for men and 47.5 for women); according to the ongoing projects – 46 years (mean 45) for men and 48 years (mean 46 years) for women. Sex representation disparities can be seen in every age group. The largest is observed among the oldest executives aged 56+.

Figure 11: The % shares of men and women among R&D managers described in the grant applications and in ongoing projects under the NCBR's programs by sex and age in 2018-2021



Assuming that the project manager supervising the R&D aspect represents the entity that acts as the consortium leader, the place of the manager's work, i.e. the institution for which the manager implements the R&D project, was determined. The vast majority of managers from this area represent enterprises (95%). Given this approach, the shares of men and women among R&D managers are at a significant imbalance: the percentage of women in the role of leaders of ongoing projects in the area of R&D in the enterprise sector is the lowest (13%) and does not exceed 15%, taking into account the size of the enterprise measured by the number of employees.

Figure 12: The % shares of men and women among R&D managers described in the grant applications and in ongoing projects under the NCBR's programs by sex and type of entity they represented in 2018-2021



Summarizing the statistics of the shares of men and women among the project staff under the NCBR's programs, one can observe a sex imbalance within each analyzed aspect. It is considered that there is a balance when the proportions of women or men are in the range of 40% to 60%. However, this criterion is difficult to meet in the area of projects strictly related to R&D.

Firstly, this is due to the structure of employment in the R&D sector in Poland, which is dominated by engineering and technical sciences. According to CSO³, a total of 283,431 people (internal and external R&D staff) were employed in the R&D sector in 2020. The largest group (196,420) were R&D jobs, with the women's share of 37%). From the point of view of the contractors (i.e. the places where R&D work is done), the shares of the enterprise sector and the higher education were 23% and 47%, respectively. These statistics show that the potential of women is still untapped in R&D – in particular in the enterprise sector. According to a study by Kantar⁴ commissioned by Ayming Polska, more than half of the companies that pursue innovative business in Poland have R&D teams dominated by men. Women represent less than

³ CSO's report: "R&D activities in 2020"

⁴ <https://www.ayming.pl/analizy-i-aktualnosci/komunikaty-prasowe/roznorodnosc-wspierainnowacje-ale-w-dzialach-br-kobiety-wciaz-stanowia-mniejszosc>

15% of the members of such teams. In every fifth company there are from 15% to 50%. On the other hand, only 7% of companies can boast of R&D teams in which women prevail.

Secondly, this is due to the imbalance in the research sector. Women represent about half of those receiving a doctoral degree, but only a fifth of full professors. The higher the level of scientific career, the less numerous the representation of women. The situation is similar in the area of R&D. According to CSO, in 2020, the shares of women among the internal R&D staff with higher education were 26% among professors, 41.5% among habilitated doctor, and 50% among doctors. In the enterprise sector, the disparities are even greater: 18% among professors, 29% among habilitated doctors and 34% among doctors.

The participation of women in the labor market in the area of R&D will increase. Taking into account the employment of women with higher education in the science and technology sector, according to Eurostat data, there has been a systematic increase in the percentage of women in this group in Poland in the last decade. While in 2011 women accounted for 46% of the workforce in this sector, in 2021 there were 58% of them (4 percentage points more than the average for the EU member states). There is also a noticeable increase in the number of women among students of public technical universities: +35% in the academic year 2020/2021. Women also accounted for 16% of IT students and 16% of new technology students⁵. These statistics testify to a better balancing of the staff of the science and technology sector, which should help overcome disproportions in the area of R&D projects, including those financed under the NCBR's programs. In order to fully monitor the shares of men and women in NCBR projects, it is necessary to ensure that sex data is captured reliably and systematically as part of the NCBR's diverse programs. Due to the limited sex information in the NCBR's programs, the information from the grant applications does not provide the full picture of the sex balance in project teams, but confirms the observed trends in the R&D sector and may be a reference point for other initiatives undertaken by the NCBR. However, it is necessary to identify activities that lead to the application of the principles of equality in projects that are implemented primarily by entities including enterprises and research institutions. This, in turn, determines the area of action taken, which is the requirement to use the so-called "horizontal" criteria and to take measures to make applicants aware of the need to apply the principles of equal opportunities and non-discrimination in projects with respect to men, women and people with disabilities.

3.4 NCBR as an institution cooperating with external experts

The NCBR is the key platform for supporting and creating innovative technological and social solutions, creating an ecosystem of knowledge and information about them. It initiates and implements projects contributing to the civilizational development of the country. The NCBR, as an executive agency and a body mediating the implementation of programs financed from European funds, has a wide range of programs (national, international, financed by the EU). Every year it announces several dozen calls for proposals, and applications for co-financing submitted as part of the calls are evaluated by experts cooperating with the NCBR based on framework agreements. The evaluation of an application may consist in obtaining several opinions from individual experts selected to evaluate the application or in granting a score based on a consensus of a panel of experts (a team of experts evaluating the application). Experts cooperating with the Center take part not only in the process of selecting applications for co-financing but also prepare substantive assessments related to the consideration of appeals against the rejection of applications or to the enforcement of the NCBR's rights and obligations under the grant agreement. For example, they evaluate reports or requests for changes at the project implementation stage, carry out audits in ongoing projects, prepare project evaluations for the supervisory team or issue other types of opinions and expertise, such as legal, financial or economic studies for the NCBR.

Their opinions are decisive for granting, withholding or changing the financing of projects, which is why they play an important role in the process of creating innovations by Polish entrepreneurs and scientists.

⁵ Report from OPI PIB and *Perspektywy*: "Women at universities of technology in 2022" NCBR

In order to ensure continuity in obtaining assessments in its tasks, the NCBR runs the Expert Database. The recruitment to the database is continuous and all necessary information on how to become one of the experts can be found in the dedicated section of the NCBR website. In addition, so-called targeted calls are conducted to attract experts from specific areas of science and economy (two such calls were carried out in 2021). Information about these calls can be found not only on the NCBR's website, but also in its social media or in the newsletter. This information is also provided directly to research institutions and enterprises. The NCBR has no influence on ensuring equal opportunities for men and women among experts who register in the database, because the registration process and willingness to cooperate with the NCBR depend solely on private and individual decisions of representatives of the scientific and economic communities and on time that experts can spare. Each of the experts listed in the database has an account in our dedicated IT system, in which they register essential information about their scientific title or degree, professional experience, publications and specialization with relevant keywords. Optional information includes diplomas, certificates or other evidence of qualifications. The expert may update and otherwise edit this information. This input is subject to formal and substantive verification by the NCBR. Most of the assessments commissioned and carried out by experts take place in the LSI IT system, after logging in to the expert's account. In addition, during the pandemic, panel meetings were introduced using electronic means of communication, which has facilitated the performance of tasks related to the assessment of applications for co-financing, without the need to come to the NCBR headquarters.

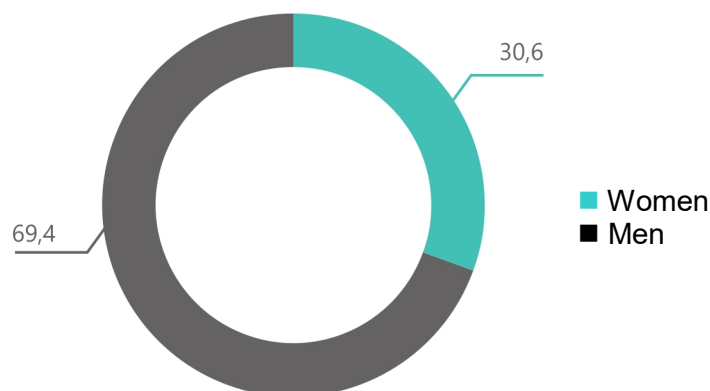
The NCBR has defined clear criteria according to which the formal and substantive candidacies of experts are verified. This is done based on the verification criteria set at the gate to the database along with a description of how the verification will proceed and with sample acknowledgments of the fulfillment of the criteria. These criteria are the same for both men and women, regardless of origin (they are the same for Polish and foreign experts). At the moment, work is underway to adapt the IT system to ensure that experts can add to the system copies of necessary proofs of education, degrees, titles and professional experience without the need to send them physically. Once the necessary preparatory work has been carried out, the criteria and the method of verification are made available to the expert on the NCBR's website. This system also complies with the guidelines of the managing authorities in order to be able to recruit experts for the new 2021-2027 perspective of the FENG and FERS programs.

The NCBR has 4,001 active experts (those with signed framework agreements, verified profiles and no exclusions). The data used in this analysis come from the Expert Database updated on 17/05/2022 (see Table 16). 3,603 experts are Poles and 398 come from other countries. 30.6% of the experts are women (Figure 13).

Table 16: Experts registered in the NCBR's Expert Database

Sex	Experts	Polish experts	Foreign experts
Women	1,223	1,126	97
Men	2,778	2,477	301
Total	4,001	3,603	398

Figure 13: The % shares of men and women in the NCBR's Expert Database

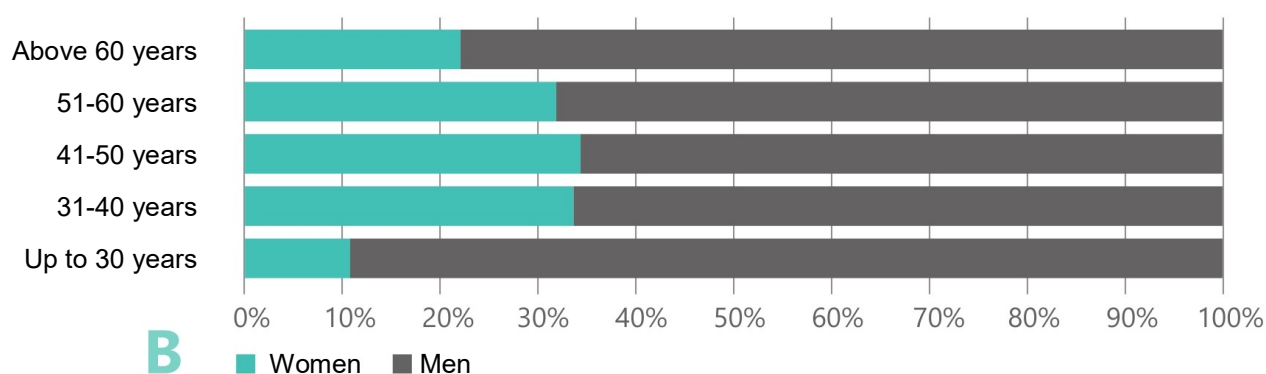
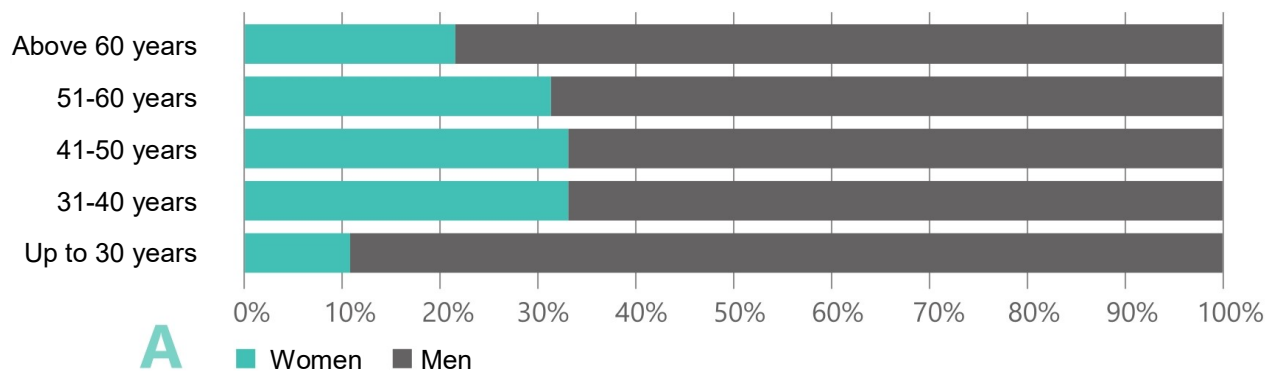


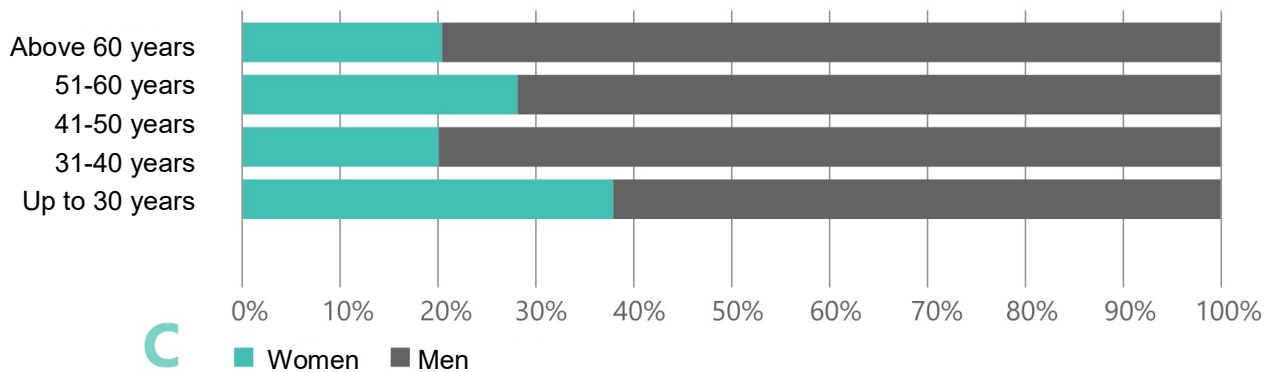
In terms of nationality, women constitute 31.3% among the Polish experts and 24.4% among the foreign experts. The largest group of the Polish experts (1,438) are aged 41-50 (Table 17, Figure 14) of which 34.7% are women, while among foreign experts the most numerous group (139) is aged 51-60, including 28.1% of women. The largest percentage of women among the Polish experts is in the 41-50 age group and the smallest in the up to 30 years group. On the other hand, among the foreign experts, the largest percentage are women aged 31-40 years and smallest one women aged 41-50. In contrast, among male experts, the largest group (27.1%) are experts aged 60+. The NCBR has no registered foreign experts younger than 30.

Table 17: The shares of men and women by age among the NCBR's experts

Sex	Up to 30 years	31-40 years	41-50 years	51-60 years	More than 60 years
Polish experts					
Women	2	219	499	227	179
Men	15	436	939	480	607
Total	17	655	1438	707	786
Foreign experts					
Women	0	11	19	39	28
Men	0	18	75	100	108
Total	0	29	94	139	136

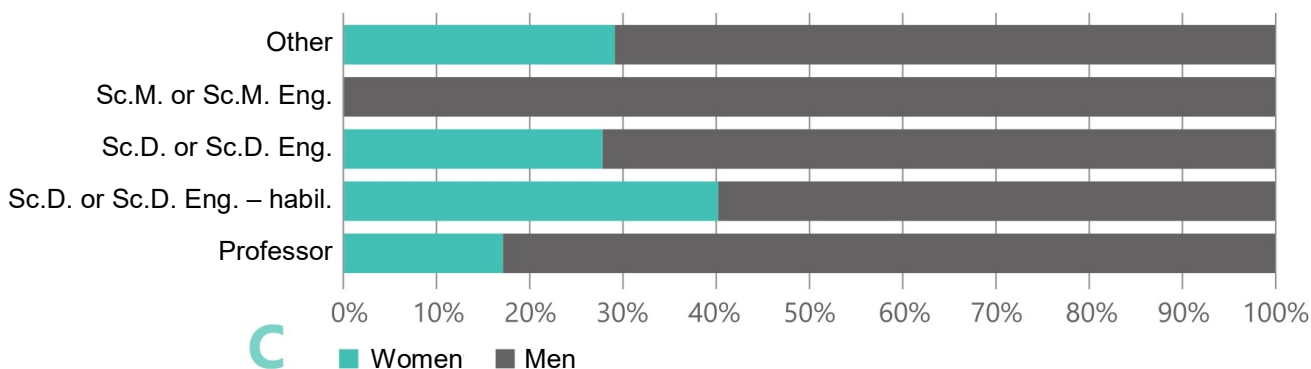
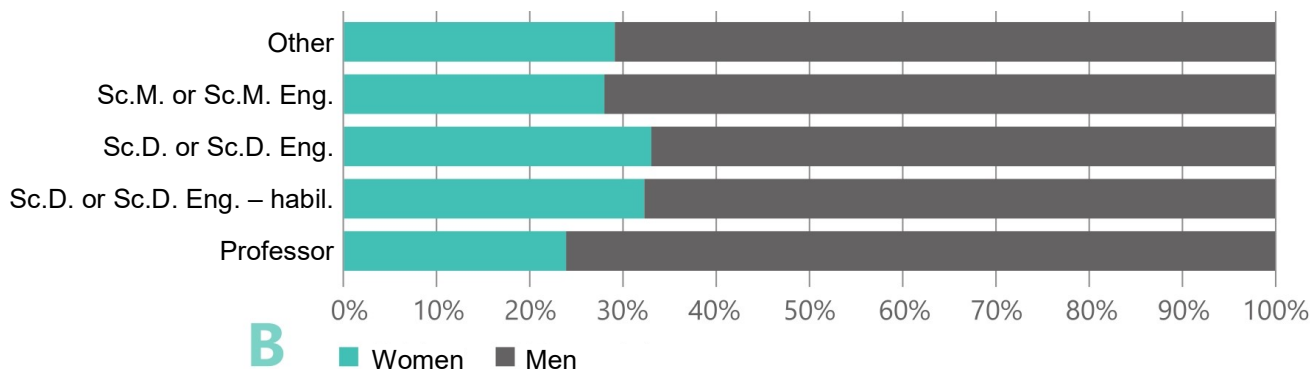
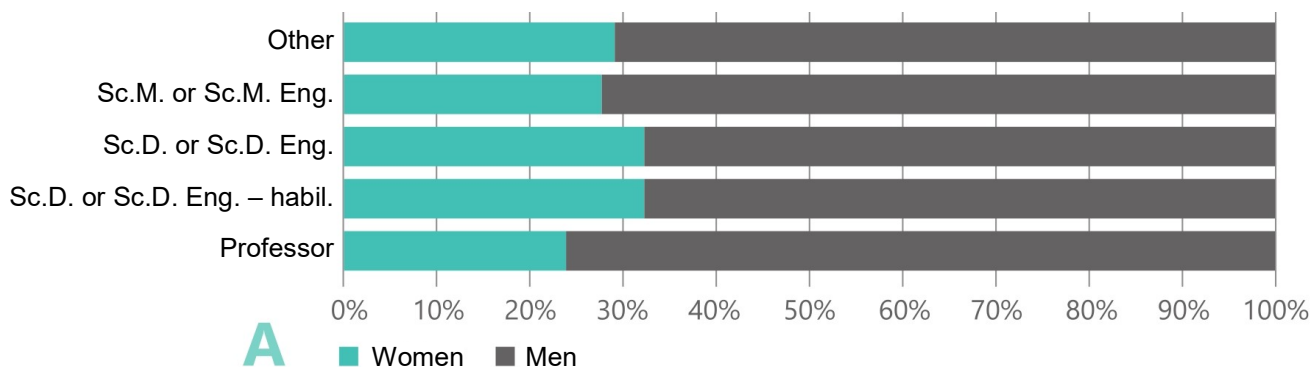
Figure 14: The % shares of men and women among the NCBR's experts by age groups: Experts: A – all, B – Polish, C – Foreign





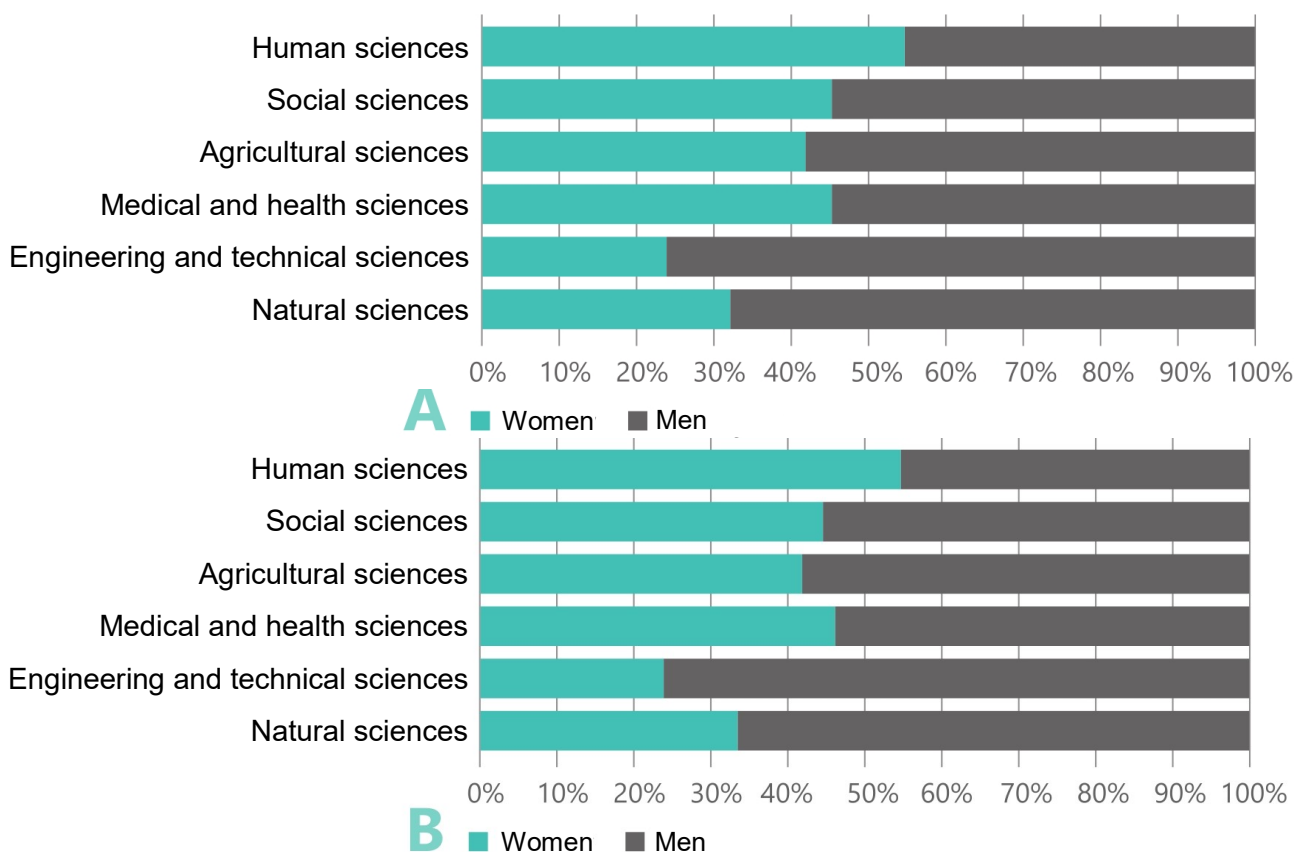
While looking at the shares of men and women by their titles or degrees among experts cooperating with NCBR, it can be seen that the largest group are people with the degree of a doctor or doctor of engineering (Figure 15A). Women constitute 34.1% of the 1,295 Polish experts. Among foreign experts there are 169 doctors / doctors engineers and 163 professors, of whom women constitute 28.4% and 17.8% respectively (Figure 15 B). The largest group of women among the foreign experts are women holding the degree of habilitated doctor / habilitated doctor engineer, constituting about 40% (Figure 15C). On the other hand, among foreign experts, only men hold the title of master / master engineer.

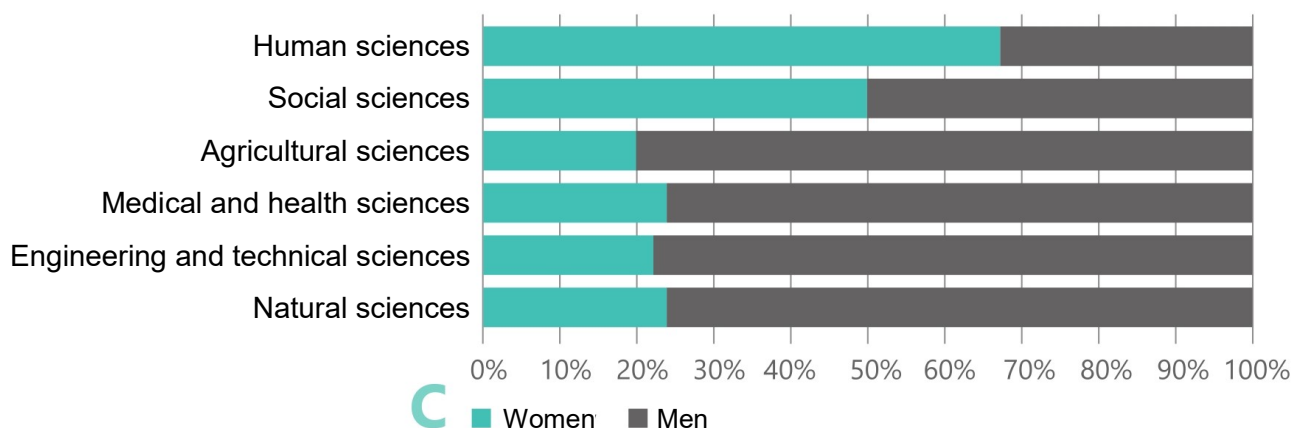
Figure 15: The % shares of men and women among the experts registered in the database by titles / degrees



Experts must also specify the fields in which they have knowledge and experience, as well as education (academic titles or degrees) in their expert profile in the NCBR's database. Each expert defines the field(s) in which they specialize according to the OECD's classification of fields of science and technology, as well as in the statistical classification of economic activities (NACE). Experts who wish to work under the new 2021-2027 perspective of the "European Funds for Modern Economy" Program will also be required to sign up for selected National Smart Specialization categories (KIS; currently NCBR is adapting the IT system dedicated to experts for the recruitment of experts in the new 2021-2027 perspective). Like experts, applicants requesting grants must locate their projects in specific OECD, NABS and PKD categories and provide keywords. The selection of experts to assess projects of all types is based mainly on the OECD's classification, keywords and information contained in the application abstract and title for the best match. When selecting experts, scientific achievements, professional experience, participation in R&D work and implementations are also taken into account. During the selection, experts are not discriminated against in terms of sex, and what counts is only their experience and knowledge converging with the subject matter of the assessment. In the EU's financial perspective for 2021-2027, under the FENG Program, this selection will be based on specific National Smart Specialization (KIS) codes declared by experts. Applications for co-financing will also be classified by applicants according to the KIS codes. When analyzing the shares of men and women in terms of the OECD's classification, a sex balance can be observed among experts in four areas (Figure 16A), while engineering and technical sciences are strongly dominated by men (78%). The predominant specializations among foreign female experts are humanities (67% of women) and social sciences (50% of women, Table 16C). The remaining areas are dominated by male experts, who account for nearly 80% of their total number in agricultural, engineering and technical sciences. Women account for 55% of experts in the humanities also among Polish experts. In medical and health sciences, women account for 48.8%, and in social and agricultural sciences 46.5% and 44.7%, respectively (Figure 16B). We can say that there is a balance in these four fields because the shares of men and women among Polish experts are in the range of 40-60%.

Figure 16: The % shares of men and women by the OECD's fields of science and technology: Experts: A – All, B – Polish, C – Foreign





The number of women listed in the NCBR’s Expert Database is the resultant of the number of women in science. According to the authors of the European Commission’s Report entitled “She Figures 2018”⁶, women constitute 59% of university graduates, 45% of doctoral students (in Poland 50%) and just 18-19% of professors (in Poland 21-27% according to various statistics). The turning point in women’s careers is the age of 25-35. Due to the need for numerous foreign internships at this stage, conference trips and active involvement in research work, this is the period of the most dynamic development of a scientific career. At the same time, it is the time considered the most favorable for a women to start a family, which is likely interrupt her career or limit the amount of time available for professional development or for additional activities, such as working as an expert.

4 Objectives

4.1 The NCBR as an employer

Goal	Proposed actions	Responsible bodies	Preparatory activities	Targets	Timing / frequency of monitoring
1. Improve knowledge of the NCBR’s employees about equality issues and encourage positive attitudes towards diversity	1. Appoint the NCBR Director’s Plenipotentiary for Equality and Diversity	HR Department, Security and Compliance Management Department, Office of the NCBR Director and Legal Services	Take steps to review the existing internal rules and make them more consistent with a view to appointing the Plenipotentiary for Equality and Diversity	Appoint the Plenipotentiary until 2025	Once a year
	2. Train the NCBR’s recruiters and managers on avoiding sex discrimination in the recruitment process	HR Department	Train at least 50% of people involved in the recruitment process by 2023	Train by 2025 at least 80% of people involved in the recruitment process	Once a year
	3. Train employees on the issues of counteracting mobbing, discrimination and unwitting bias	HR Department	Set up training courses for employees on counteracting mobbing, discrimination and unwitting prejudices	Train the NCBR’s employees through e-learning by 2025	Once a year
	3.1. Train staff on equality of men and women issues in research	HR Department, Communication and Strategic Marketing Department	Raise awareness of the importance of equality of men and women in research	Train employees from the BZB, BSR, DZE, BWM and DOB departments to raise awareness of equality of men and women in research based on NCBR’s GEP – 5 webinars until 2023; include GEP in onboarding training by the end of 2022	At the end of 2022

⁶ <https://www.fnpp.org.pl/how-foundation-supports-women-in-science>

3.2. Train employees with more than 1 year of service in the anti-mobbing procedure	HR Department	Train by 2023 at least 50% of people working at the NCBR. Workshops for management on counteracting mobbing and inequality	Train people working at the NCBR until 2025. Workshops for management on counteracting mobbing and inequality – at least one workshop every two years	Every year
4. Introduce equality principles in the context of remuneration processes	HR Department	Reduce the pay gap between men and women playing the same roles by at least 5% every year	Reduce the pay gap between men and women playing the same roles by at least 20% by 2025	Monitor salaries and statistics on the existing job positions, taking into account the sex criterion – once a year
5. Add questions on the current state of compliance with equality issues at the NCBR to the annual anti-mobbing survey	HR Department	First survey by the end of 2022	Annual anonymous survey among the NCBR's employees	Every year
6. Make it easier for women to take up managerial positions	HR Department	Identify women willing to take up positions in the managerial staff	Align executive position occupancy by men and women with their years of service	Every year as of 2024
	HR Department	Identify training needs of at least 50% of women willing to take up managerial positions by 2023 in order to develop individual career paths at the NCBR	Align executive position occupancy by men and women with their years of service	Every year as of 2024
2. Include information on the sex of persons employed at the NCBR in the annual report on the NCBR's activities	1. Include employment data in the NCBR's broken down by sex in the NCBR's annual activity report	Office for Strategy and Development	Annual report on the NCBR's activities containing data on the employment in the NCBR broken down by sex	Every year from the 2022 report.

Reporting and whistleblowing mechanisms are the foundation for an effective and solution-oriented system of supporting diversity and actions supporting equality of men and women and counteracting violence in the workplace (mobbing, harassment). Thanks to transparent procedures for reporting and solving problems, as well as existing mediation tools, the organizational culture is developed and improvement measures are implemented. The aim of the NCBR is to create such mechanisms and tools thanks to which the NCBR will be able to not only influence the awareness of employees in this area (raising the culture of the organization at the level of employee behavior and reaction) but also actively respond to all manifestations of such unacceptable behaviors.

In the long term, the pursuit of this goal will contribute to the elimination of prejudices, customs and traditions based on stereotypical sex roles, discrimination and sex-based violence including sexual harassment.

The NCBR has the procedure for counteracting mobbing and discrimination and the procedure for reporting incidents and protecting whistleblowers, which will be kept up to date with the needs of the organization and legal requirements.

Sustainable support for the development of professional careers of men and women affects the creation of a better working environment that can attract and retain the best talent, eliminate barriers to balancing professional and private lives, prevent career slowdown and support the involvement and use of the potential of diverse teams at the NCBR. The implementation of this goal is to contribute to the creation of conditions for men and women to pursue their professional ambitions on an equal footing.

As part of the recruitment processes at the NCBR, we strive to implement an open, effective recruitment procedure, taking into account the principle of equality of men and women. It is very important to include in the recruitment procedure the principle that if you have two candidates of different sexes with the same qualifications for the same position, the choice of the underrepresented sex should be preferred. Our goal is to create such a recruitment procedure in

which we will define the rules for selecting application documents while maintaining the balance of sex representation. Proper formulation of recruitment advertisements, without signs of preference in relation to a particular sex, is one such mechanism. Representation of both sexes within the members of the selection committee is another of these tools. Ensuring that all available information channels are used in such a way as to reach the widest possible range of candidates for the position is also a basic condition for the success of the described changes.

We will introduce mandatory training for employees in the form of e-learning on counteracting the phenomena of mobbing and discrimination. This will allow not only to conduct educational activities, but also to verify knowledge and provide access to training content in this area at any time. In the training courses we will emphasize the need to work to promote equality of men and women rather than to favor women, at the same time building awareness that men can also share the responsibilities of caring for children or the elderly, just as women do.

At the NCBR, it is important for us to work with managers as a special group influencing the occurrence of discrimination among employees. So far, we have conducted dedicated training courses for them in counteracting the phenomena of mobbing and discrimination. We plan to expand this topic with training related to unconscious bias also towards employees in special situations such as parenting. This is important in many HR processes, such as recruitment, promotion planning, bonus system or non-pecuniary motivation of employees.

E-learning courses will also be introduced for experts evaluating applications.

4.2 NCBR as an institution financing projects in the area of R&D and social policies

Goal	Proposed actions	Responsible units	Preparatory activities	Targets	Monitoring deadline / frequency
1. Take account of sex equality in program documentation	1. Modify application forms to effectively monitor the shares of men and women among project "administrative management" and "R&D management" teams (as appropriate for the specific program)	Strategy and Development Office, Project Selection Department, IT Department	Verify forms / applications for all programs in terms of submission of information regarding equality of men and women	Forms / applications for co-funding with space for the capture of information on the sex of members of project "administrative management" and "R&D management" teams	As of 2023
	2. Include a criterion of equality of men and women in the area of intervention in the evaluation of projects	Office for Strategy and Development	Verify existing models of contest regulations / program provisions in terms of information on equality of men and women and the applicability of evaluation criteria (horizontal, access, rewarding, etc.)	Develop a model criterion or set of criteria applicable to individual programs	As of 2023
	3. Adapt the forms used to account for projects (for example, payment requests and interim reports) for effective monitoring of the shares of men and women among project „administrative management" and „R&D management" teams (as applicable to the specific program)	Office for Strategy and Development, Office of Beneficiary Service Management, Department of IT Systems	Verify the forms used to account for projects in individual programs in terms of the content of information about assurance of equality of men and women	Forms with space for the capture of information about representation of men and women in project "administrative management" and "R&D management" teams	As of 2023
2. Raise awareness of the importance of equality of men and women in research	1. Promotional activities – presentations of projects taking into account the sex aspect in the research	Department of Strategic Communication and Marketing, Office of Beneficiary Service Management, Department of the National Contact Point	Identify projects for promotion. Identify promotional channels for equality of men and women content in research. Plan cyclical activities promoting women in scientific research.	Regularly present projects in selected promotional channels – aggregated information in selected information channels at least once a year. Launch of regular campaigns	Every year as of 2023

2. Train target groups (experts, beneficiaries, applicants) on the importance of the equality of men and women aspect in research	Beneficiary Service Management Office	Develop a training plan	Deliver at least 2 courses for applicants and beneficiaries	Every year as of 2023
3. Arrange for an e-learning training for experts on the importance of equality of men and women in research	Expert Management Department	Develop of a training plan	Module in the e-learning training for experts together with a test containing questions in the field of equality of men and women.	Deliver a once-off course with a final test – no later than 12 months from the expert's joining the NCBR or from the date of availability of the course (for experts already registered in the NCBR's Expert Database)
4. Inform employees about promotional and training activities related to equality and diversity.	Internal communication	News presenting the MWEP	Provide information about current awareness-building and training activities on a regular basis – at least 3 updates	Every year as of 2023
5. Disseminate information on equality and diversity in projects monitored by the NCBR	Department of Strategic Communication and Marketing, Office for Strategy and Development	Capture equality and diversity data for projects monitored by the NCBR	Publish analysis results in available news channels	Every 2 years
6. Disseminate information on equality and diversity in the evaluation expert group	Communication and Strategic Marketing Department, Expert Management Department	Capture equality and diversity data in the evaluation expert group	Publish analysis results in available news channels	Every 2 years

As one of the major agencies established to finance scientific research and development works in Poland, the NCBR has an important role to play in shaping the awareness of the scientific community regarding the importance of issues related to equality of men and women. This applies both to the issue of equal opportunities for men and women in science, as well as to taking into account the sex aspect in the ongoing scientific research.

The diagnosis has revealed a lack of consistency in the collection of sex-identifying data of project managers and project team members in the hitherto analyzed grant applications. It is necessary to modify and standardize application forms so that they constitute a reliable and comparable source of knowledge about the shares of men and women among managers and research teams. This requires a change in the program documentation both in programs financed from European funds and in national programs. In addition, it is important to introduce changes to the IT system through which applications for co-financing are submitted. At the same time, taking these measures requires consultation with the managing authorities. This campaign can be launched in 2023 and it should be continued.

The diagnosis shows the need for verification of the existing contest regulations and other documentation of the NCBR's programs in terms of information on equality of men and women and the applicability of evaluation criteria (e.g. horizontal, access, rewarding) in this aspect. This requires a benchmark criterion or set of criteria for each program. It is possible to begin this action in 2023.

In order to obtain necessary information about both Polish and foreign experts, an additional "Date of birth" box is required for accurate age monitoring. Monitoring reports will be prepared based on end-of-year extracts from the database. They will be reviewed at the beginning of the next calendar year (but no later than by the end of March). In addition, sex monitoring will be introduced for experts scheduled to work in the financial perspective 2021-2027, listed as FENG and FERS experts (reports will be prepared in the same way as the general reports from the database).

The objective of promoting equality of men and women in research funded by the NCBR and raising awareness of the importance of the equality of men and women dimension will be achieved in two ways: by promoting equality of men and women in funded research and by sensitizing experts assessing applications, as well as applicants and beneficiaries.

Training in the field of improving the equality of men and women aspect in research through the prism of projects monitored by the NCBR will be addressed to various groups of recipients, including applicants, beneficiaries and experts. Training for experts evaluating proposals will be extended to include a module on equality of men and women in research and on unconscious bias.

Next, promotional and dissemination activities will consist in the presentation of projects taking into account the sex aspect in the conducted research, informing employees about promotional and training activities carried out in respect of equality and diversity, disseminating information on equality and diversity in projects monitored by the NCBR and in the group of experts performing evaluations. It is planned to publish the results of analyses via the available NCBR's information channels (website, social media) at least every two years.

5 The monitoring of the implementation of the MWEP

The state of implementation of the MWEP for the NCBR for the years 2022-2025 will be monitored by the Team for Equality of Men and Women and by the Plenipotentiary of the NCBR Director for Equality and Diversity, and the content of the MWEP will be updated if there is a justified need in this respect. As a rule, the monitoring cycle will be reiterated annually (or with a different frequency, as required). The implementation of the MWEP will be monitored based on its general outcomes or specific predefined measures. Documentation of the performance of individual activities will be collected in the knowledge base of the organization and made available for inspection.

Information and education activities will be important activities. The monitoring of these activities will consist in the verification of knowledge in the field of procedures for counteracting inequalities and issues related to equality and non-discrimination.

6 Conclusion

Equality and diversity are values that contribute to the development of science and the success of any organization. Development is one of the values of NCBR, which is why we want to achieve it all the more by introducing regulations and implementing activities that can create space for it. The starting point for the NCBR's MWEP are the collected data and good practices translated into activities and better communication within the NCBR community, so that good examples and equality solutions can be better disseminated. This allows us to combine the efforts to create a safe egalitarian climate at the NCBR with the commitment to counteract discrimination using our early response system.

