

# HOW TO TAKE INTO ACCOUNT THE GENDER DIMENSION IN RESEARCH, DEVELOPMENT AND INNOVATION CONTENT



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## INTENT

The intention of the Ministry of Education, Youth and Sports (hereinafter the "MoEYS"), as a provider of funding from public funds for research, development and innovation (hereinafter "R&D&I") projects, is for the results of supported projects to a positive impact on society and the quality of life of each and every one of us. Unfortunately, research activities do not always bring the same benefits and impact to all groups in society. This also applies to men and women.

Incorporating a gender dimension into R&D&I contributes to reflecting the needs, behaviours and attitudes of women and men. Ultimately, this will lead to the production of goods or the provision of services that are more suitable for the potential market and take into account the needs of all groups of end-users, both male and female.

The gender dimension in R&D&I content is understood as the combination of knowledge on the impact of sex (biological aspects) and gender (socio-cultural aspects) in R&D&I practice with the aim of generating comprehensive and excellent knowledge or technologies for the betterment of society and all its groups.

The intention of this guide is to offer potential male and female applicants for public R&D&I funding some concise assistance on to how to assess and take into account the gender dimension in the design of an R&D&I project in an appropriate way. The material is also intended for evaluation and opposition bodies or committees as part of the background materials for evaluating project proposals.

The EU Framework Programme for Research and Innovation Horizon Europe (2021-2027) reflects gender equality as a cross-cutting priority and introduces new conditions. The gender dimension in R&D&I content has become a new eligibility criterion for projects across the Framework Programme. Applicants for funding are obliged to consider whether their project may affect women differently to men or have different impacts on them. Another eligibility condition for applicants for funding from Horizon Europe is that the organisation submitting the project proposal adopt a gender equality plan at institutional level. Thanks to long-term support provided by the National Contact Centre for Gender & Science at the Institute of Sociology of the Czech Academy of Sciences, within the framework of the implementation of the CZERA shared activities project (*Deepening the Integration of the Research and Innovation Ecosystem of the Czech Republic into the European Research Area and support for intensive international cooperation of research organizations and companies in the Czech Republic in research, development and innovation*), Czech research organisations and enterprises can obtain the necessary funding to meet these requirements.<sup>1</sup>

In the context of the above, the intention of this guide is, among other things, to help improve the readiness and competitiveness of Czech R&D&I entities as potential applicants for funding from the Horizon Europe Framework Programme.

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<sup>1</sup> <https://genderaveda.cz/>

## WHY INCLUDE A GENDER DIMENSION IN THE CONTENT OF RESEARCH, DEVELOPMENT AND INNOVATION?

The priority of every provider should be to support high quality R&D&I with the broadest possible socio-economic impact. Activities that do not lead to the desired results mean not only financial loss but can also lead to more serious consequences. Gender bias or distortion can also contribute, albeit unintentionally, to missed market opportunities in various R&D&I fields.

- Ten drugs were withdrawn from the US **pharmaceutical market** because of life-threatening effects between 1997 and 2000. Eight of these posed greater health risks to women than to men.<sup>2</sup>
- The **automotive engineering industry** and vehicle design need to take into account the diversity of body types and sizes, both male and female, to prevent more serious injuries in car accidents (see the [case study](#)).
- In the **IT technology** sector, more women than men buy Apple and Samsung products. Even so, the iPhone and Galaxy smartphones are sized to fit the average Euro-American male palm, making them too big for women's hands (as well as for men with smaller palms). This results in a higher risk of developing what is known as repetitive strain injury, which affects the musculoskeletal system or nervous system (Criado Perez, 2019).<sup>3</sup>
- An infectious disease like **COVID-19** affects everyone, regardless of sex. However, the biological impacts of a pandemic are mixed with social or economic factors. Current global statistics on the COVID-19 pandemic show that more men than women are dying from acute infection, while women will suffer more than men from the health, economic and social consequences of the pandemic in the long term (see the [case study](#)).<sup>4</sup>
- **Coronary heart disease** is one of the leading causes of death in the US and European populations (WHO,2008). However, heart disease has been defined as a primarily male disease based on male pathophysiology and outcomes. As a result, women are often misdiagnosed and underdiagnosed (EUGenMed et al. 2016; Taylor et al., 2011), (see the [case study](#)).<sup>5</sup>

Further case studies in specific R&D&I fields as well as the latest scientific studies can be found on the information and education portals [One size is not enough](#) or [Gendered Innovations](#).

It is clear from the above that R&D&I that does not reflect the diversity of male and female users and their needs will produce inaccurate and sometimes erroneous results. It is therefore important to include a gender dimension in R&D&I. Only truly responsible research produces the best results for all.<sup>6</sup>

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<sup>2</sup> <https://genderaveda.cz/jedna-velikost-nestaci/>

<sup>3</sup> <https://genderaveda.cz/technologie-a-inovace>

<sup>4</sup> <http://genderedinnovations.stanford.edu/case-studies/covid19.html>

<sup>5</sup> <http://genderedinnovations.stanford.edu/case-studies/heart.html>

<sup>6</sup> <https://genderaveda.cz/jedna-velikost-nestaci/>

## SHOULD THE GENDER DIMENSION BE TAKEN INTO ACCOUNT IN EVERY R&D&I PROJECT PROPOSAL?

Incorporating the gender dimension into R&D&I means that the given R&D&I project reflects the biological and socio-cultural differences of individuals in society. However, this consideration may not be appropriate or necessary for every R&D&I project. The goal is not to create two product variants or two solutions at any cost. Similarly, it would make no sense to artificially expand an R&D&I project dedicated solely to men or women (prostate research, research on some aspects of the lying-in period, etc.) or one that lacks any gender dimension. However, it is relevant to consider the integration of the gender dimension across all R&D&I fields.

So when and where is it appropriate to take the gender dimension into account?

- If the R&D&I results can be expected to affect or influence women and men or girls and boys differently, whether this is in the role of patients, users or consumers.
- If the R&D&I object is people (e.g. questionnaires, data analysis relating to human behaviour or attitudes, R&D&I working with human biological material, etc.).
- If humans are potentially affected by the R&D&I results; i.e. if the R&D&I project affects the environment in any way or is based on the study of animals and their biological processes and the results may be extrapolated to humans in the future.

Some research topics may appear gender-neutral at first glance. This is often the case in science, technology, engineering and mathematics (STEM) fields. In such cases, it is recommended to ask specific questions that are no longer gender-neutral:

- Whose interests and needs are addressed through this R&D&I?
- Who will use the results and knowledge obtained?
- Who can benefit from this R&D&I and how?

## GUIDANCE ON HOW TO APPROPRIATELY REFLECT THE GENDER DIMENSION IN A RESEARCH, DEVELOPMENT AND INNOVATION PROJECT

Taking the gender dimension into account in R&D&I content means integrating it into the whole product lifecycle. Setting priorities through defining concepts, formulating questions, developing methodologies, collecting and analysing data by sex, and evaluating and reporting on R&D&I results and their transfer to the market are aspects and factors that should be considered when reflecting on the gender dimension in R&D&I. The following questions may provide some guidance on how to systematically integrate the gender dimension into a project:<sup>7</sup>

### OBJECTIVES, QUESTIONS AND HYPOTHESES

- Could the physical differences between women and men (e.g. hormonal production, ergonomics, manipulative strength, body or body-part size, voice pitch, etc.) or their different experiences, needs and preferences enter into the topic?
- Can different outcomes for women and men be considered in the context of what is being addressed?
- Can we expect different impacts on women and men or groups of women and men?

### METHODOLOGY, DESIGN, DATA COLLECTION

- Will the design and tools (e.g. questionnaires, focus groups, etc.) be able to capture possible sex or gender differences or, on the contrary, confirm the absence of differences?
- Will data be collected on both sexes, respectively will members of both sexes be interviewed, and in adequate proportions?

### ANALYSIS

- Are the data analysed with respect to sex or gender?
- Is the association of sex or gender with other relevant variables such as age, social origin and ethnicity analysed?

### APPLICATION AND IMPACTS

- If the resulting product or service does not specifically target one sex, will it meet the needs of both men and women?
- Will it meet the expectations of men and women, or different groups of men and women, in terms of content, function and design?
- Will the resulting product or service be similarly safe for men and women (e.g. drug development, safety features, food ingredients, etc.)?
- Will the positive effects of the project similarly affect the quality of life of men and women (e.g. transport planning, urban planning, public services, etc.)?
- Will the planned product or service be equally accessible to men and women (or other groups)?

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<sup>7</sup> Adapted from: [https://www.tacr.cz/wp-content/uploads/documents/2021/01/18/1610962134\\_Gender%20ve%20v%C3%BDzkumu%20-%20p%C5%99%C3%ADru%C4%8Dka\\_pdf.pdf](https://www.tacr.cz/wp-content/uploads/documents/2021/01/18/1610962134_Gender%20ve%20v%C3%BDzkumu%20-%20p%C5%99%C3%ADru%C4%8Dka_pdf.pdf)

## COMMUNICATION AND DISSEMINATION OF RESULTS

- Are relevant conclusions related to the sex or gender dimensions of the issue presented as part of the analysis?
- Are zero differences also reported?
- Does the presentation include relevant statistics, tables or graphs that differentiate the data by sex?
- Was any consideration given to producing a specific publication presenting the sex or gender dimension of the issue, such as a conference paper, etc.?

## DOMESTIC AND FOREIGN EXPERIENCE

In the international environment, and not only within the European Research Area, the incorporation of the gender dimension into R&D&I is not new. Foreign R&D&I funders that systematically call for the integration of the gender dimension into R&D&I include Fraunhofer Gesellschaft, the Irish Research Council, the Austrian Research Promotion Agency, the Centre National de la Recherche Scientifique and the Research Council of Norway. The Technology Agency of the Czech Republic is among such "pioneers" at national level in the Czech Republic. Partly based on their experience, there are specific recommendations on what to avoid in a project plan in the context of the gender dimension and, on the other hand, what can significantly help:<sup>8</sup>

- It is important to distinguish between the gender dimension in R&D&I content and the gender diversity of the research team. The diversity of the research team is not directly related to the gender dimension in the R&D&I content.
- The integration of the gender dimension should avoid the use of stereotypes. For example, creating pink versions of products for girls and women indirectly promotes gender stereotypes.
- Neither gender nor sex-related characteristics should automatically be treated as binary categories (i.e. existing in just two versions - male and female). The possible intra-group diversity and the quantity of masculinities and femininities should be reflected, as well as the possible absence of differences between men and women.
- When trying to incorporate the sex and gender dimension, it is important to see the interrelationship of these variables with other variables or characteristics (e.g. age, ethnicity, social origin, sexuality, etc.).
- The integration of a gender perspective into the methodology and method of application is often insufficient (despite the often correctly identified gender context of the issue).
- Formalism or unsubstantiated argumentation: the criterion of the gender dimension can often be vague, e.g. a statement that the "R&D&I is gender-neutral" or that the "R&D&I will not cause inequalities between men and women", or the gender context is marginalised.
- Environmental arguments: a claim that taking the gender dimension into account is not relevant on the basis of the justification that the project is beneficial to the environment and thus has the same impact on society regardless of gender is not sufficiently substantiated. The relationship to the environment should also be determined based on the potential impacts on men and women.

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<sup>8</sup> [https://www.tacr.cz/wp-content/uploads/documents/2021/01/18/1610962134\\_Gender%20ve%20v%C3%BDzkumu%20-%20p%C5%99%C3%ADru%C4%8Dka\\_pdf.pdf](https://www.tacr.cz/wp-content/uploads/documents/2021/01/18/1610962134_Gender%20ve%20v%C3%BDzkumu%20-%20p%C5%99%C3%ADru%C4%8Dka_pdf.pdf)

## MORE INFORMATION

- <https://data.europa.eu/doi/10.2777/876509>
- <http://genderedinnovations.stanford.edu/>
- <https://genderaveda.cz/jedna-velikost-nestaci/>
- <https://eige.europa.eu/gender-mainstreaming/toolkits/gear>
- <https://www.tacr.cz/gender-v-obsahu-vyzkumu-a-inovaci/>
- <https://h2020.genderaction.eu/genderaction-for-he-missions/>