

Austrian Research Promotion Agency | FFG

CROSS-CUTTING ISSUES IN MSCA DOCTORAL NETWORKS

FFG Academy, June 2021

OPEN SCIENCE & RESPONSIBLE INNOVATION ALL MSCA



The MSCA endorse Open Science and Responsible Research and Innovation (RRI) through engaging society at large, integrating the gender and ethical dimensions, promoting Open Science practices through targeted training activities, ensuring open access to research outcomes, including FAIR data handling (= Findable, Accessible, Interoperable, Reusable), encouraging formal and informal science education and feeding back research results into teaching and education.

cf MSCA Work Programme 2021-22

RESPONSIBLE RESEARCH AND INNOVATION – RRI ...

... is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, to foster the design of inclusive and sustainable research and innovation.

... is implemented as a **package** that includes multi-actor and public engagement in R&I, enabling easier access to scientific results, the take up of gender and ethics in the research and innovation content and process, and formal and informal science education.
[...]"

Source: <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation>

HOW put this into practice? ...

- public engagement, open access, gender, ethics, science education (= elements of RRI) and
- integrated actions that promote institutional change (Example MSCA: Charter & Code, Horizon Europe: Gender Equality Plans)

OPEN SCIENCE PRACTICES IN HE



- Open Science as changing modus operandi in Science **Open Access, Open Data, Open Method, Open Educational Resources**
- **Open Science in Horizon Europe**
“an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process”
- **mandatory and non-mandatory**
Open Science practices → both need to be addressed in the proposal
- Details in the Horizon Europe Programme Guide and the annotated template

Open Science practices*

- **early and open sharing** of research (for example through preregistration, registered reports, pre-prints, or crowd-sourcing)
- **research output management** including research data management
- measures to ensure **reproducibility** of research outputs
- providing **open access** to research outputs (e.g. publications, data, software, models, algorithms, and workflows) through deposition in trusted repositories
- participation in **open peer-review**
- **involving all relevant knowledge actors** including citizens, civil society and end users in the co-creation of R&I agendas and contents (such as citizen science)

*Listed in the proposal template; mandatory and non-mandatory practices

OPEN SCIENCE PRACTICES – DOCTORAL NETWORKS



Doctoral Networks should develop substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields and fostering the culture of Open Science, innovation and entrepreneurship.

In particular, Doctoral Networks should adequately prepare doctoral candidates for increased research collaboration and information-sharing made possible by new (digital) technologies (e.g. collaborative tools, opening access to publications and to research data, FAIR data management, public engagement and citizen science, etc.).

cf MSCA Work Programme 2021-22

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)	Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, (...)	Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices) 	Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development 	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise 
Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects) 	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities 	
Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects)	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	30%	20%
Weighting		

OPEN SCIENCE IN THE APPLICATION FOR MSCA DN

- Open Access for peer reviewed publications; Handling of Research Data (as open as possible, as closed as necessary) → in particular under 2.3 - dissemination
- methodology – focus on the research process
- training elements
- implementation / capacity of the participating organisations ? → chapter 3.2 and in chapter 4 – see annotation in the table per participating organisation

Beneficiary Legal Name:	
General Description	<i>Short description of the activities relevant to the action</i>
Role and Commitment of key persons (including supervisors)	<i>Including names, title and the intended extent of involvement in the action (in <u>percentage of full-time employment</u>) of the key scientific staff who will be involved in the research, training and supervision</i>
Key Research Facilities, Infrastructure and Equipment	<i>Outline the key facilities and infrastructure available and demonstrate that each team has sufficient capacity to host and/or offer a suitable environment for supervising the research and training of the recruited researchers</i>
Status of Research Premises	<i>Please explain the status of the beneficiary's research facilities – i.e. are they owned by the beneficiary or rented by it? Are its research premises wholly independent from other beneficiaries and/or associated partners in the consortium?</i>
Previous Involvement in Research and Training Programmes, including H2020 ITN	<i>Detail any relevant EU, national or international research and training actions/projects in which the beneficiary has previously participated. Please clearly mention any previous involvement in H2020 ITN funded project(s), including project(s) acronym and reference number.</i>
Current Involvement in Research and Training Programmes, including H2020 ITN	<i>Detail any relevant EU, national or international research and training actions/projects in which the beneficiary is currently participating. Please clearly mention any current involvement in ongoing ITN funded project(s), including project(s) acronym and reference number.</i>
Relevant Publications/datasets/softwares/ Innovation Products/ other achievements	<i>Max. 5 Key elements of the achievement, including a short qualitative assessment of its impact and (where available) its digital object identifier (DOI) or other type of persistent identifier (PID). Publications, in particular journal articles, are expected to be open access. Datasets are expected to be FAIR and 'as open as possible, as closed as necessary'.</i>

OPEN SCIENCE IN THE APPLICATION FOR MSCA DN

- implementation / capacity of the participating organisations ? → chapter 3.2 and 4 – see annotation in the table per participating organisation

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)	Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, (...)	Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices) 	Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development 	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects) 	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities 	
Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects)	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	30%	20%
Weighting		

PUBLIC ENGAGEMENT & SCIENCE EDUCATION

- communication to the general public
- as a result that is used (exploited) by others in education
- as part of the training activities – to develop skills in this field
- as part of the methodology under excellence ?

PROMOTING INSTITUTIONAL CHANGE: CHARTER & CODE

„The principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (Charter and Code) **promoting open, merit-based and transparent recruitment and attractive working and employment conditions** are a cornerstone of the MSCA and all funded host organisations must put effort into applying them. **The MSCA pay particular attention to equal opportunities and inclusiveness.**“

MSCA Work Programme 2021-22

If yes: include this information into your proposal – i.e. in section 3 – implementation

Have organisations gained other forms of recognition for promoting excellent framework conditions for researchers (ie the Athena SWAN award etc.) ?

Have the organisations endorsed Charter & Code - or even received the HR Excellence in Research award ?
<https://euraxess.ec.europa.eu>



Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)	Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, (...)	Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages ★
Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices) ★	Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development ★	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise ★
Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects) ★	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities ★	
Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects)	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	30%	20%
Weighting		

GENDER RELATED ASPECTS IN THE APPLICATION

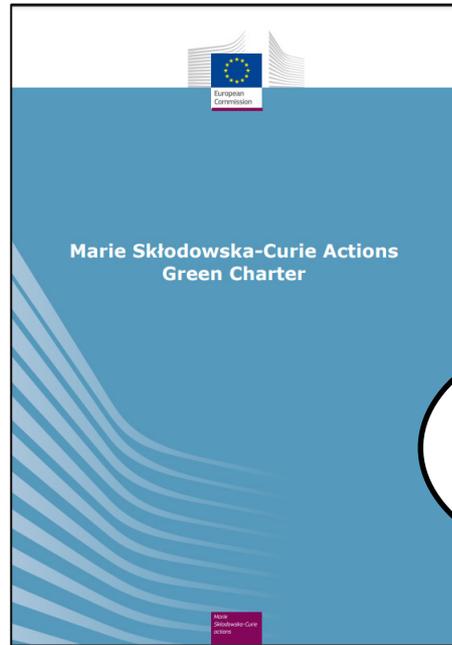
- With regard to the research content (if relevant)
- Through training or communication activities (e.g. skills training related to Gender aspects, mentoring, awareness raising among girls for science / STEM etc.), also impact on career
- **At institutional level → Gender Equality plan**
 Self declaration in the administrative form → "y/n", Grace period for the GEP until 2022
GEP is an eligibility criterion for public bodies, public and private research organisations or HEIs; does not apply to other categories such as privat for-profit organization including SMEs, NGOs and Civil Society Organisations

MSCA GREEN CHARTER

 Under Horizon Europe, the MSCA will significantly contribute to **promote sustainable research** in line with the European Green Deal, the United Nation's 2030 Agenda and the Sustainable Development Goals. All MSCA-funded projects are encouraged to **address the principles of the MSCA Green Charter and implement measures to minimise the environmental footprint of their activities.**

cf MSCA Work Programme 2021-22

SUSTAINABLE RESEARCH



to be addressed in the proposal part B under implementation – environmental aspects

could also be addressed in part B under impact – communication (sharing best practice)

- to reduce the environmental footprint of MSCA-funded projects and to serve as a catalyst in promoting best practice in sustainable research management
- All MSCA-funded projects are encouraged to address the principles of the MSCA Green Charter – on a "best effort" basis: to commit to as many of its provisions as possible during the implementation of their projects. → Reporting
- Explicitly mentioned in the template DN under implementation
- <https://ec.europa.eu/research/mariecurieactions/green-charter>

ETHICS & SECURITY

ETHICS ISSUES

- Ethics appraisal – all projects in Horizon Europe
- first step: Self-Assessment by the applicants based on the Ethics Issues Table in part A
- [Guidance on Ethics Self-assessment](#)
- need to identify ethics issues – including the potential misuse of results (if not covered under security issues)

SECURITY ISSUES

- Security appraisal – all projects in Horizon Europe
- first step: Self-Assessment by the applicants based on the Security Issues Table in part A
- Guidance coming soon ...
- need to flag issues concerning security classification or security rules – for example, activities that could result in the development of chemical, biological, radiological or nuclear (CBRN) weapons or provide knowledge, materials and technologies that could be adapted for criminal/terrorist activities

ETHICAL PRINCIPLES IN RESEARCH AND INNOVATION

- Respecting human dignity and integrity
- Ensuring honesty and transparency towards research subjects and notably getting free and informed consent (as well as assent whenever relevant)
- Protecting vulnerable persons
- Ensuring privacy and confidentiality
- Promoting justice and inclusiveness
- Minimising harm and maximising benefit
- Sharing the benefits with disadvantaged populations, especially if the research is being carried out in developing countries
- Maximising animal welfare, in particular by ensuring replacement, reduction and refinement ('3Rs') in animal research
- Respecting and protecting the environment and future generations

1. Human Embryonic Stem Cells and Human Embryos		Page
Does this activity involve Human Embryonic Stem Cells (hESCs)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Will they be directly derived from embryos within this project?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they previously established cells lines?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are the cell lines registered in the European registry for human embryonic stem cell lines?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does this activity involve the use of human embryos?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Will the activity lead to their destruction?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
2. Humans		Page
Does this activity involve human participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they volunteers for non medical studies (e.g. social or human sciences research)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they healthy volunteers for medical studies?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they patients for medical studies?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they potentially vulnerable individuals or groups?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they children/minors?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are they other persons unable to give informed consent?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does this activity involve interventions (physical also including imaging technology, behavioural treatments, etc.) on the study participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does it involve invasive techniques?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does it involve collection of biological samples?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does this activity involve conducting a clinical study as defined by the Clinical Trial Regulation (EU 536/2014)? (using pharmaceuticals, biologicals, radiopharmaceuticals, or advanced therapy medicinal products)	<input type="radio"/> Yes <input checked="" type="radio"/> No	

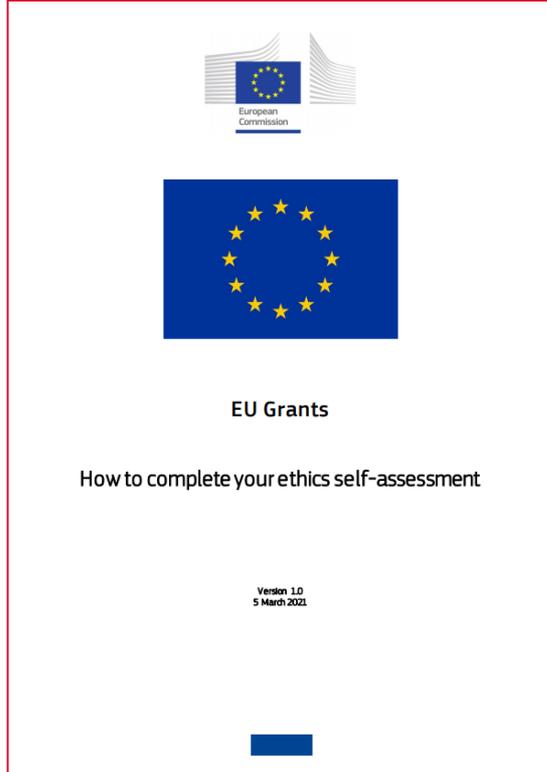
ETHICS ISSUES TABLE PART A

1. Human Embryonic Stem Cells & Human Embryos
2. Humans
3. Human Cells / Tissues (not covered by sect. 1)
4. Personal data
5. Animals
6. Non-EU Countries
7. Environment, Health & Safety
8. Artificial Intelligence
9. Other Ethics Issues

mind the detail: non-EU = all outside the European Union

EXAMPLE: QUESTIONS RELATED TO NON-EU COUNTRIES

- In case non-EU countries are involved, do the activities undertaken in these countries raise potential ethics issues? Specify the countries.
- Is it planned to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)?
- Is it planned to import any material (other than data) from non-EU countries into the EU or from a non-EU country to another non-EU country? (Specify the material and countries involved)
- Is it planned to export any material (other than data) from the EU to non-EU countries? (Specify the material and countries involved)
- Does your activity involve low and/or lower middle income countries, are benefit-sharing measures foreseen?
- Could the situation in the country put the individuals taking part in the activity at risk?



GUIDANCE TO IDENTIFY AND ADDRESS ETHICS ISSUES

- For Guidance “How to complete your ethics self assessment”
- Includes further domain specific information and guidance notes (for example Ethics in Social Sciences, Research on Children etc.)

If you identify potential ethical issues in the proposal → detail how these will be addressed

ETHICS SELF ASSESSMENT

- Start early based on the Self Assessment Guide
- all in part A now: table & section „Ethics Self-Assessment“ – **no particular section in B**
- If issue flagged: describe the issue and any relevant documents (for example authorisation or permission that are already available, including the expiry date – or, approximate timing etc.)
- No need to provide all documents in advance, keep them on file or have them ready when needed (= start of the project)

1. Human Embryonic Stem Cells and Human Embryos	Page
Does this activity involve Human Embryonic Stem Cells (hESCs)?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Will they be directly derived from embryos within this project?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they previously established cell lines?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are the cell lines registered in the European registry for human embryonic stem cell lines?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Does this activity involve the use of human embryos?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Will the activity lead to their destruction?	<input type="radio"/> Yes <input checked="" type="radio"/> No
2. Humans	Page
Does this activity involve human participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they volunteers for non medical studies (e.g. social or human sciences research)?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they healthy volunteers for medical studies?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they patients for medical studies?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they potentially vulnerable individuals or groups?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they ...?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Are they ...?	<input type="radio"/> Yes <input checked="" type="radio"/> No

Ethics Self-Assessment

Ethical dimension of the objectives, methodology and likely impact

Explain in detail the identified issues in relation to:

- objectives of the activities (e.g. study of vulnerable populations, etc.)
- methodology (e.g. clinical trials, involvement of children, protection of personal data, etc.)
- the potential impact of the activities (e.g. environmental damage, stigmatisation of particular social groups, political or financial adverse consequences, misuse, etc.)

Compliance with ethical principles and relevant legislations

Describe how the issue(s) identified in the ethics issues table above will be addressed in order to adhere to the ethical principles and what will be done to ensure that the activities are compliant with the EU/national legal and ethical requirements of the country or countries where the tasks are to be carried out. It is reminded that for activities performed in a non-EU countries, they should also be allowed in at least one EU Member State.

1. EU Classified Information (EUCI) ²		Page
Does this activity involve information and/or materials requiring protection against unauthorised disclosure (EUCI)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Is the activity going to use classified information as background ³ information?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Is the activity going to generate EU classified foreground ⁴ information as result?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does this activity involve non-EU countries?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Do participants from non-EU countries need to have access to EUCI?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Do the non-EU countries concerned have a security of information agreement with the EU?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
2. Misuse		Page
Does this activity have the potential for misuse of results?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does the activity provide knowledge, materials and technologies that could be channeled into crime and/or terrorism?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Could the activity result in the development of chemical, biological, radiological or nuclear (CBRN) weapons and the means for their delivery?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
3. Other Security Issues		Page
Does this activity involve information and/or materials subject to national security restrictions? If yes, please specify: (Maximum number of characters allowed: 1000)	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Are there any other security issues that should be taken into consideration? If yes, please specify: (Maximum number of characters allowed: 1000)	<input type="radio"/> Yes <input checked="" type="radio"/> No	

SECURITY ISSUES TABLE

- New in part A for all Horizon Europe projects
- need to flag issues concerning security classification or security rules – for example, activities that could result in the development of chemical, biological, radiological or nuclear (CBRN) weapons or provide knowledge, materials and technologies that could be adapted for criminal/terrorist activities
- Reminder: issues of potential misuse of results not covered under this table should be flagged and analysed in the Ethics Issues Table

DISCLAIMER

All text, images and graphics are subject to copyright. Publication or use - whether in part or whole - is permitted only with express written consent from Österr. Forschungsförderungsgesellschaft mbH. We can not accept responsibility for the correctness, accuracy or completeness of the information offered. Any liability for damages that have been caused by the use or non-use of the information offered or by inaccurate or incomplete information is precluded.