

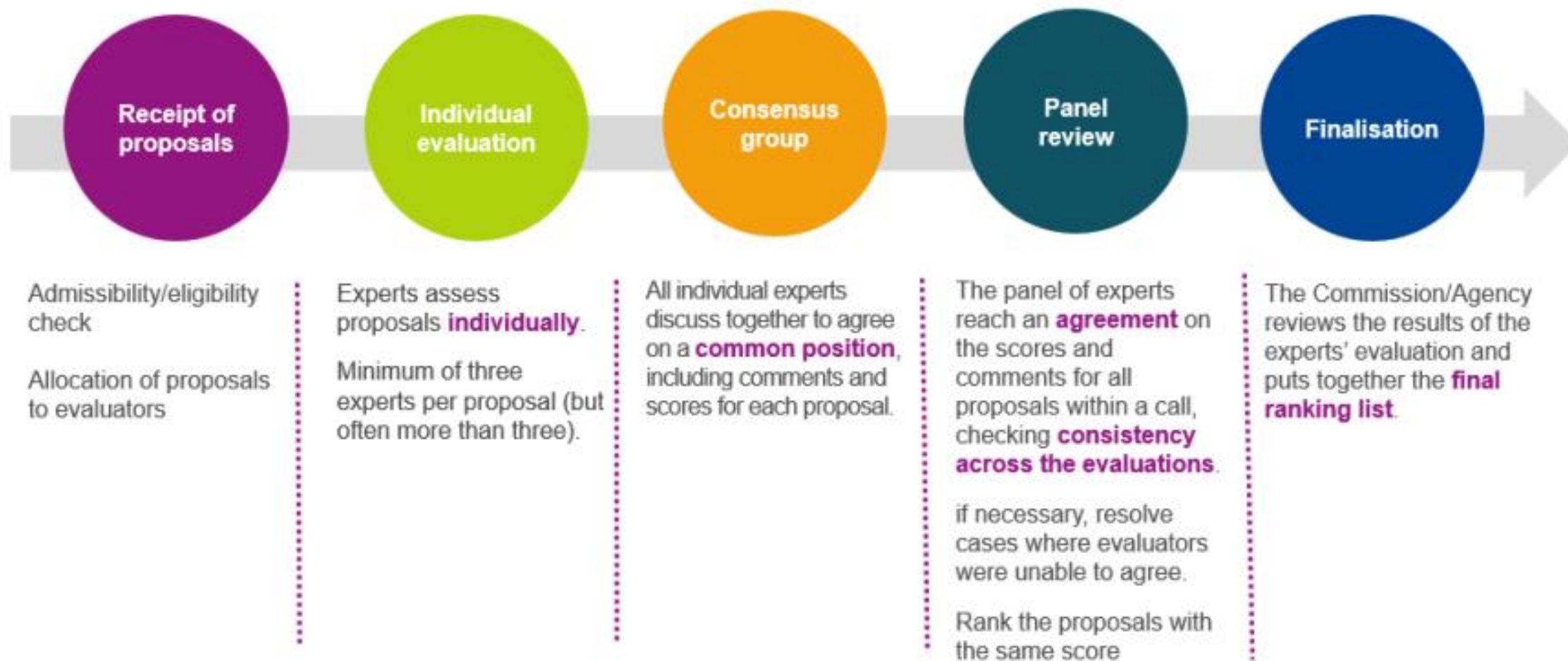
Marie Skłodowska-Curie Actions Horizon Europe

Doctoral Networks 2021 Call

7th September 2021

Jesús ROJO

MSCA DN 2021: OVERVIEW OF THE PROCESS



MSCA DN 2021: CRITERIA AND EQUAL SCORES

- PART A
- PART B
 - ✓ B1 (30 pages)
 - ✓ B2

Criteria	Weight	Priority (ex.aequo)
Excellence	50%	1
Impact	30%	2
Implementation	20%	3

The priority order for **ex-aequo proposals** will be established as follows:

- Score awarded for the criterion 'Excellence'
- In case of equality, scores awarded for the criterion 'Impact'
- If necessary, the gender balance among PF fellows
- If a distinction still cannot be made, the panel may decide to further prioritise by considering other factors, such as:
 - *gender and other diversity aspects in the research activities*
 - *participation of the non-academic sector (including involvement of SMEs)*
 - *geographical diversity*
 - *favourable employment and working conditions*
 - *relationship to the Horizon Europe objectives, in general.*

MSCA DN 2021: AWARD CRITERIA

EXCELLENCE	IMPACT	QUALITY AND EFFICIENCY OF THE IMPLEMENTATION
Quality and pertinence of the project's research and innovation objectives	Contribution to structuring doctoral training at European level and 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	Credibility of the measures to enhance the career perspectives 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	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	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	30%	20%

MSCA DN 2021: AWARD CRITERIA

‘Excellence’, ‘Impact’ and ‘Quality and efficiency of the implementation’:

- Each criterion includes the **‘aspects to be taken into account’**. The same aspect is not included in different criteria, so it is not assessed twice.
- Open Science practices are assessed as part of the scientific methodology in the excellence criterion.

1.1. 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)

- Introduction, objectives and overview of the research programme
- Pertinence and innovative aspects of the research programme
- WPs list

MSCA DN 2021: AWARD CRITERIA EXCELLENCE

Excellence: main novelties

1.2 Soundness of the proposed methodology

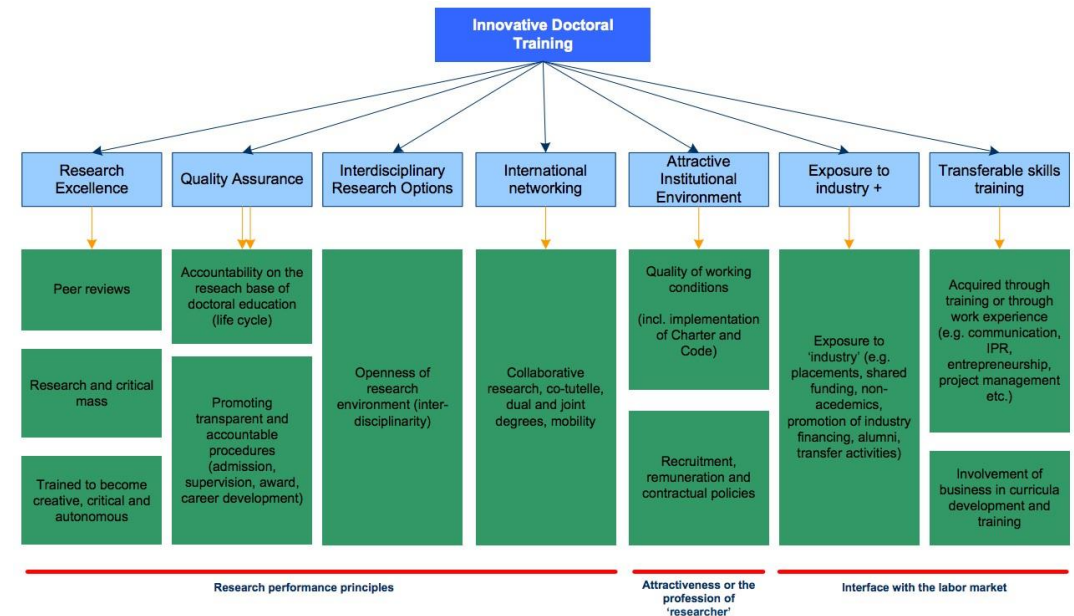
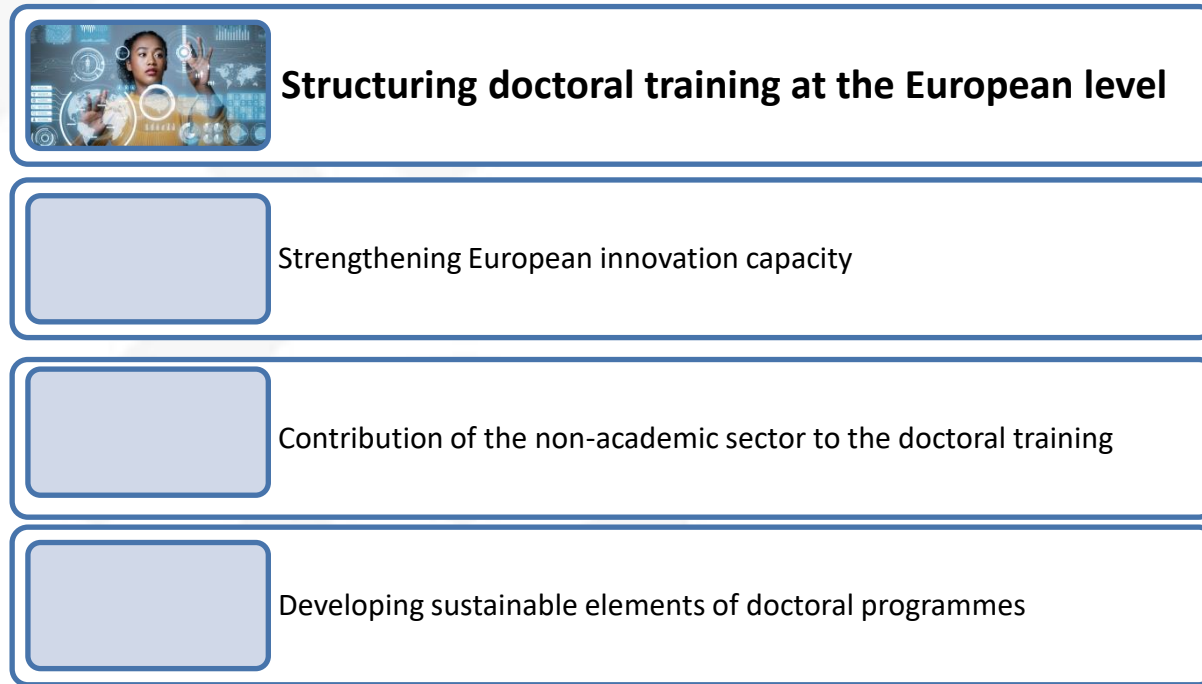
- Gender dimension and diversity aspects
- Open science practices
- Research data management and management of other research outputs
 - Gestión y planificación de datos de investigación. Horizonte Europa.
<https://www.youtube.com/watch?v=4jvAzT0lvlo&t=6686s>

1.3 Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects)

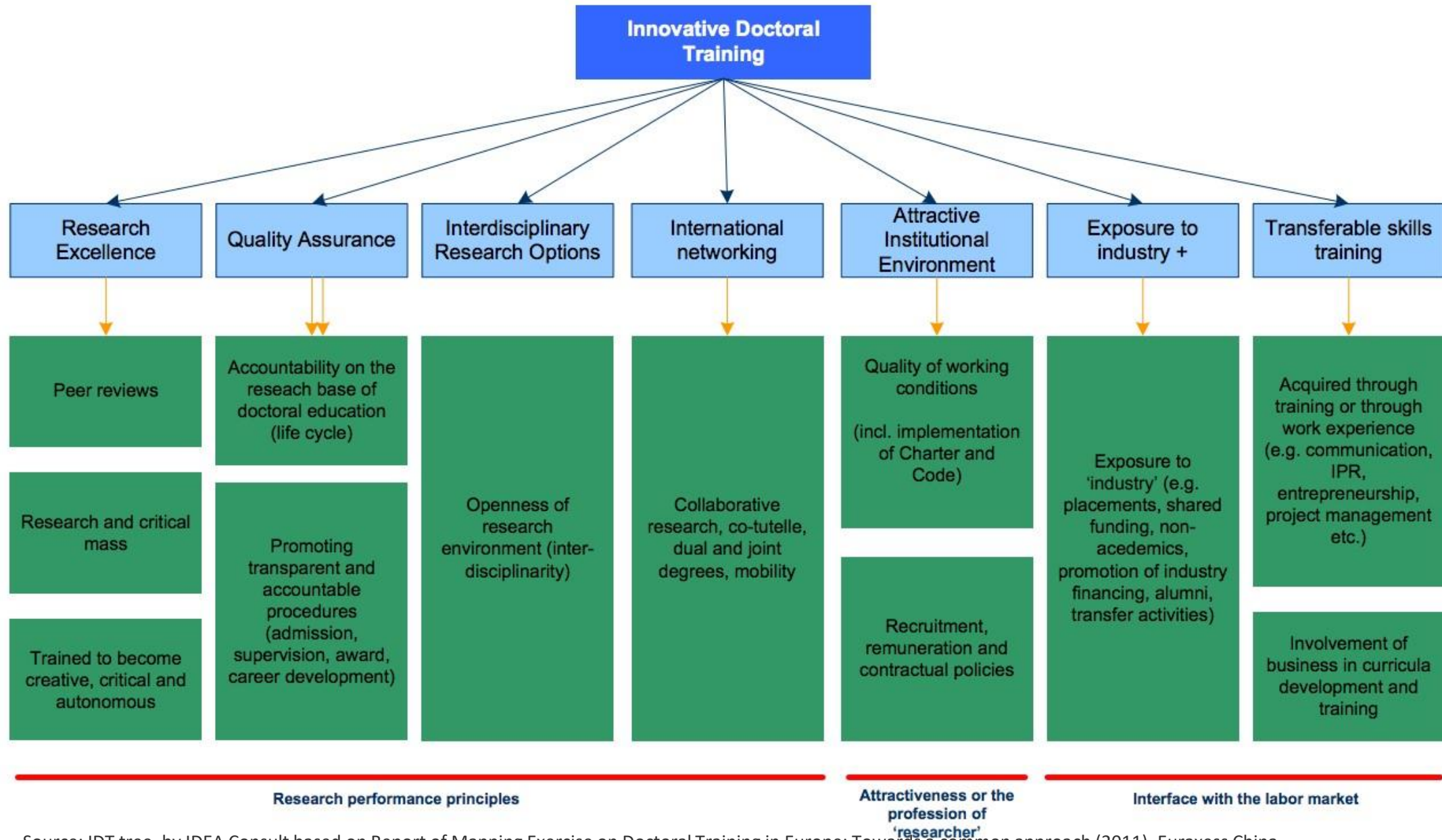
1.4 Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects)

MSCA DN 2021: AWARD CRITERIA IMPACT

2.1. Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for:



Source: IDT tree, by IDEA Consult based on Report of Mapping Exercise on Doctoral Training in Europe: Towards a common approach (2011)



Source: IDT tree, by IDEA Consult based on Report of Mapping Exercise on Doctoral Training in Europe: Towards a common approach (2011). Euraxess China.

MSCA DN 2021: AWARD CRITERIA

2.1. Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for:



- Contribution to **Europe's Economy and Society** by the Doctoral Programme and the Doctoral Candidates
- Linkage to the of **EU/HEU goals** or UN SDG or some aspects of the Green Deal, Digitalization...
- How it will help **bringing ideas to market and policy stakeholders**.
- The **role of the non-academic sector** in terms of research commercialization, training in entrepreneurship/tech transfer to the fellows.
- **Previous ITN** or other funded projects, beyond them

MSCA DN 2021: AWARD CRITERIA

2.1. Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for:

Structuring doctoral training at the European level

 Strengthening European innovation capacity

 Contribution of the non-academic sector to the doctoral training

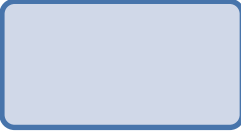
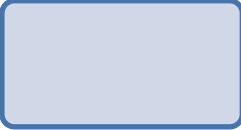
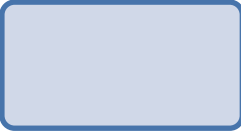
Developing sustainable elements of doctoral programmes

EXPOSURE of Fellows to the non-academic sector is meaningful

- **Employability** of the fellows in the non-academic sector
- **Stays** of the fellows in the non-academic sector.
- Excellence and impact of the research training.
How the training goals can be only achieved with the **contribution of the non-academic**.
- The **contribution** of your non-academic sector participants.
- Improve the **inter-sectoral collaboration** in research training in this area.

MSCA DN 2021: AWARD CRITERIA

2.1. Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for:

	Structuring doctoral training at the European level
	Strengthening European innovation capacity
	Contribution of the non-academic sector to the doctoral training
	Developing sustainable elements of doctoral programmes

- Spreading of **best practices** in European **collaborative research training programmes**.
- Ongoing and **sustainable activities after the end** of the programme, e.g. an own grad school.
- The **uniqueness** and need for your Doctoral Network.
- **Lessons learned** of your programme at the end

MSCA DN 2021: AWARD CRITERIA

2.2. Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development

- How the **training modules / activities** will provide **impact on the career perspectives and employability**. (Core scientific training, other scientific training and the transferable skills programme).
- **Development of career perspective opportunities** in both sectors.
 - In Academia
 - In Non-Academic Sector: SMEs, BioPharma, Engineering, Telecoms, Governments...
- As individual level: short- and long-term impact career.

MSCA DN 2021: AWARD CRITERIA IMPACT

2.3 Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities

Required sub-headings:

- Plan for the dissemination and exploitation activities, including communication activities. *(a more detailed plan will need to be provided as a mandatory project deliverable submitted at mid-term stage)*
- Strategy for the management of intellectual property, foreseen protection measures

	Dissemination	Exploitation	Communication
What	the public disclosure of the results by appropriate means	The use of results in further research and innovation activities	Taking strategic and targeted measures for promoting the action itself and its results
When	When results are available		From the project start on
Why	Knowledge transfer, enable further use of results	Enable use and uptake of results	Inform and reach out to society, show the benefits of research
How	Publications, posters,...	Patents, policy guidelines,...	Social media, events,...
Target audiences	Audiences who can continue using the results, e.g. scientific peers	Audiences who can make use of the results for scientific, societal, economic purposes or for policy making	Multiple audiences beyond the project's community, e.g. media, broad public

MSCA DN 2021: AWARD CRITERIA IMPACT

2.4 The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts (project's pathways towards impact)

- Expected scientific impact(s)
- Expected economic/technological impact(s)
- Expected societal impact(s)

Give an indication of the magnitude and importance of the project's contribution to the expected outcomes and impacts, should the project be successful. Provide quantified estimates where possible and meaningful.

- **Magnitude** refers to how widespread the outcomes and impacts are likely to be. For example, in terms of the size of the target group, or the proportion of that group, that should benefit over time;
- **Importance** refers to the value of those benefits. For example, number of additional healthy life years; efficiency savings in energy supply.

MSCA DN 2021 DEFINITIONS

RESULTS

What is generated during the project implementation. This may include, for example, **know-how, innovative solutions, algorithms**, proof of feasibility, new business models, policy recommendations, guidelines, prototypes, demonstrators, **databases and datasets**, trained researchers, new infrastructures, networks, etc. Most project results (inventions, scientific works, etc.) are **‘Intellectual Property’**, which may, if appropriate, be protected by formal ‘Intellectual Property Rights’. *Example: Successful large-scale demonstrator: trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management.*

OUTCOMES

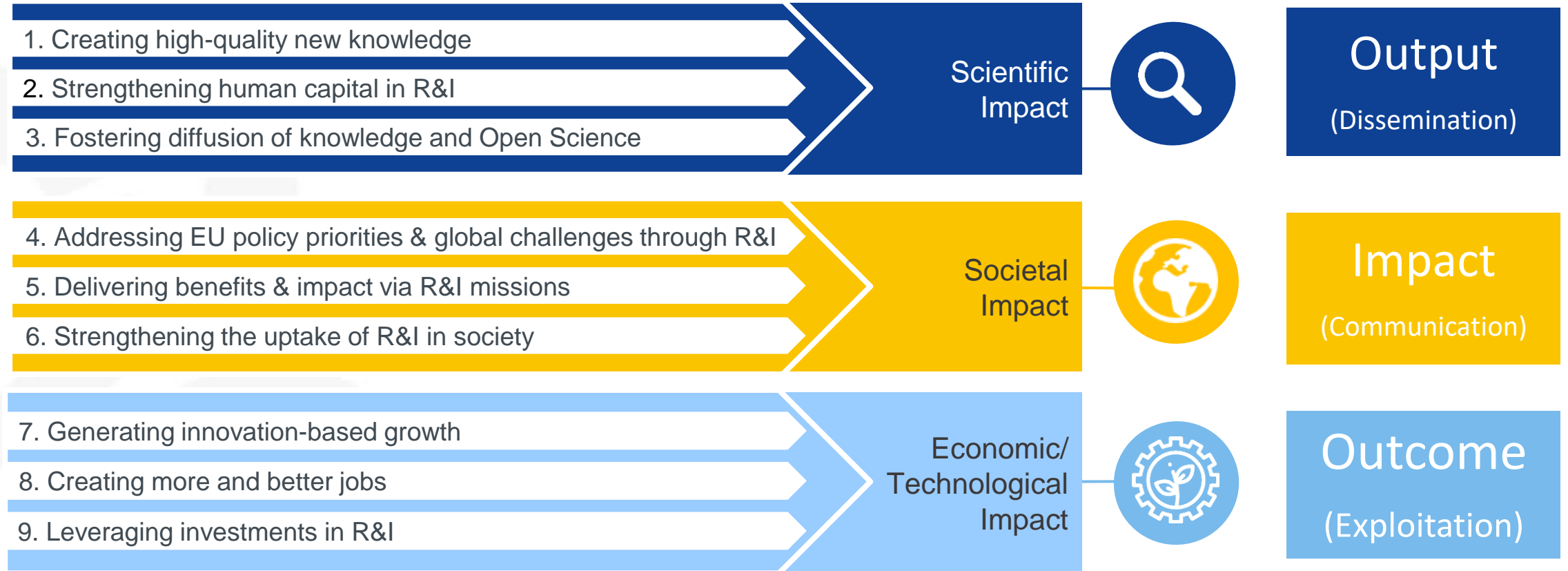
The expected effects, **over the medium term**, of projects supported under a given topic. The **results of a project should contribute to these outcomes**, fostered in particular by the dissemination and exploitation measures. This may include the uptake, diffusion, deployment, and/or use of the project’s results by direct target groups. Outcomes generally occur during or **shortly after the end of the project**. *Example: 9 European airports adopt the advanced forecasting system demonstrated during the project.*

PATHWAY TO IMPACT

Logical steps towards the achievement of the **expected impacts of the project over time**, in particular **beyond** the duration of a project. A pathway begins with the projects’ results, to their dissemination, exploitation and communication, contributing to the expected outcomes in the work programme, and ultimately to the wider scientific, economic and societal impacts of the work programme destination.

THREE TYPES OF IMPACT

HORIZON EUROPE **LEGISLATION** defines three types of impact, tracked with Key Impact Pathways



Article 50 & Annex V 'Time-bound indicators to report on an annual basis on progress of the Programme towards the achievement of the objectives referred to in Article 3 and set in Annex V along impact pathways'

IMPACT DESIGN IN HORIZON EUROPE. THREE TYPES OF IMPACT



Scientific impact

Promote scientific excellence, support the **creation and diffusion of high-quality new fundamental and applied knowledge**, skills, training and mobility of researchers, attract talent at all levels, and contribute to full engagement of Union's talent pool in actions supported under the Programme.



Societal impact

Generate knowledge, strengthen the impact of R&I in developing, supporting and **implementing Union policies**, and support the **uptake of innovative solutions in industry**, notably in SMEs, and society to address global challenges, inter alia the SDGs



Economic impact

Foster all forms of innovation, facilitate technological development, demonstration and **knowledge transfer**, and strengthen deployment of innovative solutions



Horizon Europe

Programme Guide

Version 1.0
17 June 2021

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf Pag 31

MSCA DN 2021: AWARD CRITERIA

3.1 Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages

Required Sub-headings

- Work Packages description (please include table 3.1a);
- List of major deliverables (please include table 3.1b, including the awarding of doctoral degrees;
- List of major milestones (please include table 3.1c);
- Fellow's individual projects, including secondment plan (please include table 3.1d);

- Network organisation
- Joint governing structure (mandatory for DN-ID and DN-JD actions)
- For DN-JD, joint admission, selection, supervision, monitoring and assessment procedures
- Supervisory board
- Recruitment strategy
- Progress monitoring and evaluation of individual projects
- Risk management at consortium level (including table 3.2a)
- Gender aspects
- Environmental aspects in light of the [MSCA Green Charter](#)

MSCA DN 2021: AWARD CRITERIA

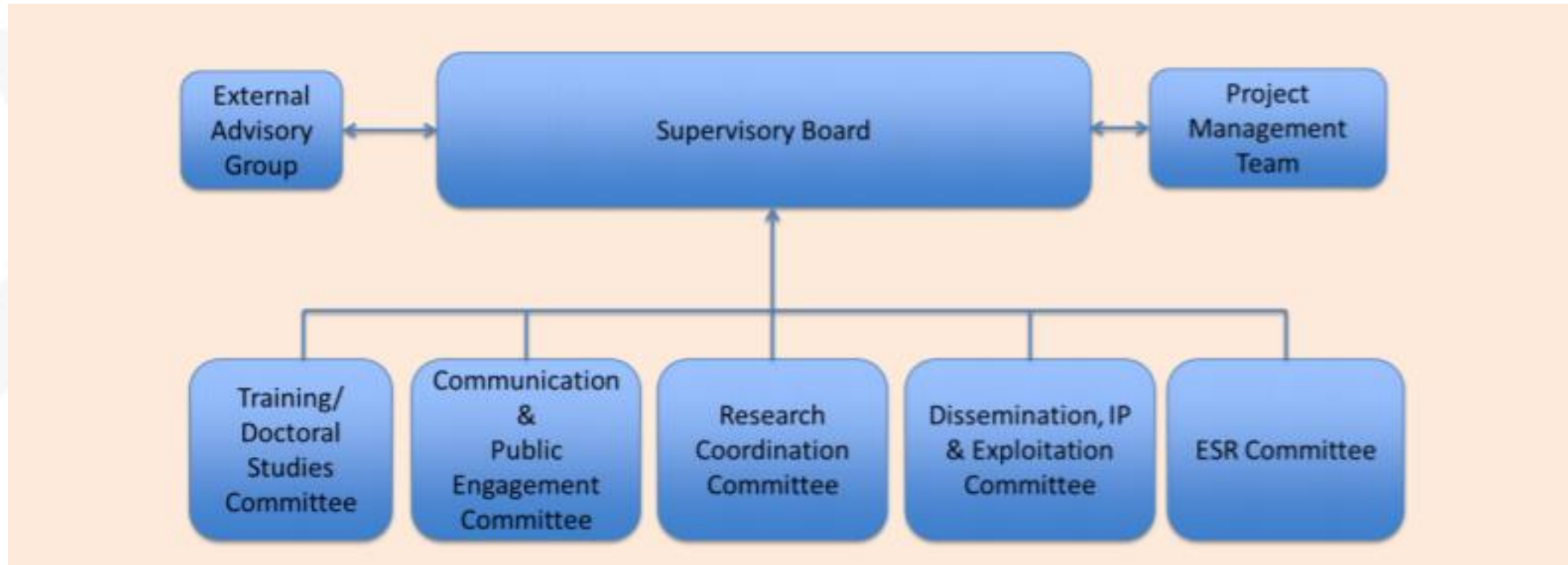
Quality and efficiency of the implementation: main novelties

3.1 Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages

- **Management structures not assessed anymore**
- Risk management at consortium level
- Gender aspects (both at the level of recruitment and that of decision-making within the action)
- Environmental aspects in light of the MSCA Green Charter
- Description Joint Governing Structure (ID-JD) and joint admission, selection, supervision, monitoring and assessment procedures
- Strategy for Scientific Misconduct // Recruitment Strategy
- Internal Communication
- WP Impact ????

MSCA DN 2021: AWARD CRITERIA

3.1 Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages



MSCA DN 2021: AWARD CRITERIA

Quality and efficiency of the implementation: main novelties

3.2 Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise

- Operational capacity fully assessed under criterion 3.2
- Description of the **necessary infrastructure** and how the consortia provides them.
- **Hosting arrangements** – excellent environment for host the doctoral candidates.
- Euraxess Services – Office
- **HR Excellence in Research**
- Explain the consortium and its **complementarities, synergies**, previous collaborations, etc.
- Commitment of the beneficiaries

DOCTORAL NETWORKS: PROJECT IMPLEMENTATION

REPORTING - novelties

Beneficiaries will also be requested to report on:

- **Project Pathway to impact:**
 1. Results (results, scientific publications, research datasets, IPRs resulting from the project, standards resulting from the project, other research outputs)
 2. Dissemination activities
 3. Communication activities
- **Impact** (technology readiness level of the project, impact on SDGs, citizen engagement, etc.)

DOCTORAL NETWORKS: PROJECT IMPLEMENTATION

REPORTING - novelties

- **NEW** - **Data management plan submitted at mid-term** and an update towards the end of the project if needed;
- **NEW** - **Plan for the dissemination and exploitation** of results, including communication activities, **submitted at mid-term** and an update towards the end of the project.

DOCTORAL NETWORKS: PROJECT IMPLEMENTATION

REPORTING - novelties

- **NEW - Progress report submitted** within 30 days after one year from the starting date of the action;
- **NEW - Mid-term meeting** organized between the participants and the granting authority;
- **NEW - Mobility declaration** submitted within 20 days after the recruitment of each researcher and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;
- **NEW - Career development plan:** a document describing how the individual Career Development Plans have been established (listing also the researchers for whom such plans have been put in place), submitted before the mid-term meeting;

MSCA DN 2021: RELEVANT CONCEPTS

Responsible Research and Innovation



Open Access

- Obligation to provide open access when publishing
- "As Open as Possible, as Closed as Necessary"
- Data Management Plan (DMP) is a deliverable in the first 6 months
- Is an explicit evaluation criteria under Excellence

Gender

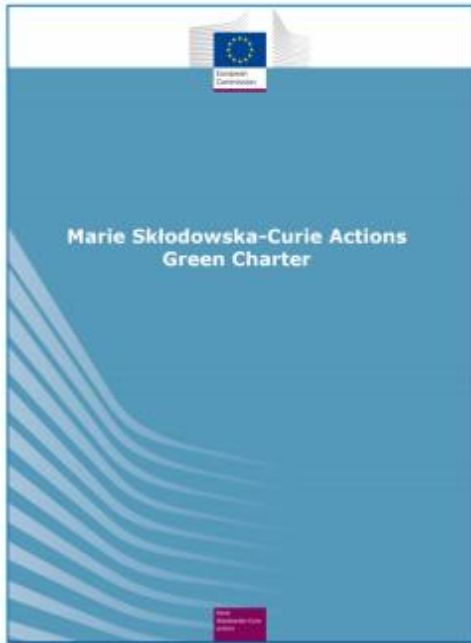
- Is an explicit evaluation criteria under Excellence
- Equal Opportunities among seconded staff and decision-makers/supervisors
- Consider whether and how the gender dimension is relevant to your research (Gender Dimension of Research)
- Consider gender dimension in project management and networking activities

Focus on 6 policies:

1. **Public engagement**
2. **Gender equality**
3. **Science education**
4. **Open access**
5. **Ethics**
6. **Governance**

MSCA DN 2021: RELEVANT CONCEPTS

MSCA Green Charter

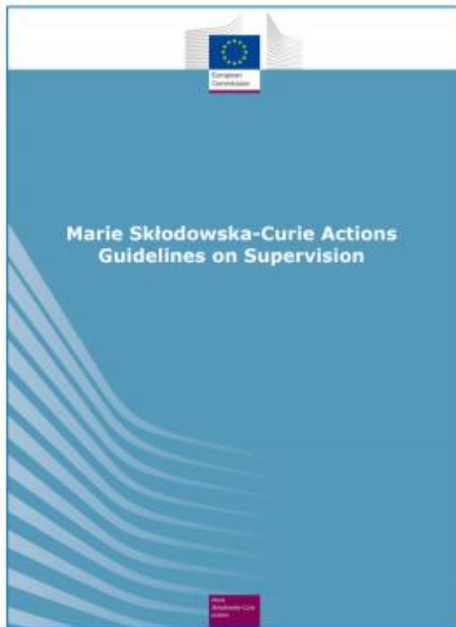


- Code of good practice for MSCA recipients
- Promotes the mainstreaming of environmental considerations in all aspects of project implementation
- Aims to:
 - Reduce the carbon footprint of MSCA projects
 - Raise awareness of environmental issues
 - Promote sustainable research management best practices
- Not an evaluation criteria as such
- 4 levels:
 - 1. Researcher-related measures
 - 2. Institutional-related measures
 - 3. Consortium-related measures (for multi-beneficiary projects)
 - 4. Outreach (applicable to MSCA researchers and participating institutions)

[Marie Skłodowska-Curie Actions Green Charter - Publications Office of the EU \(europea.eu\)](https://europea.eu)

MSCA DN 2021: RELEVANT CONCEPTS

Guidelines on supervision



- Appropriate level of supervision depends on the career stage of both parties and the expectations of the project
- Supervisors need to be committed and involved for the full duration of the fellowship
- Make sure the supervisor is on board with the career development plans
- 4 Levels
 - **1. Role of the supervisor:** General principles and integration of the researcher, Research support, Career development, Mentoring and wellbeing of the researcher, Communication and conflict resolution
 - **2. Role of the researcher:** General principles, Research, Wellbeing, Communication and conflict resolution
 - **3. Role of institution**
 - **4. Training and professional development for supervisors**

[Marie Skłodowska-Curie actions guidelines on supervision - Publications Office of the EU \(europea.eu\)](https://europea.eu)

MSCA DN 2021: GENERAL TIPS FOR PROPOSAL WRITING

About the project :

- Approach properly the novelties of the call
 - Gender Dimension and diversity Aspects
 - Open Science
 - Research Data Management Plan
- Innovative Aspects of the current state of the art, existing programmes, networks.
- How your Project goes beyond the state-of-the art.
- Employability - Career Development of the Doctoral Candidates
- IMPACTS of the Project
 - Scientific
 - Economic / Technological
 - Societal



MSCA PF 2021: GENERAL TIPS FOR PROPOSAL WRITING

General Approach:

- It is a DOCTORAL NETWORK based on individual projects and its relationships
- Doctoral candidates the centre of the project
- National Contact Points...
- Get familiar with the Funding and Tenders ' Portal, upload a version, you will be able to rewrite it

About the evaluation:

- The **weighting of criteria** is 50% -30% -20%. You need to perform at close to 100% on each
- **Follow the template** –the evaluators need to find all key points
- The reviewers may not be specialists in the field
- **“Una imagen vale más que mil palabras”**: use visuals to provide global information at a glance



¡Muchas gracias!

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Annex. Policy and horizontal considerations



Open Science across the programme



Gender dimension in R&I content



Pathway to impact



Measures to maximise impact



Do no significant harm principle (DNSH)

These aspects must normally be considered in all Horizon Europe calls (unless explicitly mentioned in the topic description).



Open Science across the programme

Open Science

Open science is an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process. Including active engagement of society

Mandatory immediate Open Access to publications: beneficiaries must retain sufficient IPRs to comply with open access requirements;

Data sharing as 'open as possible, as closed as necessary': mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Reusable) research data

- Work Programmes may incentivize or oblige to adhere to **open science practices** such as involvement of citizens, or to use the **European Open Science Cloud**
- Assessment of open science practices through the **excellence award criteria** for proposal evaluation. Under **quality of participants** previous experience on open sciences practices will be evaluated positively.
- Dedicated support to **open science policy actions**
- **Open Research Europe** publishing platform



Gender dimension in R&I content

Gender Dimension

Addressing the gender dimension in research and innovation entails taking into account sex and gender in the whole research & innovation process.

The **integration of the gender dimension** into R&I content is **mandatory**, unless it is explicitly mentioned in the topic description

Why is gender dimension important?

- Why do we observe differences between women and men in infection levels and mortality rates in the COVID-19 pandemic?
- Does it make sense to study cardiovascular diseases only on male animals and on men, or osteoporosis only on women?
- Does it make sense to design car safety equipment only on the basis of male body standards?
- Is it responsible to develop AI products that spread gender and racial biases due to a lack of diversity in the data used in training AI applications?
- Is it normal that household travel surveys, and thus mobility analysis and transport planning, underrate trips performed as part of caring work?
- Did you know that pheromones given off by men experimenters, but not women, induce a stress response in laboratory mice sufficient to trigger pain relief?
- And did you know that climate change is affecting sex determination in a number of marine species and that certain populations are now at risk of extinction?



Describing the impact of your proposal

Project's pathway towards impact

...by thinking about the specific contribution the project can make to the expected outcomes and impacts set out in the Work Programme.

Work Programme outcome: "Innovative accessibility and logistics solutions applied by the European Transport sector"

Work Programme impact: "Seamless, smart, inclusive and sustainable mobility services"

PROJECT'S RESULTS

INPUTS

DISSEMINATION & EXPLOITATION

PROJECT'S CONTRIBUTION TO THE EXPECTED OUTCOME

PROJECT'S CONTRIBUTION TO THE EXPECTED IMPACT

HE grant, human resources, expertise, etc.

Successful large-scale demonstration trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management

Other project results

At least 9 European airports adopt the advanced forecasting system that was demonstrated during the project

Other expected outcomes

Increase max. passenger capacity by 15% and passenger average throughput by 10%, leading to a 28% reduction in infrastructure expansion costs

Other expected impacts



Measures to maximise impact

Dissemination,
exploitation and
communication

To include a draft plan in proposal is an admissibility condition, unless the work programme topic explicitly states otherwise.

All measures should be **proportionate** to the scale of the project, and should contain **concrete actions** to be implemented both **during and after** the end of the project

Elements of the D&E&C plan

- **Planned measures** to maximise the impact of projects
- **Target groups** (e.g. scientific community, end users, financial actors, public at large) and **proposed channels** to interact
- **Communication measures** for promoting the project and its findings throughout the full lifespan of the project
- **Policy feedback** measures to contribute to policy shaping and supporting the implementation of new policy initiatives and decisions
- Follow-up plan to foster **exploitation/uptake** of the results
 - Comprehensive and feasible strategy for the **management of the intellectual property** (the provision of a results ownership list is mandatory at the end of the project)
 - If exploitation is expected primarily in non-associated third countries, give a convincing justification that this is still in the Union's interest.



Do no significant harm principle (DNSH)

European Green Deal

In line with the European Green Deal objectives, the research and innovation activities should not make a significant harm to any of the six environmental objectives (EU Taxonomy Regulation)

The **DNSH principle** needs to be taken into consideration in the **scientific methodology** and **impact** of the project. However, compliance is not mandatory unless explicitly stated.

The six environmental objectives to which no significant harm should be done:



Climate change mitigation



Sustainable use & protection of water & marine resources



Pollution prevention & control



Climate change adaptation



Transition to a circular economy



Protection and restoration of biodiversity & ecosystems