

MSCA
DOCTORAL NETWORKS
HANDBOOK
CALL 2022

NETWORK OF THE MARIE SKŁODOWSKA-CURIE ACTIONS
NATIONAL CONTACT POINTS

Task 3.4	Handbooks
Issued by:	Agency for Mobility and EU Programmes
Issued date:	19 September 2022
Work Package Leader:	InnovationAuth (IL)



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Abbreviations

- MSCA – Marie Skłodowska – Curie Actions
- HE – Horizon Europe programme
- EC – European Commission
- REA – European Research Executive Agency
- NCP – National Contact Point
- PIC - Participant Identification Code
- FAQ – Frequently asked questions
- GfA – Guide for Applicants
- MS – Member States
- AC – Countries associated to Horizon Europe programme
- DN – Doctoral networks
- JD – Joint Doctorates
- ID – Industrial Doctorates
- GA – Grant Agreement
- CA – Consortium Agreement
- PA – Partnership Agreement

Disclaimer

This Handbook is an UNOFFICIAL document prepared by MSCA-NET, the EU-funded project of National Contact Points (NCP) for the Marie Skłodowska-Curie Actions (MSCA). It is the continuation of the MSCA Handbooks prepared within the Net4Mobility+ project by the Irish Universities Association.

The information contained in this document is intended to assist and support, unofficially and practically, anyone submitting a proposal to the MSCA Doctoral Network Call with the deadline of 15 November 2022. This document is not, by any means, a substitute for official documents published by the European Commission, which in all cases must be considered binding. As such, this document is to be used in addition to the official call documents: [MSCA Work Programme 2021-2022](#), [Guide for Applicants for Doctoral Networks 2022](#), and official FAQs prepared by the European Research Executive Agency (REA).

This document may not be considered in any way as deriving from and/or representing the views and policies of the European Commission and the REA. Likewise, it may not be considered as a document deriving from and/or representing the views and policies of the entities that are beneficiaries of the MSCA-NET project.

Please note that this document is susceptible to data corruption, unauthorized amendment, and interception by unauthorized third parties for which we accept no liability.

It is the responsibility of the applicant to remain aware of any updates and to use the latest version of the official call documents should they be published after the publication of this document.

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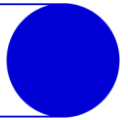
Acknowledgements

We thank our NCPs colleagues, task members from the MSCA-NET project and the EC / REA Staff for checking the document, as well as the External Experts/ Scientists who have acted as Evaluators for past calls and have provided valuable insights.

How to use the Handbook

This Handbook should be used in conjunction with the [MSCA Work Programme 2021 – 2022](#), [Guide for Applicants](#), [official FAQs](#) and proposal templates, and [Standard application form \(HE MSCA DN\)](#), downloaded from the call webpage on the [Funding & Tender Opportunities Portal](#). Please note that the information in this Handbook complements the information contained in the template for Part B of the proposal.

- ✓ Information from the original Part B proposal is written in black Times New Roman font.
- ✓ Additional suggestions & information for each section of the proposal (Parts B1 and B2) are written in blue bullets and **Calibri font**.
- ✓ Tables with the top 5 strengths and weaknesses of each sub-criterion illustrate comments by evaluators in previous Evaluation Summary Reports.



MSCA Doctoral Networks essentials

Before you begin preparing your proposal, please ensure you are aware of the following facts and comply with the requested requirements:

MSCA DN DEADLINE	<ul style="list-style-type: none"> ❖ 15 November 2022, 17:00 Brussels time ❖ You can submit your application at any time before the deadline. Once submitted you can reopen, edit and resubmit your proposal as many times as required before the call deadline. Only the last submitted version of the proposal will be evaluated. Please start early!
CONSORTIUM REQUIREMENTS	<ul style="list-style-type: none"> ❖ At least three independent legal entities, each established in a different EU Member States or HE Associated Countries. A minimum of ONE beneficiary must be from an EU MS. On top of this minimum, any entity from any Third Country can join and there is no minimum for associated partners.
RESUBMISSION	<ul style="list-style-type: none"> ❖ Applicants having received a score below 80% in the Doctoral Networks 2021 call are NOT ELIGIBLE to resubmit a similar proposal in the Doctoral Network 2022 call. ❖ As specified in the Horizon Europe Standard application forms Part A, a 'similar' proposal or contract is one that differs from the current one in minor ways, and in which some of the present consortium members are involved. ❖ If you intend to re-submit a proposal, you must indicate re-submission in Part A of the project proposal, including the reference number of the previously submitted proposal.

Upon fulfilling requirements for the 2022 call, make sure you have also prepared the following:

COMMUNICATING CONSORTIUM AGREEMENT	<ul style="list-style-type: none"> ❖ During the preparation of the proposal, the coordinator should start negotiations and communications with the other beneficiaries on the main terms of the consortium: project implementation, internal organisation and management, project budget and distribution of EU funding, additional IP rules, rights and obligation of consortium partners, etc. ❖ The consortium agreement (CA) should be negotiated and concluded before signing the Grant Agreement (GA) and should complement the GA but must not contain any provision contrary to it.
PRE-AGREEMENT FOR JOINT DOCTORATES	<ul style="list-style-type: none"> ❖ At the time of the submission of the Joint Doctorates proposal, you need to provide a pre-agreement to award a joint, double or multiple degrees to the doctoral candidate(s). ❖ The pre-agreement template is available in the Part B2 – section 7.2.
LETTER OF COMMITMENT	<ul style="list-style-type: none"> ❖ Associated Partners must include a letter of commitment in the proposal to ensure their active participation in the action. The involvement of any Associated Partner for which no such evidence of commitment is submitted will not be taken into account during evaluation. ❖ The letter of commitment template is available in Part B2 – 7.1.

	<ul style="list-style-type: none"> ❖ Associated Partners linked to a Beneficiary do not need to provide a letter of commitment. However, it should be clear from Part B1 which Associated Partners are linked to a Beneficiary, and which ones are not.
<p>PARTNERSHIP AGREEMENT</p>	<ul style="list-style-type: none"> ❖ When Associated Partners are involved, the beneficiary is encouraged to sign a partnership agreement with them to regulate the internal relationship between all participating organisations. The partnership agreement must comply with the Grant Agreement.
<p>GENDER EQUALITY PLAN (GEP)</p>	<ul style="list-style-type: none"> ❖ For calls with deadlines in 2022, once a project proposal is selected for funding following evaluations, consortium partners concerned by the eligibility criterion will have until the Grant Agreement signature to confirm they have a GEP in place.
<p>REQUIRED DOCUMENTS</p>	<ul style="list-style-type: none"> ❖ Read the required documents that contain the rules and conditions for the call, the template for project proposals as well frequently asked questions (FAQs) <ul style="list-style-type: none"> ✓ Doctoral Network Guide for Applicants 2022 ✓ MSCA Work Programme 2021 – 2022 ✓ Specific FAQs for Doctoral Network call ✓ MSCA-NET FAQs ✓ Proposal template and instructions on how to fill it in
<p>FAMILIARISE YOURSELF WITH THE SUBMISSION PROCESS</p>	<ul style="list-style-type: none"> ❖ Proposals must be created and submitted on the Funding & Tender Opportunities Portal by a contact person of the coordinating organisation – using the coordinator’s Participant Identification Code (PIC) number. ❖ Proposal templates (Part B) can be downloaded once the submission has been started and a proposal profile is created on the Funding & Tender Opportunities Portal. ❖ For more details on the submission process, you can consult Proposal Submission Service User Manual.
<p>UNDERSTAND WHAT IS REQUIRED FOR THE SUBMISSION</p>	<ul style="list-style-type: none"> ❖ Administrative forms (Part A) Part A constitutes an integral part of your proposal; it is the part of the proposal where you will be asked for certain administrative details that will be used in the evaluation and further processing of your proposal. For more information, please refer to the Standard application form (HE MSCA DN) (pages from 1 to 20). In Part A only beneficiaries fill in the information about the researchers involved and the role of participating organisations in the project. This is not required for the associated partners. Also, in Part A, it is not required for the beneficiaries or the associated partners, to fill in the list of up to five publications, relevant previous projects, or significant infrastructure. This information however will need to be described in the relevant sections of Part B2 (Section 6). ❖ Narrative Part B is composed of two separate PDF files (Part B1 and Part B2), which must be uploaded as separate PDF files: ❖ Part B1, containing a maximum of 34 A4 pages. <ul style="list-style-type: none"> • The Start Page must consist of 1 whole page. • The Table of Contents must consist of 1 whole page. • The list of Participating Organisations data, including the non-academic beneficiaries and declarations tables, must consist of a maximum of 2 whole pages.

- Section 1 (Excellence) must start on page 5 of the document.
 - The core of the proposal (section 1 – Excellence, section 2 – Impact and section 3 - Implementation) must have a maximum of 30 pages.
 - Any excess pages (i.e., numerical page 35 and beyond) will not be made available to the evaluators and therefore will not be taken into account.
- ❖ **Part B2**, with no strict page limit for the number of pages containing:
- Section 4. Network organisation.
 - Section 5. Environmental aspects in light of the MSCA Green Charter.
 - Section 6. Participating organisation – one table of maximum of one page for each beneficiary and half a page for each associated partner.
 - Section 7. Templates of Letter of Commitment and for DN – JD Pre-agreement letter.
- ❖ Bear in mind that formatting for Part B1 must be continued for part B2.

All sections of the proposal will be included in the evaluation.

Applicants will **NOT** be able to submit their proposal in the submission system unless both parts 1 and 2 are provided in PDF format (Adobe version 3 or higher, with embedded fonts).

You should name your part B2 documents as:

- Proposal Number-Acronym-Part B1.pdf
- Proposal Number-Acronym-Part B2.pdf

The maximum size of each document is 10 MB.

NCP SUPPORT

- ❖ You have contacted your relevant MSCA National Contact Point.
- ❖ You can contact your NCP via <https://msca-net.eu/contact-points/>

Key tips for proposal template and layout

The following information is important to familiarise yourself with as it will make the review process for the evaluator easier.

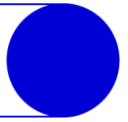
1. General points and information on Part A

- ✓ **Acronym:** Use a self-explanatory title and a memorable acronym. Don't forget that you will not be able to change the acronym once you submit your proposal on the Funding and Tenders Portal.
 - ✓ The acronym will be on your proposal, and you will refer to it throughout your communication and dissemination activities. Ensure that the acronym is short, easy to pronounce, and easy to remember by the evaluators. Please also be careful that it cannot be construed as inappropriate or have a "double meaning" in another language.
- ✓ Here is a useful tool for creating an acronym: <http://acronymcreator.net/>

- ✓ The proposal acronym must be placed in a header on each page in addition to already placed information: Call: - HORIZON-MSCA-2022-DN-01 - Doctoral Networks (DN)
- ✓ Check http://cordis.europa.eu/projects/home_en.html to see if an EU project with the same acronym already exists. An internet search could also be used to determine if the acronym is “protected”.
- ✓ **For resubmissions**, don't just use the Evaluation Summary Report (ESR) from the previous submission. Review the proposal as a whole to find room for improvement. Your new proposal is not being evaluated in comparison with the old one.
- ✓ Evaluators will have access to the previous ESR after they have evaluated the new proposal.
- ✓ Part B might change slightly from one year to another (e.g., subheadings), so please be sure that you are using the template of the 2022 MSCA DN-call.
- ✓ Be aware of the overall weighting of each criterion. You need to score well in all sections to be funded.
- ✓ **Descriptors & free keywords:** Choose carefully up to 5 (and at least 3) descriptors among the fixed descriptors related to your chosen evaluation Panel that best characterise the subject of your proposal, **in descending order of relevance**. You can also enter any words you think give extra detail of the scope of your proposal.
 - ✓ It is important to carefully choose your descriptors as they will be used to support REA services in identifying the best qualified evaluators for your proposal (matchmaking process between the descriptors of your proposal and the descriptors of the registered evaluators' expertise).
 - ✓ Description on how to select the keywords is available on a [specific FAQ](#).

2. Abstract

- ✓ The abstract is a short description of your project in maximum 2000 characters including spaces.
- ✓ The main elements are:
 - 1-2 sentences that put the project into context including the research objective
 - Background information on the state of the art
 - Specific aims and details of training a new generation of researchers
- ✓ Abstracts in Part A should not contain sensitive information, as they will be made publicly available if the project is funded.
- ✓ An abstract should promote your project and be understandable to the non-expert.
- ✓ It should communicate the importance, impact and timeliness of the project and also convince the evaluator that it should be funded.
- ✓ It should **NOT** be the usual scientific abstract.
- ✓ See ideas of existing projects in CORDIS (using filters [Projects – H2020 – Marie Skłodowska-Curie actions Innovative Training Networks](#))



3. Proposal layout

- ✓ The page size is **A4**, and **all margins (top, bottom, left, right) should be at least 15 mm** (not including any footers or headers).
- ✓ The reference font for the body text of proposals is **Times New Roman (Windows platforms), Times/Times New Roman (Apple platforms) or Nimbus Roman No. 9 L (Linux distributions)**.
 - ✓ The use of a different font for the body text is not advised and is subject to the cumulative conditions that the font is legible and that its use does not significantly shorten the representation of the proposal in several pages compared to using the reference font (for example to bypass the page limit).
- ✓ **The minimum font size allowed is 11 points.** Standard character spacing and a minimum of single line spacing are to be used.
- ✓ Use charts, diagrams, text boxes, figures to explain aspects of the project. Do not just use blocks of text. Don't forget to add serial numbers and titles to the charts/diagrams/ figures/ text boxes.
- ✓ If needed, use tables for illustrating the core text of the proposal (**minimum font size 9**). Tables should not be used to circumvent the minimum font size indicated for the main text.
- ✓ Ensure that any colour diagrams, etc., are legible when printed (also if printed in black and white).
- ✓ Use highlighting where appropriate (bold, underline, italics) but don't overdo it!
- ✓ **Literature references in footnotes, font size 8.** All footnotes will count towards the page limit.
- ✓ Avoid hyperlinks to information that is designed to expand the proposal. Evaluators will be instructed to ignore them. Include the relevant information in your text.

4. Proposal template

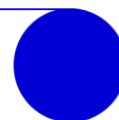
- ✓ Use the proposal template provided, including the exact sub-headings, because:
 - ✓ It matches the evaluation template and helps you to put the right information in the right place for the evaluators to find it.
 - ✓ Evaluators use a "checklist" approach to marking – if the information is not in the correct section, it may be a risk that can have an effect on the final evaluation score.
- ✓ Both Part B2 documents need to have a header on each page containing: the proposal acronym, call identifier and implementation mode applied to the type of DN (DN, DN - ID, DN - JD): **"Call: [HORIZON-MSCA-2022-DN-01-01] – [MSCA Doctoral Networks 2022 – Industrial Doctorates – DN ID] ACRONYM"**
- ✓ All pages should be numbered in a single series on the footer of the page to prevent errors during handling. It is recommended to apply the following numbering format: "Part B - Page X of Y"

5. Page limitations

- ✓ Part B1. Sections 1, 2 and 3 together **should not be longer than 30 pages**. With the start page, the table of contents and list of participating organisations added, Part B1 must not exceed **34 pages**.
- ✓ All tables, figures, references and any other element about these sections must be included as an integral part of these sections and they are counted towards this page limit.
- ✓ After the deadline, excess pages (in over-long proposals) will be automatically blanked, and therefore will not be taken into consideration by the evaluators.

6. Proposal language

- ✓ The proposal must be written in English.
- ✓ Explain any abbreviations the first time you use them.
- ✓ Use simple clear text to be sure that it reads well.
- ✓ Avoid long sentences. Avoid too much repetition. Sign-post or put reference to other parts of the proposal if necessary.
- ✓ Do not copy & paste information from other documents/websites. Instead, tailor information to fit your proposal.



Definitions and key aspects

DISCLAIMER: For the purpose of this MSCA DN Handbook, authors may interpret official EU Definitions that are stated in the [Guide for Applicants for Doctoral Networks 2022](#). Any interpretation by the authors will be indicated in blue font.

DEFINITIONS and KEY ASPECTS	
Artificial Intelligence¹	<p>Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals.</p> <p>AI-based systems can be purely software-based, acting in the virtual world (e.g., voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g., advanced robots, autonomous cars, drones or Internet of Things applications)</p> <p>If you plan to make use of Artificial Intelligence in your project, the evaluators will evaluate the technical robustness of the proposed system under the appropriate criterion – (methodology aspect of the project), as such it should be considered while writing the Excellence part of the project proposal.</p>
Associated Partners	<p>Associated Partners are entities which participate in the action but without the right to directly charge costs or claim contributions. They contribute to the implementation of the action, but do not sign the Grant Agreement. Associated Partners may not employ the researchers under the action.</p>
Associated Partners linked to a beneficiary	<p>Associated Partners linked to a beneficiary are organisations with an established capital or legal link with the beneficiary, which is not limited to the action nor specifically created for its implementation.</p> <p>The Associated Partners linked to a beneficiary do not have the right to claim unit contributions and may not employ the researcher under the action.</p> <p>In addition, they must fulfil the eligibility conditions for participation and funding applicable to the beneficiary to which they are linked.</p> <p>The type of link and involvement of such entities must be clearly described in the proposal and will be assessed as part of the evaluation.</p>
Critical risk	<p>A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives.</p> <p>Level of likelihood to occur (low/medium/high): The likelihood is the estimated probability that the risk will materialize even after taking account of the mitigating measures put in place.</p> <p>Level of severity (low/medium/high): the relative seriousness of the risk and the significance of its effect.</p>

¹ Definition from the European Commission's High-Level Expert Group on Artificial Intelligence, https://ec.europa.eu/futurium/en/system/files/ged/ai_hleg_definition_of_ai_18_december_1.pdf

CA - Consortium Agreement	<p>The consortium agreement is a private agreement between the beneficiaries, to set out the rights and obligations amongst themselves. It does not involve the European Commission / REA.</p> <p>It sets the framework for successful project implementation and exploitation of results including intellectual property management, and is meant to settle where already possible all issues that might hamper the smooth and seamless cooperation of the different actors for the different parts of the project.</p> <p>The members of the consortium must sign a consortium agreement.</p>
CORDIS	<p>The Community Research and Development Information Service – CORDIS – is the European Commission’s primary public repository and portal to disseminate information on all EU-funded research projects and their results in the broadest sense. In this web service, you can find information (calls, projects, partners, contacts) about all European projects financed by Directorate-General Research.</p>
Deliverable	<p>A report that is sent to the European Commission or REA providing information to ensure effective monitoring of the project. There are different types of deliverable (e.g., a report on specific activities or results, data management plans, other documents, ethics or security requirements, software products, technical diagram brochures, etc.).</p> <p>Deliverables must be produced at a given moment during the action. Each work package will produce one or more deliverables during the project.</p>
Evaluation criteria	<p>The criteria against which independent expert evaluators assess eligible proposals. For MSCA, they are related to excellence, impact, and quality and efficiency of implementation.</p>
Evaluation process for MSCA	<p>Each full proposal is evaluated by at least three experts, but in some cases more experts may be needed who know about the full range of disciplines and sectors covered by the proposal. Experts work individually. They give a score for each criterion, with explanatory comments which are indicated in the Evaluation Summary Report. After carrying out an individual evaluation, an expert will join other experts who have evaluated the same proposal in a consensus group, to agree on a common position, including comments and scores. Before notifying coordinators of the final evaluation results, the Commission reviews the results of the experts’ evaluations and puts together the final ranking list for funding under the call.</p>
ESR – Evaluation Summary Report	<p>The Evaluation Summary Report is the assessment of the proposal following evaluation by independent experts. The ESR contains comments and scores for each criterion.</p>
GA – Grant Agreement	<p>The Grant Agreement is the legal instrument that provides for Commission funding of a successful proposal. Grant Agreement preparation procedure</p>
Impacts	<p>Wider long-term effects on society (including the environment), the economy and science, are enabled by the outcomes of R&I investments (long term). Impacts generally occur sometime after the end of the project. For this call, Impacts refers to section 2. Example: <i>The deployment of the advanced forecasting system enables each airport to increase maximum passenger capacity by 15% and passenger average throughput by 10%, leading to a 28% reduction in infrastructure expansion costs.</i></p>
Milestone	<p>Control points in the project helping to chart progress. Milestones may correspond to the achievement of a key result, allowing the next phase of</p>

	<p>the work to begin. They may also be needed at intermediary points so that, if problems have arisen, corrective measures can be taken. A milestone may be a critical decision point in the project where, for example, the consortium must decide which of several technologies to adopt for further development. The achievement of a milestone should be verifiable.</p>
MSCA Green Charter	<p>The MSCA Green Charter is a code of good practice for individuals and institutions that receive MSCA funding. It promotes the sustainable implementation of research activities. The goal of the Green Charter is to encourage sustainable thinking in research management. This document can give you some ideas while writing the implementation section of your project proposal:</p> <p>https://marie-sklodowska-curie-actions.ec.europa.eu/about-msca/msca-green-charter.</p>
Objectives	<p>The goals of the work performed within the project, in terms of its research and innovation content. This will be translated into the project's results.</p> <p>These may range from tackling specific research questions, demonstrating the feasibility of innovation, sharing knowledge among stakeholders on specific issues. These points could be considered in every proposal.</p> <p>The nature of the objectives will depend on the type of action, and the scope of the topic.</p>
Outcomes	<p>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.</p> <p><i>Example: 9 European airports adopt the advanced forecasting system demonstrated during the project.</i></p>
Open Science	<p>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. Open Science practices include early and open sharing of research (for example through pre-registration, registered reports, pre-prints, or crowd-sourcing); research output management; measures to ensure reproducibility of research outputs; providing open access to research outputs (such as publications, data, software, models, algorithms, and workflows); participation in open peer-review; and 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).</p>
PA - Partnership Agreement	<p>Partnership agreements are private agreements concluded with the purpose to regulate the relationship between beneficiaries and Associate Partners, including the secondment period framework. Beneficiaries must be careful to conclude these agreements in compliance with their obligations laid down in the Grant Agreement and, depending on the project, the consortium agreement as well.</p>
Research output	<p>Results generated by the action to which access can be given in the form of scientific publications, data or other engineered outcomes and processes such as software, algorithms, protocols, and electronic notebooks.</p>
Results	<p>Whatever 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</p>

	<p>infrastructures, networks, etc. Most project results (inventions, scientific works, etc.) are ‘intellectual property’, which may, if appropriate, be protected by formal ‘intellectual property rights’ (IPR).</p> <p>Example: <i>Successful large-scale demonstrator: trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management.</i></p>
<p>Supervision</p>	<p>Employers and/or funders should ensure that a person is clearly identified to whom researchers can refer for the performance of their professional duties and should inform the researchers accordingly.</p> <p>Such arrangements should clearly define that the proposed supervisors are sufficiently expert in supervising research, have the time, knowledge, experience, expertise, and commitment to be able to offer the recruited researcher appropriate support and provide for the necessary progress and review procedures, as well as the necessary feedback mechanisms.</p> <p>While the MSCA Guidelines on Supervision are non-binding, funded-projects are strongly encouraged to take them into account.</p>

Part B-1

TABLE OF CONTENTS (max. 1 page)

- Insert a full table of contents with page numbers, including main headings and sub-headings. Include the sections from Document 1 (Part B1) and Document 2 (Part B2).

LIST OF PARTICIPATING ORGANISATIONS (max. 2 pages)

Please provide a list of the consortium's members (both beneficiaries and associated partners²) indicating the legal entity, the department carrying out the work and the scientist-in-charge of the action. Entities with a capital or legal link should be added under the associated partners linked to a beneficiary.

Consortium Member	Legal Entity Short Name*	Academic (tick)	Non-academic (tick)	Awards Doctoral Degrees (tick)	Country	Dept./ Division / Laboratory	Scientist -in- Charge	Role of associated Partner ³ or link to beneficiary
<u>Beneficiaries</u>								
- NAME* Insert full name of the organisation e.g., University of Zagreb	Insert short name of the organisation e.g., UNIZG							Do not complete this section.
<u>Associated Partners**</u>								
- NAME* Insert full name of the partner	Insert short name of the partner							

² Please refer to the section on associated partners

³ For example, delivering specialised training courses, hosting secondments, etc.

<u>Associated Partners linked to a beneficiary</u>								Enter the role of the partner: For example, Training, Hosting Secondments, Delivering Doctoral Degree, etc.
- NAME* Insert full name of the partner	Insert short name of the partner							

* Please use the same participant numbering and names as the ones used in the administrative proposal forms.

- Have in mind that the order of organisation/beneficiary should align with how they were entered in Part A.

** Associated partners should provide a Letter of Commitment (see Section 7).

For non-academic beneficiaries, please provide additional data as indicated in the table below.

- This section is **only for the non-academic beneficiaries** and does not need to be completed for non-academic Associated Partners.

Data for non-academic beneficiaries:

Name	Location of research premises (city / country)	Type of R&D activities	No. of full-time employees	No. of employees in R&D	Website	Annual turnover ⁴ (in Euro)	Enterprise status (Yes/No)	SME status ⁵ (Yes/No)

- The information in the above table **must be based on current data, not projections**
- The financial and operational capacity of organisations participating in successful proposals will be subject to verification during the grant preparation phase

Declarations

⁴ Defined as the total value of sales of goods and services during the last accounting period.

⁵ As defined in [Commission Recommendation 2003/361/EC](#).

Name (institution / individual)	Nature of inter-relationship

- Applicants **must** use the table above to **declare any inter-relationship between different participating institutions or individuals** (e.g., family ties, shared premises or facilities, joint or part ownership, financial interest, overlapping staff or directors, etc.)
- If you have associated partners linked to the beneficiary, you need to declare their connection and inter-relationship.
- If two whole pages are not used for this section, the remaining space must be left blank. For example, if only 1 page is used for the list of participating organisations, then the 2nd page must be completely blank. The excellence section must start on next page.

1. Excellence (starting on p.5)*Excellence – aspects to be taken into account.*

- 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).
- 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 and appropriateness of open science practices).
- Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects).
- Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects).

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)

Required sub-headings:

- Introduction, objectives and overview of the research programme. It should be explained how the individual projects of the recruited researchers will be integrated into – and contribute to – the overall research programme. All proposals should also describe the research projects in the context of a doctoral training programme. Are the objectives measurable and verifiable? Are they realistically achievable?
- As a short introduction, state, the research/technical problem/knowledge/specific skills gap(s) your proposal addresses, its relevance to current European and/or international policies, and your proposed solution to this problem.
- Demonstrate the timeliness and relevance, in terms of societal need and fit to sectoral policy targets, and link to relevant EU policies as well as **UN Sustainable Development Goals**.
- Have in mind that individual training of the doctoral candidates should be delivered through an outstanding research programme and excellent doctoral training programme. You should focus on both the research and the training dimensions of the programme.
- Outline the overall field/research theme of the network, describing the overall research goal of the DN. The research programme must be cohesive and coherent.
- Describe why this consortium is best placed to address this research theme from a cohesive, multi-/inter-disciplinary, and intersectoral point of view, and how the outcome will be greater than the sum of its parts.
- Have in mind that projects need to have clear training aims, and objectives⁶ that are linked to relevance, timeliness, and the proposed research objectives. Think about why you are proposing this project and why now!
- Provide a clear outline of the key specific **Research Objectives** of the programme. Demonstrate that they are measurable, verifiable and realistically achievable. For clarity present them in a bulleted list or text box, relating them to the relevant Work Packages.

⁶ For further definition and difference between the aims, goals, and objectives, you can consult <https://www.10differences.org/difference-between-aims-goals-and-objectives/>

- For the Research and Innovation objectives, have in mind that innovation can also take place as **‘social innovation’**.
- Outline how the training programme is multi-/inter-disciplinary and intersectoral. You should demonstrate the synergy and contribution of each individual project within the whole programme.
 - Pertinence and innovative aspects of the research programme (in light of the current state of the art and existing programmes / networks / doctoral research trainings). Describe how your project goes beyond the state-of-the-art, and the extent the proposed work is ambitious.
- Describe the state-of-the-art in the research area and how the specific Research Objectives will advance the field beyond the current state-of-the-art.
- Show that you master the state-of-the-art in your area: support your state-of-the-art review through key international bibliographic references (in footnotes, font size 8) – also cite the consortium (but not only!) to show that you are the experts in the field. Aim to be effective rather than exhaustive in terms of citations.
- Benchmark against other doctoral research trainings at national or international level. Previous MSCA DN and ITN projects can be checked via CORDIS portal (<https://cordis.europa.eu/en>), but do not limit your benchmark to only EU-funded consortia.
- Consider establishing the links between your programme and existing programmes.
- Show the gap existing in doctoral training in your area and explain how your project will fill this gap. Highlight the need for the specialists you will train among industrial and academic stakeholders in Europe.
- Highlight what makes your project ambitious.

The action should be divided into **Work Packages** and described in the Table 3.1a under the Implementation section.

- Break down the research programme into (typically) three or four discrete research Work Packages that relate to the Research Objectives described above, adding separate Work Packages for training, management and dissemination, communication and exploitation.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
<p>1. The state-of-the-art and the overview of the action are appropriately reviewed and relevant. Recent concepts will be elaborated and verified, and the action has the potential to advance the state-of-the-art in the field. The specific objectives are clearly presented, and they are timely and pertinent.</p> <p>2. The integration of the individual projects into the overall concept is credibly described; each project is in line with the objectives of the consortium and addresses its overarching investigation and research sub-questions.</p> <p>3. The research objectives are clearly outlined and convincingly integrated into the proposed work packages. For each specific objective, there is a comprehensive explanation on how the project will contribute to going beyond state-of-the-art by proposing new and original approaches to tackle the identified bottlenecks.</p> <p>4. Proposal, with very good innovation potential, is state-of-the art and promises a complementary approach to other European and non-European projects running on the same topic.</p> <p>5. The planned research is comprehensively formulated in four research work packages. The proposed methodology is convincingly detailed and strongly supported by various background studies, mostly carried out by the members of the participating teams.</p> <p>6. The objectives of the proposal are very clear and well defined with sufficient key performance indicators (KPIs) for proper verification and assessment.</p>
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
<p>1. Past work on the subjects of the proposal is not sufficiently presented and thus it is not made clear what has been done in the past and how the current proposal will move it forward.</p>

2. *The state of the art gives insufficient attention to how the different disciplines will contribute to the issues raised by the proposal.*
3. *The logical structure of the Work Packages and their interconnection regarding the research workflow are not fully convincing.*
4. *The contribution of the actions to advance the state-of-the-art is not sufficiently explained. The gaps to be studied are generically identified and the planned research questions are not sufficiently developed.*
5. *The scientific originality/innovation is not adequately demonstrated against similar research performed in other areas of the world.*
6. *Key metrics associated with research objectives are not sufficiently described which may hinder the effective monitoring progress towards achievement.*

1.2 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 and appropriateness of open science practices)

Required sub-headings:

- Overall methodology: Describe and explain the overall methodology including the concepts, models and assumptions that underpin your work. Explain how this will enable you to deliver your project's objectives. Refer to any important challenges you may have identified in the chosen methodology and how you intend to overcome them.
- Describe in detail how the objectives in the research programme will be explored - equipment, techniques, tests, types of research, etc. You need to provide enough information so that the evaluator can understand how you will tackle the problem at hand and can clearly see what is novel/interesting about your particular approach (analysis, concept, methods, techniques, etc.).
- Highlight any foreseen challenges and how these will be overcome.
- You can organize the overall methodology description by work package (not mandatory).
- Integration of methods and disciplines to pursue the objectives: Explain how expertise and methods from different disciplines will be brought together and integrated in pursuit of your objectives. If you consider that an inter-disciplinary approach is unnecessary in the context of the proposed work, please provide a justification.
- Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts, or theories from two or more scientific disciplines. The term discipline refers to the first level of MSCA keywords. A list of MSCA keywords is available on: <https://rea.ec.europa.eu/system/files/2021-10/MSCA%20Keywords.pdf>
- Once more, you need to highlight the multi- / inter-disciplinary aspects focusing on the research methodology.
- Also, explain the added value of the interdisciplinary approach to address your research and training objective(s).
- Ask yourself why this consortium is the best team to address these research objectives from a cohesive, multidisciplinary, and intersectoral point of view. Highlight the role of each consortium member in the research programme.
- If applicable, besides beneficiaries, include specific and interdisciplinary methods from Associated Partners who will provide additional training for doctoral candidates.
- Gender dimension and other diversity aspects: Describe how the gender dimension and other diversity aspects are taken into account in the project's research and innovation content. If you

do not consider such a gender dimension to be relevant in your project, please provide a justification.

⚠ Remember that this question relates to the content of the planned research and innovation activities, and not to gender balance in the teams in charge of carrying out the project.

⚠ Sex, gender and diversity analysis refers to biological characteristics and social/cultural factors respectively. For guidance on methods of sex / gender analysis and the issues to be taken into account, please refer to https://ec.europa.eu/info/news/gendered-innovations-2-2020-nov-24_en

- In other words, you should take into account biological characteristics (sex) social/cultural features (gender), and socioeconomic characteristics such as race and social standing/class in research dimension and activities. Ask yourself the following questions:
 - Will the results of the research, now or at any point in the future be applicable to humans? If so, gender/intersectionality needs to be considered.
 - Will the results of the project affect males and females in the same way?
 - Does the methodology ensure that (possible) gender differences will be investigated: that sex/gender differentiated data will be collected and analysed throughout the research cycle? Does it matter whether test persons are male or female?
 - Are questionnaires, surveys, focus groups, etc., designed to unravel potentially relevant sex and/or gender differences in your data?
 - Are the groups involved in the project (e.g., samples, testing groups) gender-balanced?
- Note that, in addition to describing the gender and diversity aspects in the research, it is also possible to address the gender dimension through training (section 1.3) and communication/dissemination activities (section 2.3).
- More questions on the gender aspect in research are available on https://docs.wixstatic.com/ugd/17c073_22d7b327acc8434a91dbceba1898e7d2.pdf
- The European Commission produced a video on Understanding the Gender Dimension for MSCA projects <https://www.youtube.com/watch?v=Hq4eWo3ORfy>
- The European Commission has published [Toolkit gender in EU-funded research](#)
- A gender dimension may apply to research involving the use of animals too.
- If this applies to your research programme, you must briefly explain how you have taken gender into account in the research methodology, e.g. using animal models of both genders, and separation of research subjects into male and female groups.
- Some examples of the gender dimension in different research areas can be found at <https://genderedinnovations.stanford.edu/what-is-gendered-innovations.html>
- Apart from gender dimension in research, and if applicable, include other diversity aspects to better address the multiple and interacting factors of inequality experienced by R&I actors, such as other social categories and identities: e.g., ethnicity and race (including migrants and refugees), social class and wealth, human physical parameters (size, weight), gender identity, sexual orientation, LGBTI+ issues, disability, and age.
- An example of a useful resource listing which could be considered under the other diversity aspects or a new intersectional approach can be found in the publication [Gender equality and diversity in R&I](#).
- If your research is not concerned with gender issues or other diversity aspects you should clearly explain why and provide a strong justification.
 - Open science practices: Describe how appropriate open science practices are implemented as an integral part of the proposed methodology. Show how the choice of practices and their implementation are adapted to the nature of your work, in a way that will increase the chances

of the project delivering on its objectives. If you believe that none of these practices are appropriate for your project, please provide a justification here.

⚠ *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. Open science practices include early and open sharing of research (for example through preregistration, registered reports, pre-prints, or crowd-sourcing); research output management; measures to ensure reproducibility of research outputs; providing open access to research outputs (such as publications, data, software, models, algorithms, and workflows); participation in open peer-review; and 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).*

⚠ *Please note that this question does not refer to outreach actions that may be planned as part of communication, dissemination and exploitation activities. These aspects should instead be described below under ‘Impact’.*

- You must provide concrete information on how you plan to comply with the mandatory, and when relevant, recommended open science practices – at consortium and beneficiary levels.
- In section 3 while describing the consortium as a whole, you can point out that involved organisations apply OS strategies, especially if they implement some specific strategies.

Mandatory OS practice
<ul style="list-style-type: none"> ✓ open access to scientific publications under the conditions required by the Grant Agreement; ✓ responsible management of research data in line with the FAIR principles of ‘findability’, ‘accessibility’, ‘interoperability’ and ‘reusability’, ✓ information about the research outputs/tools/instruments needed to validate the conclusions of scientific publications or to validate/re-use research data; ✓ digital or physical access to the results needed to validate the conclusions of scientific publications, unless exceptions apply; ✓ in cases of public emergency, if requested by the granting authority, immediate open access to all research outputs under open licenses or access under fair and reasonable conditions to legal entities that need the research outputs to address the public emergency.

Recommended OS practice
<ul style="list-style-type: none"> ✓ Open Science practices beyond the mandatory ones, such as involving all relevant knowledge actors, including citizens, early and open sharing of research, output management beyond research data, open peer-review, pre-registration of research, (i.e. specifying your research plan in advance of your research and submitting it to a registry).

- Show how OS implementation is adapted to the nature of your work and methodology, therefore increasing the chances of the project delivering on its objectives.
- You can demonstrate the link between OA, communication, dissemination, and exploitation; using the right licenses to comply with the OA and exploitation.
- In addressing OS practice take into account:
 - ❖ **Early and open sharing:** specific information on what type of early and open sharing is appropriate (if applicable) for your discipline and project, such as preprints or preregistration/registration reports, and which platforms you plan to use.
 - ❖ **Reproducibility of research outputs:** you should outline the measures planned in the project that tend to increase reproducibility. Such measures may already be mentioned in other parts of the methodology of a proposal (such as transparent research design, the robustness of statistical analyses, addressing negative results, etc.) or in mandatory/non-

mandatory open science practices (e.g., the Data Management Plan, early sharing through preregistration and preprints, open access to software, workflows, tools, etc.).

- ❖ **Open access (OA):** Provide specific information on how you will meet the OA requirements, that is deposition and immediate open access to publications and OA to data through a trusted repository, and under open licenses. You may elaborate on the publishing locations that you will use and/or trusted repository/repositories through which OA to publication and research data will be provided.

OA should be “**as open as possible and as closed as necessary**”, remaining “open” in order to foster accessibility, reusability, and accelerate research, but at the same time information should be “closed” to safeguard the privacy of the subjects (protection of the private data), protecting results that can reasonably be expected to be commercially or industrially exploited, keeping confidentiality in connection with security issues.

As a general rule, OA to other research outputs such as software, models, algorithms, workflows, protocols, simulations, electronic notebooks, and others is not required but strongly recommended. Access to ‘physical’ results like cell lines, biospecimens, compounds, materials, etc., is also strongly encouraged.

- ❖ **Open peer review:** Anytime it is possible, you are invited to prefer open peer review for your publications over traditional (‘blind’ or ‘closed’) peer review. When this is the case, you should provide specific information regarding the publishing locations you envisage to use, and highlight those that would qualify as providing open peer review.
 - As a peer-reviewed publishing service you can also use [Open Research Europe](#), the European Commission’s open access publishing platform for scientific articles for Horizon 2020 and Horizon Europe.
- ❖ **Citizen, civil society and end-user engagement:** Provide clear and succinct information on how citizen, civil society and end-user engagement will be implemented in your project, where/if appropriate kinds of engagement will depend on the type of research activities envisaged and may include activities such as:
 - co-design activities (such as workshops, focus groups or other means to develop R&I agendas, roadmaps and policies);
 - co-creation activities (involving citizens and/or end-users directly in the development of new knowledge or innovation, for instance through citizen science and user-led innovation);
 - co-assessment activities (such as assisting in the monitoring, evaluation and feedback to the governance of a project, projects, policies or programmes on an iterative or even continual basis).
- It is recommended that you provide OA to research outputs beyond publications and data (software tools, models, apps, etc.) and share them as early and openly as possible – providing guidance for potentially interested users.
- A clear explanation of how the consortium will adopt recommended practices, as appropriate for projects, will result in a higher evaluation score.
- Justification is needed in case you believe that none of these practices are appropriate for your project.

- *Research data management and management of other research outputs:* Applicants generating/collecting data and/or other research outputs (except for publications) during the project **must provide maximum 1 page** on how the data will be managed in line with the FAIR principles (Findable, Accessible, Interoperable, Reusable), addressing the following (the description should be specific to your project):

Types of data/research outputs/research outputs (e.g., experimental, observational, images, text, numerical) and their estimated size; if applicable, combination with, and provenance of, existing data.

- Research data management (RDM) is the process within the research lifecycle that includes the data collection or acquisition, organisation, curation, storage, (long-term) preservation, security, quality assurance, allocation of persistent identifiers (PIDs), provision of metadata in line with disciplinary requirements, licensing, and rules and procedures for sharing of data.
 - If you expect to generate or re-use data and/or other research outputs (except for publications), you are required to outline in a maximum of 1 page (including OS practices) how these will be managed.
 - RDM, in line with the FAIR principles, is a requirement that should be carried out regardless of whether the data generated and re-used in the project is intended to be openly accessible, or if access restrictions are foreseen.
 - Findability of data/research outputs: Types of persistent and unique identifiers (e.g. digital object identifiers) and trusted repositories that will be used.
 - Accessibility of data/research outputs: IPR considerations and timeline for open access (if open access not provided, explain why); provisions for access to restricted data for verification purposes.
 - Interoperability of data/research outputs: Standards, formats and vocabularies for data and metadata.
 - Reusability of data/research outputs: Licenses for data sharing and re-use (e.g. Creative Commons, Open Data Commons); availability of tools/software/models for data generation and validation/interpretation /re-use.
 - Curation and storage/preservation costs; person/team responsible for data management and quality assurance.
 - If using the [European Open Science Cloud](#) (EOSC) federated repositories, you should explicitly discuss the use of such repositories in the proposal.
 - Show best practice in RDM – including provisions required to be in place to ensure that data is managed responsibly (e.g., the right location is chosen for deposition, legal provisions such as general data protection regulation (GDPR) are respected, etc.).
 - FAIR data is not equivalent to open data (publicly available to everyone to access and reuse). Data can, and should be FAIR, even when access is restricted.
 - More details should be provided in a data management plan (DMP), which is not required at submission stage, but it is mandatory deliverable. In the text explain that further details will be provided in DMP.
- ⚠ *Proposals selected for funding under Horizon Europe will need to develop a detailed data management plan (DMP) for making their data findable, accessible, interoperable and reusable (FAIR) as a deliverable at mid-term and revised towards the end of a project's lifetime.*

⚠ *For guidance on open science practices and research data management, please refer to the relevant section of the [HE Programme Guide on the Funding & Tenders Portal](#).*

- Artificial Intelligence (if applicable to the proposal): If the activities proposed involve the use and/or development of AI-based systems and/or techniques, applicants must provide explanations on the technical robustness of the proposed system(s).
- Have in mind the definition of the Artificial Intelligence at the beginning of the Handbook (page 9).

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
<p>1. <i>The proposal is based on a rigorous, but flexible interdisciplinary methodology that is appropriate for the project objectives, given the complexity of the topic, the diversity of the partners from different countries involved and the multiplicity of the projects that individual researchers will undertake.</i></p> <p>2. <i>The open science practices of the proposal are well planned and include multiple measures in line with FAIR principles, such as open access publications, which aims at making data accessible in each university repository.</i></p> <p>3. <i>The highly relevant gender dimension is well acknowledged and the plan on how to address it is outlined in detail.</i></p> <p>4. <i>The proposal makes very clear that all members, be it doctoral candidates or supervisors, will be trained in diversity and gender aspects and on how to deal with these issues on the daily work.</i></p> <p>5. <i>12. Quantitative and qualitative methods are well-justified in relation to the research aims. The balance between novel and established research methods is suitably explained.</i></p> <p>6. <i>The use of AI in the proposal is technically relevant and does not carry risks associated to human rights.</i></p>
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
<p>1. <i>The methodological overview does not provide sufficient detail about how individual projects would achieve and verify their objectives. It is not sufficiently clear which approaches/theories would be used to answer each research (sub)question and how they would be implemented in each project.</i></p> <p>2. <i>Open Science practices are not fully substantiated. The specific expertise of supervisors in open science practices is not sufficiently evident.</i></p> <p>3. <i>The interdisciplinary aspects of the individual research projects are rather limited and do not sufficiently reflect synergies of the whole proposal.</i></p> <p>4. <i>The claim for interdisciplinarity is insufficiently substantiated as it pays attention more to the disciplinary fields of the participants (belonging to relatively narrow and conventional bandwidth of disciplines) rather than to the project itself.</i></p> <p>5. <i>Open science practices (above the mandatory open access publications) are not delineated in appropriate detail.</i></p> <p>6. <i>Given the declared Industrial Doctorate modality, the role of the non-academic partners is not sufficiently described. The short description is generic and does not provide details of their role.</i></p> <p>7. <i>The training programme does not sufficiently go beyond conventional training methods.</i></p>

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

Required sub-headings:

- Overview and content structure of the doctoral training programme, including network-wide training events and complementarity with those programmes offered locally at the participating organisations (please include table 1).
- Clearly identify your training objectives. Your training programme must be ambitious, but realistic.

- Emphasise the “triple i” aspects of the programme: international, inter-sectoral and interdisciplinary (from the [EU Principles for Innovative Doctoral Training](#)). Provide a list of overall **Training objectives**, including developing the following types of training:
 - **Core research skills or scientific training** (acquired via the Individual Research Project);
 - **Advanced/Additional scientific training and research skills** (delivered by the consortium);
 - **Transferable and complementary skills training** (delivered by the consortium - particularly those useful in non-academic careers). The [Vitae Research Development Framework](#) can serve as inspiration;
 - **Open Science related 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 (e.g., digital technologies, collaborative tools, opening access to publications and to research data, FAIR data management, public engagement and citizen science, etc.).

- Indicate the local and the network wide training activities, and show the balance between them:

LOCAL TRAINING	<ul style="list-style-type: none"> • Offered at the main host organisation where the doctoral candidate will work. Include a description of the Individual Research Programme and the structured training (research training) offered by, for example, local graduate/doctorate schools. • Describe other specific opportunities and trainings offered by the host organisation (e.g., ethics, research integrity, gender, open science) and transferable skills training. It would be positive if training available at one host was open to doctoral candidates from the other hosts in the consortium.
NETWORK WIDE TRAINING	<ul style="list-style-type: none"> • Offered by the consortium at specific events, e.g. workshops, summer schools, training weeks, training during the secondments. • Be very specific about the details - when and where it will take place, what areas will be covered, how long will it last, who will deliver the training. You can include extra tables to show a fuller description of all the trainings.

Open up some events to the wider research community. It is typical to have a final conference for example or to make some places at summer schools open to doctoral candidates who are not part of the network – a fee can be charged to cover the cost if necessary. Good practice is to web stream events where applicable/feasible.

- Have in mind that trainings are a good way to multiply the contacts between doctoral students and different actors involved in the project.
- Highlight the training through secondments and explain its added value.
- Earning a certain number of ECTS Credits (European Credit Transfer System) via local and network-wide training is becoming the norm – especially for Joint Doctorates.
- Have in mind that the complementarity between local and network training and the specific needs of the doctoral candidate should be indicated in the compulsory **Career Development Plan** which should be prepared with each recruited researcher at the start of the project and

be reviewed every six months. You can indicate a percentage in time to show which weighting one gives to which training element.

- Make sure the training activities schedule is appropriate regarding the research tasks schedule and the recruitment calendar.
- Virtual mobility/training does not have the same impact, but bear in mind that it can complement physical interaction and facilitate long-distance collaboration. You are encouraged to explore e-infrastructure and related services (for example GEANT, the pan-European research and education network).

Table 1 Main Network-Wide Training Events, Conferences and Contribution of Beneficiaries

	Main Training Events & Conferences	ECTS ⁷ (if any)	Lead Institution	Action Month (estimated)
1	When and where it will take place, what areas will be covered, how long will it last, who will deliver the training.	If no ECTS are applied, you can give a weighting in the form of a percentage of time. Have in mind that there should be a balance across the consortium.	Main organiser.	Month of the project, not calendar month.
2				
3				
4				

- Role of non-academic sector in the training programme.

- Provide precise details of the contribution of the non-academic beneficiaries and Associated Partners in the training programme, including recruiting (for non-academic beneficiaries) training (local and the network wide training), hosting secondments (specific training).
- Besides industry, non-academic partners can be an NGO, a charity organisation, a hospital, or any other organisation that satisfies the definition of non-academic sector.
- It can be very helpful to use a table to list the role of each non-academic participant – this makes the details clear and easy to follow.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

⁷ ECTS: European Credit Transfer and Accumulation System.
http://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf.

1. Network-wide events are adequate and will significantly boost the main doctoral training programme, improving research efficiency, employability and career prospects of researchers.
2. The role of the non-academic actors is meaningful and pertinent; they are actively involved in the training programme, providing recruitment and day-to-day work (learn-by-doing), as well complementary supervision and dedicated training in transferable skills and network opportunities in international development
3. The transfer of knowledge is credible because the DCs precisely specify the acquired skills and knowledge which will be crucial to reach the proposal aims.
4. The proposal includes meaningful network-wide training events, facilitating also on-line participation and recording of lectures, which are complementary to the programmes offered locally.
5. Very promising twice-monthly on-line lectures are planned to regularly cover project-related training and topics, and to support subject matter training as well as transferable skills and gender/diversity aspects.
6. Secondments are well planned to ensure both types of mobility, international and inter-sectoral. Host, supervisor, timing, length and purpose for each secondment are indicated.
7. Network-wide training activities include a variety of face-to-face events (courses, review meetings, symposia, conferences, etc.) as well as on-line and e-learning events.

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. The presentation of the inter-sectoral secondments is not sufficiently elaborated, and the degree of exposure of the individual doctoral candidates to inter-sectoral secondments is limited.
2. It is not sufficiently clear why the selected non-academic organisations are suited to each research project.
3. The integration of the individual researchers' projects into the overall research and doctoral training programme is not fully elaborated.
4. Some of the secondments are relatively short (only one month) and it is not fully plausible that they will be meaningful for the recruited researchers.
5. The local training is not clearly described in a way to show clear benefits to the research project and to the doctoral programmes for each doctoral candidate. There is a great discrepancy in quality of local and network-wide training.
6. The complementarity between the doctoral network training and the existent local PhD training programmes is not convincingly demonstrated.

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

Required sub-headings:

- Qualifications and supervision experience of supervisors.
- Demonstrate, with hard evidence, the collective quality of the research supervisors in training of researchers, and appropriateness of their profiles regarding the training objectives of the project
- You probably do not have enough space to write one paragraph per participating supervisor. Instead write a collective statement about the expertise of the consortium. Do not leave out the Associated Partners (secondment mentors).
- Include number of PhDs graduated, numbers of postdocs mentored. If you have enough space, you can provide a table to structure the information on supervisors (name, organisation, expertise and publication, experience and leadership roles) and to indicate the number of doctoral candidates which will be supervised.
- In section 6 – description of participating organisation – you can provide more details to show research excellence of the supervisors (grants, awards, editorial board membership, important journal articles/conference papers/ monographs, etc.).

- Quality of the joint supervision arrangements (including mandatory joint supervision for DN-ID and DN-JD).
 - You should have identified the **Supervisory Board (SB)** that is coordinating the network-wide training, research, and in particular supervision activities in line with the MSCA Guidelines on supervision. The **SB** also establishes communication and exchange of best practices among the consortium to maximise the benefits of the partnership. The role and composition of the SB must be described in Section 3 (3.1, mandatory sub-heading).
 - Quality of supervision should include integration of researchers, research support, career development, mentoring and well-being of researchers, communication, and conflict resolution.
 - Joint supervision is recommended for the regular DN, but **mandatory** for Joint and Industry Doctorates.
 - Explain practical arrangements for supervision. The aim is to demonstrate that each doctoral candidate is assured high levels of contact with their supervisor(s) through a supervision policy that is consistent across the consortium (particularly for Joint Doctorates).
 - The role of the SB includes ensuring that a Personal Career Development Plan for research and training is put in place for each doctoral candidate and reviewed at regular intervals. Remember that PCDP should be reviewed every six months.
 - It is good practice that a doctoral candidate has a supervisor team or PhD committee comprising a minimum of 3 supervisors: one from each sector (academic and non-academic) and from Associated Partners (secondment). Clearly explain the roles of each co-supervisor and their complementarity.
 - Be concrete. Describe a regular series of meetings between the doctoral candidates and the supervision team – you can also mention an open-door policy (e.g., free access to the supervisor, encouraging open communication, two-way feedback, etc).
 - Foresee feedback mechanisms and review procedures to monitor the progress of each doctoral researcher.

⚠ *To avoid duplication, the role and scientific profile of the supervisors should only be listed in the "Participating Organisations" tables (see section 6 below).*

⚠ *The following section of the European Charter for Researchers refers specifically to supervision:*

Supervision

Employers and/or funders should ensure that a person is clearly identified to whom researchers can refer for the performance of their professional duties, and should inform the researchers accordingly.

Such arrangements should clearly define that the proposed supervisors are sufficiently expert in supervising research, have the time, knowledge, experience, expertise and commitment to be able to offer the research doctoral candidate appropriate support and provide for the necessary progress and review procedures, as well as the necessary feedback mechanisms.

⚠ ***Supervision** is one of the crucial elements of successful research. Guiding, supporting, directing, advising and mentoring are key factors for a researcher to pursue his/her career path. In this context, all MSCA-funded projects are encouraged to follow the recommendations outlined in the Guidelines for MSCA supervision⁸.*

⁸ While the Guidelines for MSCA supervision are non-binding, funded projects are strongly encouraged to take them into account.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

1. *The scientific profile and research activities of the senior researchers of all beneficiaries are well in line with the scientific objectives of the activity. The potential supervisors, including those from the non-academic sector, have well-documented and strong records in mentoring and tutoring the doctoral candidates.*
2. *Measures are in place to ensure appropriate support and review procedures, as well as the necessary feedback mechanisms. The plan to brief all supervisors on the Guidelines for MSCA supervision at the beginning of the project ensures a consistent approach and quality among all partners.*
3. *Supervision arrangements are overall appropriate to support DCs and provide progress and review procedures. Beneficiaries not entitled to award PhDs will be supported with a co-supervision and partnership with universities. DCs will maintain regular contact with supervisors through regular visits, additional to secondments, to monitor and discuss their progress.*
4. *The quality of the proposed supervision measures is very high. The joint supervision arrangements are convincingly described, with biweekly formal meetings involving the two supervisors. Furthermore, supervision training and common good practices will be addressed at the kick-off meeting.*
5. *Overall, the supervision arrangements are well detailed, appropriately organised and relevant. They will provide a satisfactory level of support and feedback to the recruited doctoral candidates. Arrangements for joint supervision are fully and correctly implemented.*
6. *In addition to the Thesis Board, the Supervision Agreement and Career Development Plans provide useful guidance to students. Also, the inclusion of a mentor outside of the supervisory team provides additional support to doctoral students.*

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. *Given the high complexity of the activity and the planned co-supervision, the proposed review, evaluation procedures, project reports to relevant boards, feedback mechanisms and means of working among the advisory team are insufficiently detailed.*
2. *The modalities for the timing and frequency of the interaction between the supervisors and the doctoral candidates are not fully convincing.*
3. *The proposal does not sufficiently explain which structures (meetings, internal reports) will be adopted by the supervisors to follow the progress of the DCs towards scientific and training goals.*
4. *Supervision arrangements and division of responsibilities between the main- and co-supervisors are insufficiently detailed.*
5. *Some aspects of the joint-supervision are not detailed. For instance, the progress monitoring aspect and the time commitment of supervisors, are not sufficiently elaborated.*

3. Impact

Impact – aspects to be taken into account.

- Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for:
 - a) meaningful contribution of the non-academic sector to the doctoral training, as appropriate to the implementation mode and research field
 - b) developing sustainable elements of doctoral programmes.
- Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development.
- Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.
- The magnitude and importance of the project’s contribution to the expected scientific, societal and economic impacts.

- You should think about what is the DN's contribution to strengthening European Innovation capacity.
- You need to demonstrate how your programme is contributing to the creation of a critical mass of uniquely skilled graduates in this research area who have the required skillset to drive Europe's capacity for innovation (e.g., next generation researchers that have unique and improved skills and level of expertise compared to the researchers today in and outside Europe, etc.).
- You can link back to relevant EU/Horizon Europe research/policy goals where this strengthened innovation capacity will have a positive impact (Horizon Europe Missions, UN SDGs, Green Deal etc.)

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

- a) meaningful contribution of the non-academic sector to the doctoral training, as appropriate to the implementation mode and research field, this could include (non exhaustively) e.g. meaningful exposure of Doctoral Candidates to the non-academic sector through secondments, contribution of the non-academic sector to the research and the transferable skills training.
 - Demonstrate how the exposure of all the fellows to the non-academic sector is meaningful, i.e., it has sufficient duration and content to ensure:
 - the employability of the trained fellows in the non-academic sector and
 - excellence and impact of the research training.
 - Explain how the contribution of your non-academic sector participants to this particular programme is essential to improving inter-sectoral collaboration in research training in this area.
 - Give specific examples of future non-academic career opportunities for doctoral candidates.
 - The recent Study on mobility flows of researchers in the context of MSCA shows that fellows hosted in the private sector (52%) were in a stronger position to secure employment after their fellowship than those hosted within academia (42%). Most fellows in the private sector were able to secure employment at one of the partners involved in their MSCA project (64%), and most of them pursued careers in the business sector after the end of their fellowships.⁹
- b) Developing sustainable elements of doctoral programmes after the end of the DN funding, this could include (non exhaustively) e.g. sustainability of training programmes at local or network-wide level, sustainable cooperation and secondment opportunities, sustainability of transferable skills training offering, sustainability of researchers recruitment according to the code of conduct for the recruitment of researchers.
 - A key policy goal in this area is overcoming differences/fragmentation in doctoral training across Europe.
 - Explain how your programme addresses and incorporates Salzburg II Recommendations & Principles for Innovative Doctoral Training.
 - The harmonisation of institutional processes involved in developing joint degrees will help to bring consistency to the doctoral experience across Europe.
 - Explain how your doctorate programme will help with developing the consistency of the doctoral experience – unified selection, recruitment, monitoring, awarding processes, etc.
 - Explain how your programme will help the further development and spreading of best practice in European collaborative research training programmes.
 - Describe any sustainable elements of the doctoral programme which will last beyond the lifetime of the DN, which the organisations involved and future PhD students will benefit from.

⁹ European Commission, Directorate-General for Education, Youth, Sport and Culture, Délkuté, R., Nikinmaa, J., Pupinis, M., et al., Study on mobility flows of researchers in the context of the Marie Skłodowska-Curie Actions : analysis and recommendations towards a more balanced brain circulation across the European Research Area : executive summary, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2766/343004>

- For JD proposals, explain how you will continue the joint degree process in the consortium after the JD project is finished, possibilities for the new collaboration projects or further funding.
- Have in mind the possible synergies with other programmes (for example Erasmus +) including at regional and national level. More information is available in document [Synergies between the Marie Skłodowska-Curie Actions and Erasmus+ in the area of higher education](#).

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

1. *The proposed structure of double doctorates in topics of cutting-edge research, with the exposure to varied expertise required to reach a common goal, contributes significantly to the strength of this proposal in terms of its impact in structuring doctoral training at the European level.*
2. *The proposal very convincingly outlines how the proposed network would have a structuring effect on doctoral training at the European level. The plans to use this DN as a platform for designing an open PhD course are promising.*
3. *The commitment of a large number of non-academic and prestigious academic European organisations provides a substantial effect on the doctoral training and ensures a new generation of specialists. The network may act, consequently, as a model for structuring doctoral training.*
4. *Possible interactions with existing doctoral programmes at the EU level are foreseen, contributing to development of doctoral training.*
5. *The doctoral training is very well suited to prepare both academic and professional figures strongly requested by the sector. The involvement of all partners (academic and non-academic) is convincingly described, which boosts the credibility of the proposed contribution in terms of innovative capacity. The non-academic sector contributes considerably to the doctoral/research training and can significantly benefit from the successful results of the project.*
6. *The project contributes to the structuring of doctoral training as demonstrated by: defining best practices, easy transferability of credits, curriculum development, setting of reproducible training standards and supervision standards as presented in Double Doctorate Degree Agreements.*
7. *Career pathways research and teaching are very convincingly addressed. The program will build an innovative and sustainable model for excellent inter-sectoral PhD training and demonstrates the potential to foster European innovation capacity in the fields by linking theoretical approaches and research activities.*

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. *The proposal does not appropriately explain how it will contribute to structuring doctoral training at the European level in the long term, providing insufficient information on concrete steps to ensure a long-lasting impact of the project.*
2. *The proposal's focus on industry is limited, with low potential to bridge the gap between academia and well-known companies in the field.*
3. *The impact of the non-academic secondments on developing synergies and required sustainable knowledge and skills is not sufficiently justified considering their duration.*
4. *The contribution to strengthening European innovation capacity is not adequately described. The proposal does not clearly identify how effective interactions and exchanges with the wider sector, policy makers and other relevant stakeholders are foreseen.*
5. *The contribution of the proposal to structuring European doctoral training is insufficiently described. For instance, activities to formally develop training elements and make them available at the European level are not sufficiently foreseen in the proposal.*

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

In this section, please explain the impact of the research and training on the fellows' careers.

- Describe the potential employment sectors that the doctoral candidate might end up working in. Consider both academic and non-academic career opportunities, both R&I and management positions. What are the relevant current and future labour market needs which the DN can contribute to?

- Present an analysis of how the elements of the programme will make them employable in these sectors, e.g.:
 - research training
 - transferable skills training
 - secondments and/or other opportunities for exposure to other organisations (e.g., networking opportunities)
 - communication/dissemination/public engagement/exploitation activities.
- Focus on the impact of the skills on the doctoral candidates' employability, and do not repeat how these skills will be delivered.
- Explain the impact of the research and training on the fellows' short- and long-term **career perspectives**.
- Make a strong link between your programme's elements, the EU policies about researcher careers/employability, and any sectoral policies referring to a skill gap in the relevant sector.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

1. Career prospects and employability in academia and in several other clearly identified sectors (such as profit/non-profit organizations, think tanks, and policymaking agencies), are convincingly explained. The doctoral candidates' interactions with the non-academic sector provide scope for skills and awareness development.
2. The proposal describes well the impact on the researchers' career. It adds evident and credible values by enhancing their cross-sectoral and interdisciplinary skills in the research field. This will have a great impact on the researchers' future career perspectives and employment.
3. Actions such as training on CV writing and job interviews and the use of Talent Development Suite created within the EURAXESS project will enhance DCs career perspectives and employability.
4. It is very credible that the range of skills/scientific expertise developed by the researchers will be highly sought after by major industrial and academic sectors. Enhanced by a track-record of engagement with high-visibility researchers, industry and institutions, the Doctoral Candidates' career perspectives are very likely to be significantly strengthened.
5. The proposed measures will evidently enhance the researcher's future employability. A dedicated career workshop scheduled during the final year will help doctoral candidates start their professional careers.
6. DCs will undergo a strong multi-modal cross-sectoral training experience, incorporating industry exposures and networking opportunities.
7. The acquired multidisciplinary skills will allow the DCs to contribute to other fields of innovative precision medicine, in the private sector, in the academic field or in regulatory affairs. Pointing the doctoral candidates to the Marie Curie Alumni Association is a good way to expand even further the horizons of the doctoral candidates, both science-wise and career-wise.

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. There is no detailed strategy for improving development and career perspectives. The enhancement of career perspectives of researchers is limited to a list of general skills acquired in the doctoral programme.
2. While recapitulating qualities of the doctoral training, the proposal does not explicitly address how exactly these qualities will translate into better career prospects and employment opportunities.
3. The description on the impact on the doctoral candidates' careers is generic and it does not make a satisfactory specific case to demonstrate how the proposed research and training will have this impact, thus reducing its credibility.
4. The impact of the training on the doctoral candidates' future careers has not been sufficiently analysed. The proposal does not adequately explain how the new skills will be achieved in practice and through the training plan. Specific steps and their timing in the training of each candidate are not sufficiently clear.
5. Despite the convincing contribution of the project to the improvement of transferable and non-academic skills of the doctoral candidates, very little emphasis is given to improving their methodological skills.

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:
Describe the planned measures to maximise the impact of your project by providing a first version of your ‘plan for the dissemination and exploitation including communication activities’. Describe the dissemination, exploitation and communication measures that are planned, the target group(s) addressed (e.g., scientific community, end users, financial actors, public at large), with objectives, and how these activities and the fulfilment of these objectives will be monitored.

⚠ *Regarding communication measures and public engagement strategy, the aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens. Activities must be strategically planned, with clear objectives, start at the outset and continue through the lifetime of the project. The description of the communication activities needs to state the main messages as well as the tools and channels that will be used to reach out to each of the chosen target groups.*

- **Dissemination** is sharing research results with potential users - peers in the research field, industry, other commercial players and policy makers.
- Before writing, discuss with all beneficiaries about their own dissemination and exploitation channels/mechanisms.
- Describe in detail the activities you will organise and participate in at a consortium level to disseminate the research results to the relevant audience.
- Indicate which conferences the Doctoral Candidates will attend or organise, present at, and how often.
- State which specialist journals will be targeted for the publication of the consortium’s results and how many articles each doctoral candidate will aim to produce. Be realistic.
- Describe activities targeted to other potential users, e.g., attending trade shows to engage with industry, organising workshops for clinicians in healthcare-related projects, workshops for NGOs, etc.
- Remember that this is the **Impact** section.
 - Describe the potential impact of disseminating to these audiences – it might be a different impact for each audience type.
 - Have in mind that that dissemination and communication activities will also have an impact on the development of doctoral candidates’ dissemination and presentation skills.
- **Exploitation** is using results for commercial/ research/ education/ standardisation purposes or in public policy making. There is a close link between dissemination and exploitation. Dissemination feeds into exploitation, and exploitation is connected with the management of intellectual property.
- Depending on the type and field of research, some exploitation methods are:

Further internal research	The results coming out of the project can be applied to further research in the field and beyond.
Collaborative research	The results can be used for building/contributing to collaborative research projects.
Product development	Results can be used for developing or contributing to a product, process, technique, design, etc.
Education	Results are integrated into education curricula on Bachelor, Master or Doctoral level.
Standardisation activities	Results could be used to develop new standardization activities or contribute to ongoing work.
Spin-offs	A separate company will or could be established as a result of the research results.

<p>Engagement with communities/end users/policy makers</p>	<p>Describe the activities to ensure that relevant societal actors will benefit from your project. For example, results will be used in policy briefings to impact on policy.</p>
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- Where relevant, remember that the results can and should be widely disseminated AFTER intellectual property (IP) protection has taken place.
- Mention applicability and commercialisation of the research results (e.g., new product/service, new techniques/methods), possible patents.
- If not applicable directly, indicate the likelihood of how your results may be applicable in the long-term (basic or fundamental research is seldom applicable immediately).
- Show that you understand the potential barriers to exploitation of your results. Just briefly describe the main ones and how will you tackle them. You can provide a more detailed description within the plan for the dissemination, exploitation and communication (which is mandatory deliverable).
 - Possible obstacles may include: inadequate financing, skills shortages, IPR issues, regulation that hinders innovation, mismatch between market needs and the solution, etc.
- Remember that this is the **Impact** section. Describe the potential impact of exploiting the commercial potential of the research results.
- If the results are useful to policymakers/the wider society:
 - Outline what activities you will engage in to ensure that relevant policymakers/societal actors (community or voluntary sector) etc. will be informed about the research results. E.g., could you organise a special workshop or information event? For health-related projects, it is advisable to include patient groups in your plans.
 - Some examples are provided in the JRC document [10 Tips for Researchers: How to achieve impact on policy](#)
- **Communication** and public engagement activities aim to raise awareness of the citizens on the challenges addressed by the project, and to show the impact of your research on our daily lives.
- Communication is one-way from sender to receiver, e.g., an article in a newspaper or on TV or radio or via social media
- Describe the activities which the consortium will perform to ensure media coverage about the programme and its results, e.g., press releases to newspapers, feature articles in magazines, articles on social media. Is there any potential to have the programme featured on local/national TV or radio in any of the countries in the consortium?
- Explain who will help you with defining media coverage, e.g., Communications or Marketing Office/Officer.
- Remember that this is the **Impact** section.
 - Describe the potential impact of media coverage of the activities of the project.
 - Have in mind that activities may also have an impact on the development of doctoral candidate's communication and presentation skills.
- **Public engagement** aims to engage a broad audience and/or two-way from sender to receiver, and to bring knowledge and expertise on a particular topic to the general public.
- Describe what activities the consortium will perform to engage the general public about the activities of the Doctoral Network. Have in mind that doctoral students should be actively involved in public engagement and communication activities.

- Plan a range of face-to-face activities (e.g., school visits, lab open days, public talks, science festivals, European Researchers’ Night, Researchers at Schools) targeted at multiple audiences.
- Talk to experts at your institution. See what local/national activities you can join. Activities need to take place across the whole consortium, so ask your consortium participants for information on what activities they have in their organisation/region/country.
- If applicable, explain who will help you with public engagement activities e.g., Education/Outreach/Impact Officer.
Describe the potential impact of engaging the public in the activities of the programme.
- Communication and public engagement activities concern not only the project results, but your project as a whole and your research area. These activities can take place all along the project duration.
- Include quantifiable targets for measuring the effectiveness of dissemination, exploitation, communication and public engagement activities. For this you could use a table as shown below.

Activity	Target audience	When	Where	Key indicators (KPI)
Conference (provide the full name)	List the target audience that will participate at the conference	Estimated month of project when it will take place (M12, M14)	If known at the time of the project proposal application	Number of attendees, etc.

- Include targets in terms of number of publications/year/doctoral candidate, number of international conferences/year/doctoral candidate, etc., for all deliverables.
- Think about what is realistic for PhD students in your research discipline. Have in mind quality over quantity.
- Don’t forget to indicate these activities in related work packages in the Implementation section.

⚠ *In case your proposal is selected for funding, a more detailed plan will need to be provided as a mandatory project deliverable submitted at mid-term stage with an update towards the end of the project.*

- Strategy for the management of intellectual property, foreseen protection measures, such as patents, design rights, copyright, trade secrets, etc., and how these would be used to support exploitation.

⚠ *If your project is selected, you will need an appropriate consortium agreement to manage (amongst other things) the ownership and access to key knowledge (IPR, research data etc.). Where relevant, these will allow you, collectively and individually, to pursue market opportunities arising from the project.*

⚠ *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, e.g. standardisation activities. Your plan should give due consideration to the possible follow-up of your project, once it is finished. In the justification, explain why each measure chosen is best suited to reach the target group addressed. Where relevant, describe the measures for a plausible path to commercialise the innovations.*

⚠ *If exploitation is expected primarily in non-associated third countries, justify by explaining how that exploitation is still in the Union’s interest.*

- Before submitting your proposal and while forming a consortium you should already pay attention to eventual and expected results (Intellectual Property), ownership issues and the associated intellectual property rights (IPR) with a view to disseminating and exploiting the results efficiently. You should set out these rules within the consortium agreement.
- Having a consortium agreement with a clear set of procedures, IPR management and ownership rights between the consortium members can maximise the exploitation potential of the project's results.
- Good practice is to have an Intellectual Property Committee (beneficiaries and Associated Partner representatives – especially if the non-academic sector is included) whose role can be to provide internal approval of planned dissemination/exploitation activities, licensing agreements and deciding on IP protection activities.
- Have in mind the specifics of the MSCA¹⁰ and relevant characteristics that may have an effect on IPR:
 - **Intersectoral exchange** (academic/non-academic) requires different IP policies/interest, difference in publication and exploitation;
 - **International dimension** EU-MS/AC vs. third countries – different IP laws and regulations;
 - **Secondments** focusing on the explanation of complementary competences of the participants (host organisation and secondment host organisation) – granting access to background/results for/by secondees (“visitors”).
- Outline plans to exploit any IP/commercial potential arising from the programme. Briefly describe the role of any Technology Transfer Office or similar in helping you to commercialise the results.

Concrete plans for sections 2.3 must be included in the corresponding table 3.1 b Description of Work Packages.

⚠ Note that the following sections of the European Charter for Researchers refer specifically to public engagement and dissemination:

Dissemination, Exploitation of Results

All researchers should ensure, in compliance with their contractual arrangements, that the results of their research are disseminated and exploited, e.g. communicated, transferred into other research settings or, if appropriate, commercialised. Senior researchers, in particular, are expected to take a lead in ensuring that research is fruitful and that results are either exploited commercially or made accessible to the public (or both) whenever the opportunity arises.

Public Engagement

Researchers should ensure that their research activities are made known to society at large in such a way that they can be understood by non-specialists, thereby improving the public's understanding of science. Direct engagement with the public will help researchers to better understand public interest in priorities for science and technology and also the public's concerns.

⚠ You can also refer to the *Communicating EU research and innovation guidance for project participants* as well as to the "communication" section of the *Online Manual*.

¹⁰ More information on IPR issues in the previous Horizon 2020 MSCA ITN projects, that can still be useful, is available on: https://ec.europa.eu/info/intellectual-property-management-h2020-msca-itn-2019_en

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
<p>1. Quantitative descriptors to assess the effectiveness of the dissemination and communication activities to maximise their outcomes and impacts are appropriately considered.</p> <p>2. A clear and detailed strategy of early protection of the intellectual property rights generated by the network is in place, with appropriate anticipated evaluation of the commercial value.</p> <p>3. The strategy for public engagement has high quality. It makes good use of social media and public events and will include the production of videos for a wide non-technical audience, a measure with the potential to significantly increase impact of the project.</p> <p>4. The dissemination and communication strategy is extensive, presenting a credible and structured plan for the exploitation and dissemination of outputs, which is based on the effective use of appropriate on and offline tools to target different audiences and relevant performance indicators. Sound dissemination and exploitation policies are included: i.e., project's research findings will remain available on the project website after its completion.</p> <p>5. The proposed dissemination and exploitation plan is pertinent. It is well structured under four groups of objectives, properly identifying key messages, activities, performance indicators and relevant target groups (including academia, industry, policy makers, civil society organisations, students, and general public).</p> <p>6. The Doctoral Candidates are well integrated into the dissemination strategy with opportunities to publish chapters of their doctoral research. The dissemination activities well align with the skill development plans of the programme.</p> <p>7. The exploitation of the results by industrial partners is very well-defined. The management of intellectual property and the associated protection measures are sufficiently well considered.</p>
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
<p>1. A communication strategy specifically defined to reach the general public has not been sufficiently addressed.</p> <p>2. Although open access and IP strategies are well presented, it is not sufficiently clear which mechanisms will be used to balance between them.</p> <p>3. Although possible exploitation routes are outlined, the proposal lacks details related to the expected resources, coordination mechanisms of individual organisations, and level of involvement of senior staff in the possible exploitation pathways of the project results.</p> <p>4. Dissemination measures are not innovative and are limited to standard methods (publications, website with blog, twitter).</p> <p>5. A clear strategy of exploitation was not adequately organised for the results which refer to guidelines, recommendation and policy inputs. The market potential is not sufficiently described.</p> <p>6. Proposal does not sufficiently elaborate potential for exploitation of the research data obtained, in terms of plans for future protection, concrete collaboration with targeted industry, and possible commercialisation of research findings.</p> <p>7. The participation of each of the doctoral students in the communication activities is not addressed in enough detail.</p>

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

- Have in mind that during the Horizon Europe implementation, the European Commission aims to achieve an impact-driven programme by maximising the effect of research and innovation. To achieve this aim, the EC identified key impact pathways as follows:

Key impact pathways	
Scientific impact	<ol style="list-style-type: none"> 1. Creating high-quality new knowledge 2. Strengthening human capital in research and innovation 3. Fostering diffusion of knowledge and open source

Societal impact	<p>4. Addressing EU policy priorities and global challenges through research and innovation</p> <p>5. Delivering benefits and impact through research and innovation missions</p> <p>6. Strengthening the uptake of research and innovation in society</p>
Towards technological/ economic impact	<p>7. Generating innovation-based growth</p> <p>8. Creating more and better jobs</p> <p>9. Leveraging investment in research and innovation</p>

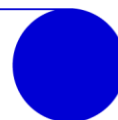
- Try to address all aspects of the key pathways. The concept of key pathways to impact should be discussed in relation to the project.

Required sub-headings:

- Provide a narrative explaining how the project’s results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project. The narrative should include the components below, tailored to your project.
 - Expected scientific impact(s), e.g., contributing to specific scientific advances, across and within disciplines, creating new knowledge, reinforcing scientific equipment and instruments, computing systems (i.e., research infrastructures);
 - Expected economic/technological impact(s), e.g., bringing new products, services, business processes to the market, increasing efficiency, decreasing costs, increasing profits, contributing to standards’ setting, etc.
 - Expected societal impact(s), e.g., decreasing CO₂ emissions, decreasing avoidable mortality, improving policies and decision-making, raising consumer awareness.
- Explain how the research programme and the doctoral candidates’ research (including dissemination/exploitation/communication/outreach activities) will contribute to Europe’s economy and/or society – not just in terms of the research impact (how does the DN programme and individual projects advance the field) but also in terms of the results of the programme (e.g., a new concept of training, new approach, etc.).
- If your programme builds on an existing or a previous MSCA ITN, COST Action or other funded project, explain how it does so. Could your research contribute to the development of a new European Standard?
- Explain how the research and training programme will help in bringing ideas to market. The role of the participants from the non-academic sector in this respect should be described, in terms of research commercialisation or training in entrepreneurship/tech transfer to the fellows, etc.
- Expand on a link to EU research/policy goals: **[Green Deal](#)**, **[Horizon Europe Missions](#)**, **[MSCA Green Charter](#)**, **[UN Sustainable Development Goals](#)**
- Embed your project into those overarching goals – how do they contribute? On a very small scale is perfectly fine. For the SDGs, when you find the applicable SDG(s), you can indicate a specific target inside the mentioned goal. For defining SDGs, feel free to use **[JRC KnowSDGs Platform](#)** which can help you to integrate the SDGs into the Impact section of your proposal.

⚠ *Be specific, referring to the effects of your project, and not R&I in general in this field. State the target groups that would benefit.*

⚠ *Only include such outcomes and impacts where your project would make a significant and direct contribution. Avoid describing very tenuous links to wider impacts.*



⚠ 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.

- To illustrate the magnitude and importance of the project contribution to outcomes and impacts, you can use a table. For example:

Expected outcome	Description	Magnitude	Importance	Expected impact

- For each expected outcome, provide quantified indicators for “magnitude” and “importance”.
- Examples provided in [HE Programme Guide](#):
- ❖ Example of the outcome: We would like to create a filtering membrane to treat tap water. At the end of the project, the technology should be used by 10 water treatment plants.
- ❖ The expected impact will be: For companies and water treatment plants, our technology is expected to reduce the costs in the long run (after the initial investment) and the use of chemical product to treat the water. We plan on testing the technology in X region(s) of the EU and this environmentally friendly technology should help to reduce the use of plastic bottles by consumers who would then drink tap water.
- Example on how your results can feed back to policy making and how it contributes to EU priorities: Water treatment would contribute to higher quality of tap water at a lesser cost with a better taste and the guarantee of a safer product (free of viruses), thereby encouraging citizens to drink tap water instead of bottled water, and reducing the impact on the environment, thereby contributing to the green deal. We will reach out to the local authorities to raise their awareness and get their support. We will implement a mapping of stakeholders at the local governmental level. For that we can rely on indicators as levels of interest in water management but also Go-to-market service from [Horizon Results Booster](#). We will create a white paper to be distributed to regional water authorities from the region of A and B (where we intend to run the tests).

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

1. *Economic impacts are reported with great clarity and fully depict the contribution to technological advancements. The project will result in many useful deliverables and policy recommendations for relevant stakeholders.*
2. *The expected scientific results and their impacts outlined in the proposal are important from local to global scale, and the results have a high potential to have impacts beyond the project.*
3. *The proposal has the potential to deeply impact both academic and policy sectors by providing human capital and expert knowledge in the cutting-edge field of informality and precarity that is of interest to governmental, NGO, business and scientific stakeholders.*
4. *Overall, the scientific, economic and societal impacts beyond the immediate scope and duration of the project are adequately identified. The action will generate new knowledge in support of future green and clean solutions. Clean end of life solutions will support the economy. Expected societal impacts identified include the training of experts in the field of sustainable composites, increased awareness of sustainable composites, and the creation of new jobs.*
5. *The economic impact will be important because the relationship between the academic sector and the industrial sector will contribute to the development of technological tools.*
6. *Economic impacts are reported with great clarity and fully depict the contribution to technological advancements. The project will result in many useful deliverables and policy recommendations for relevant stakeholders.*
7. *Societal impacts have been thoroughly explained in accordance to UN SDG targets and measurable, relevant and feasible KPIs have been identified.*

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. *Although the proposal addresses the expected societal and economic impacts in a good way, how the project's results will make a difference in terms of impact beyond the immediate scope and duration of the project is not sufficiently demonstrated.*
2. *The contribution of the project to the scientific, societal and economic impacts are not sufficiently quantified with KPIs.*
3. *The claimed economic and societal impacts are overstated in the proposal and it is unrealistic to expect their achievement within the timeframe of the action. For example, there is a very long way to practical industrial applications from developing computational prediction methodologies in projects of this size and scope.*
4. *The description of the potential scientific, technological, economic and societal impact is broad and generic without focusing on specific results generated from the proposal.*
5. *The investigated fields are so divergent that the societal and economic impact of the whole proposal is seemingly overestimated.*
6. *The project's prospective influence on policy-drafting is unclear, as the proposal is not explicit enough about communication with policymakers.*

3. Quality and Efficiency of the Implementation

Quality and efficiency of the implementation – aspects to be taken into account

- Quality and effectiveness of the work plan, assessment of risks and appropriateness of the effort assigned to work packages.
- Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise.

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 (WP) List (please include Table 3.1a);

- Description of Work Packages (please include Table 3.1b);
- Deliverables List (please include Table 3.1c, including the awarding of doctoral degrees);
- Milestones List (please include Table 3.1d);
- Recruitment Table per beneficiary (please include Table 3.1e); Individual Research Projects, including secondment plan (please include table 3.1f);
- Progress monitoring and evaluation of individual research projects;
- Address the issue of overall quality assurance – will there be external review/monitoring of the Doctoral Network by an independent panel/external advisory group?
- A good practice is to develop a progress monitoring procedure ensuring effectiveness of the progress monitoring (e.g., timely delivery of project deliverables and milestones).
- Another good practice is to have an evaluation and satisfactory survey completed by the doctoral candidates at the end of each training session.
- Individual Projects: Link back to 1.4 Supervision, particularly on monitoring and updating Personal Career Development Plans. Focus on timings and structures here (day to day supervision and communication with the doctoral candidate, meetings of PhD theses committee, evaluation of the doctoral candidate’s progress for the internal reports, etc.)
- Implementation Risks (please include Table 3.1g);
- Supervisory board (including gender aspects in the decision making of the board);
- A Supervisory Board is mandatory. This is the main decision-making body for the network. All beneficiaries and supervisors are represented, plus at least one doctoral candidate representative (consider rotating representation among all doctoral candidates).
- Associated Partners can be represented in the SB with or without voting right.
- Briefly describe the main activities of the Board, including regular meetings. Detailed decision-making procedures can be explained in Part B2 – section 4 – Network organisation.
- Be conscious of having gender-balanced membership.
- Recruitment strategy (including gender aspects in the selection process);
- Centralised recruitment is the best practice with the involvement of the HR department.
- Describe the application process, applicant requirements, composition of selection committees, decision making/selection process. Specify selection criteria and indicators.
- Use **EURAXESS Jobs and funding portal** to advertise.
- Shortly explain employment conditions (employment contracts or fellowships contracts).
- Have in mind gender-balanced recruitment. If applicable and relevant to your research area, describe how you will recruit a gender-balanced mix of doctoral candidates, e.g. targeted advertising to women-in-science groups (e.g. **IEEE Women in Engineering**, plus multi-disciplinary groups such as the **European Platform of Women Scientists**).
- For DN-JD, joint admission, selection, supervision, monitoring and assessment procedures (if not applicable, please remove).
- Admission, selection, supervision, monitoring & assessment should be coherent across the consortium. The same procedures should be applied to each doctoral candidate. Any known variations in practice between network partners should be explained.
 - For example, in terms of monitoring, University A requires a yearly report, and University B requires a quarterly report. Will the doctoral candidate have to do both?
 - For example, in terms of assessment: University A requires a closed viva voce, and University B requires an open thesis defence. For joint/multiple degrees, will the doctoral candidate have to do both?

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

1. *The work plan is logically and coherently structured to ensure a very good balance between research and training. The goals for the project of each doctoral candidate are explained in appropriate detail. The allocation of tasks is adequate.*
2. *The work plan has credible and measurable milestones and deliverables in place for reaching the objectives. The proposal describes sufficient measures for the organisation of the network, for dealing with scientific misconduct, joint governing structure (including participation of non-academic partners), supervisory board and quality assurance.*
3. *The work plan is clearly presented, coherent and effective. It clearly supports the realisation of the research and training objectives. The scientific work packages are clearly presented, correctly containing details of the doctoral candidates' individual projects. The major deliverables and milestones are well placed and timed, and their descriptions allow for proper monitoring of the activities.*
4. *The work plan is coherent and is in line with the research objectives. The structure, with three WPs for management, dissemination and training respectively and three WPs for the scientific doctoral work, is credible.*
5. *The milestones and deliverables are well described and major deliverables are appropriately designed to serve as performance indicators to facilitate assessment of progress.*
6. *The tasks and resources are appropriately distributed among the partners according to their expertise and infrastructure. The effort for the WPs are reasonable for the proper implementation of the proposal.*
7. *The joint structure governing the activity is convincing and suitable for the size of the consortium. The recruitment strategy is convincing and an academic with experience in equality, diversity and inclusion chairs the recruitment committee.*
8. *Gender aspects are implemented well at all project levels (recruitment, management, training activities, dissemination, consortium members...). Specific promotion actions are considered to reach the targeted gender balance.*

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. *An important number of scientific deliverables have due dates very close to the end of the proposal's period and it is insufficiently demonstrated how to ensure effective monitoring of the evolution over the whole period of the activity and why the data management plan will not be established until six months after the activity starts.*
2. *The consistency between the attributed budget to each participant, individual doctoral projects, secondments and the proposal's terminology "placements" is not well demonstrated.*
3. *There are some missing data regarding non-academic secondments' tasks, as some of the declared organisations are not contemplated in the work plan.*
4. *The proposal does not satisfactorily elaborate on the time that will be dedicated by each supervisor, especially in view that some supervisors already have several PhD candidates.*
5. *The scientific risk resulting from the strong interdependency of the work packages, as reflected in the tasks allocated to the doctoral candidates, has not been fully taken into account.*
6. *The provided information on scientific misconduct and how venues will be assessed for environmental best practice is insufficient.*
7. *The risk management strategy insufficiently considers specific risks, for example risks related to the organization and coordination of scheduled activities or the risk of doctoral candidates deviating from the specified tasks.*
8. *The distribution of the secondments between the associated partners and the secondment duration for the Doctoral Candidates are imbalanced and without adequate justification.*
9. *The scheduling of secondments (those which are very early after the recruitment as well as those close to the completion of the proposed work) is insufficiently justified in terms of scientific/technical relevance to individual research projects.*

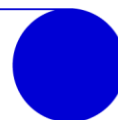


Table 3.1 a: Work Package¹¹ (WP) List

➤ Table to be included in above sub-heading “Work Packages (WP) List”

WP No.	WP Title	Lead Beneficiary No.	Lead Beneficiary Short Name	Start Month	End month	Activity Type ¹²	Researcher involvement ¹³

⚠ *The Work Packages should reflect the research objectives. Only brief headings and overviews of the Work Packages should be presented in Table 3.1a. More details in terms of actual implementation should be provided in Table 3.1b.*

- Describe the overall structure of your work plan, then each Work Package. Demonstrate logical links between the Work Packages.
- It is usual practice to include 3 or 4 Research WPs (matching the description in Section 1.2). Also include non-research Work Packages:
 - Management WP
 - Training WP
 - Dissemination/Exploitation/Communication/Public Engagement WP
- Each Work Package must be described in detail: title, objectives, tasks, calendar, contributors.
- The work plan must be coherent and efficient regarding the programme research and training objectives. It must convince the evaluators that you are able to achieve the objectives set.

Table 3.1 b Description of Work Packages

➤ Table to be included in above sub-heading “Description of Work Packages”

WP Number	
WP Title	<i>(e.g. including Research, Training, Management, Communication and Dissemination...)</i>
Objectives	
Description of Work and Role of Specific Beneficiaries / Associated partners	
<i>(possibly broken down into tasks), indicating lead participant and role of other participating organisations</i>	
<p>Description of Work: Break down each WP into several Tasks (3-6 is typical). Here you can provide details on the methodological tasks that were not described in detail in Section 1.2.</p> <p>Task 1.1</p> <p>Task 1.2</p> <p>Task 1.3</p>	

¹¹ A work package is defined as a major subdivision of the proposed action.

¹² For example, research, management, dissemination, etc.

¹³ Indicate which ESR(s) will participate in the Work Package in question.

Role: Use organisation short names from Participants Table to indicate which organisation(s) is (are) responsible for each Task
 Indicate timescales for the Tasks (in months elapsed from the start of the project), e.g. M6, M12
 Ensure that everything is coherent with the details given elsewhere in your proposal.

Deliverables linked to each WP are listed in Table 3.1c (no need to repeat the information here).

Table 3.1 c Deliverables List

➤ Table to be included in above sub-heading “Deliverables List”

<i>Scientific Deliverables</i>							
Number ¹⁴	Deliverable Title	Short description	WP No.	Lead Beneficiary Short Name	Type ¹⁵	Dissemination Level ¹⁶	Due Date (in months)
D1.1 (<WP number>.<number of deliverable within that WP>)	Keep it short	Be specific but concise. Try not to be redundant with the Deliverable Title.		Use organisation short names from Participants Table	R, ADM, PDE or OTHER (see note)	PU, SEN, CI (see note). Note that PU means that once validated by the EC, the deliverable can be published on a freely accessible website.	(in months elapsed from the start of the project) e.g., M6, M12
<i>Management, Training, Recruitment¹⁷ and Dissemination Deliverables</i>							
Number	Deliverable Title	Short description	WP No.	Lead Beneficiary Short Name	Type	Dissemination Level	Due Date (in months)

¹⁴ Deliverable numbers in order of delivery dates. Please use the numbering convention <WP number>.<number of deliverable within that WP>. For example, deliverable 4.2 would be the second deliverable from Work Package 4. Please indicate the nature of the deliverable using one of the following codes:

¹⁵ **R** = Report; **ADM** = Administrative (website completion, recruitment completion, etc.); **PDE** = dissemination and/or exploitation of results; **OTHER** = Other, including coordination.

¹⁶ Please indicate the dissemination level using one of the following codes:

PU = Public: fully open, e.g. web; **SEN = Sensitive:** restricted to consortium, other designated entities (as appropriate) and Commission services; Please consider that deliverables marked as "PU" will automatically be published on CORDIS once approved: the applicants should therefore consider the relevance of marking a deliverable as "PU"; **CI = Classified:** classified information as intended in Commission Decision 2001/844/EC.

¹⁷ Including overall recruitment (e.g. advertising vacancies), Researcher Declarations on Conformity, Career Development Plan, training deliverable x, etc. The individual recruitments should only be listed in Table 1.2a.

⚠ *The deliverables should be divided into scientific deliverables and management, training, recruitment and dissemination deliverables. Scientific deliverables have technical/scientific content specific to the action. The number of deliverables in a given Work Package must be reasonable and commensurate with the Work Package content. Note that during implementation, the submission of these deliverables to the REA will be a contractual obligation.*

⚠ *Note that, if the proposal is successful, several mandatory deliverables will be added during the Grant Agreement preparation such as the establishment of a supervisory board of the network, due at month 2; the progress report, due at month 13; the career development plan etc. (full list in the MSCA Work Programme – Definitions section, paragraph 1.6).*

⚠ **Due date:** *The schedule should indicate the **number of months** elapsed from the start of the action (Month 1).*

- Keep the number of Deliverables to a minimum.
- Remember that you must actually deliver each Deliverable at the fixed due date if the project is funded and implemented, and too many deliverables will make your administrative workload very high.
- Deliverables are submitted to the REA Project Officer in PDF format, so ensure that it would be feasible to present your deliverables in this way.
- Keep in mind that the MSCA Work programme lists mandatory deliverables for Doctoral Networks that will have to be submitted for projects selected for funding:
 - ❖ **establishment of a supervisory board** of the network;
 - ❖ **progress report** submitted within 30 days after one year from the starting date of the action;
 - ❖ **mid-term meeting** organised between the participants and the REA;
 - ❖ **mobility declaration** submitted within 20 days after the recruitment of each researcher and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;
 - ❖ **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;
 - ❖ **evaluation questionnaire** completed by each recruited researcher and submitted at the end of the research training activity; a follow-up questionnaire submitted two years later;
 - ❖ **data management plan** submitted at mid-term and an update towards the end of the project if needed;
 - ❖ **plan for the dissemination and exploitation of results, including communication activities**, submitted at mid-term and an update towards the end of the project.

Table 3.1 d Milestones List

➤ Table to be included in above sub-heading “Milestones List”

Number	Title	Related Work Package(s)	Lead Beneficiary	Due Date ¹⁸	Means of Verification ¹⁹
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¹⁸ Measured in months from the action start date (month 1).

¹⁹ Show how the consortium will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype completed and running flawlessly; software released and validated by a user group; field survey complete and data quality validated.

MS<Number>	Specific but concise	One milestone can relate to one or several WP	Use organisation short names from Participants Table	(in months elapsed from the start of the project) e.g., M6, M12	Be concrete (use clear indicators)
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⚠ Note that, if the proposal is successful, several mandatory milestones will be added during the Grant Agreement preparation such as the mid-Term meeting between REA and the consortium (the presence of all beneficiaries (scientists-in-charge and recruited researchers) and associated partners is expected. A best practice is to combine this meeting with other project events as appropriate); the recruitment process completed, due at month 12; the PhD enrolment for all fellows, due at month 12 etc.

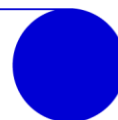
⚠ For DN-JD projects, specific milestones may also be added (Agreement to deliver the joint/double/multiple PhD).

- Milestones are major checkpoints for measuring progress, e.g., all doctoral candidates recruited, completion of the training programme, organisation of a conference.
- Also, there must be some research milestones – major points in the work which need to be reached before further progress can be made.
- Tip: You should have more Deliverables than Milestones. 6 or 8 Milestones covering major achievements in the lifetime of the project is sufficient. The proposal should be checked for consistency throughout.

Table 3.1 e Recruitment Table per Beneficiary

- Table to be included in above sub-heading “Recruitment Table per beneficiary (please include Table 3.1e); Individual Research Projects, including secondment plan (please include table 3.1f)”

Researcher No.	Recruiting Participant (short name)	PhD awarding entities	Planned Start Month 0-45	Duration (months) 3-36
1.	Use organisation short names from Participants Table	Use organisation short names from Participants Table Can be different from the Recruiting Participant	(in months elapsed from the start of the project) e.g., M3, M6	Minimum: 3 Maximum: 36
2.				
3.				
...				
Total				



If a Doctoral Candidate is recruited by more than one beneficiary, please indicate this in the table accordingly.

- Have in mind that some countries/institutions have fixed recruitment dates for doctoral candidates, and this should be taken into account when planning the start dates.

Table 3.1 f Individual Research Projects

- Table to be included in above sub-heading “Recruitment Table per beneficiary (please include Table 3.1e); Individual Research Projects (IRP), including secondment plan (please include table 3.1f)”
- Should be consistent with information in Table 3.1e

If applicable and relevant, linkages between the individual research projects and the work packages should be summarised here (one table /fellow).

Fellow (e.g. researcher 1)	Host institution	PhD enrolment*	Start date (e.g. Month 6)	Duration (e.g. 36 months)	Deliverables (refer to numbers in table 3.1b)
	Recruiting Participant	PhD awarding entit(-ies)			One deliverable can be related to several fellows
Project Title and Work Package(s) to which it is related:					
Objectives:					
Expected Results:					
Planned secondment(s): <i>Host, supervisor, timing, length and purpose</i>					
<p>* Enrolment in Doctoral degree(s):</p> <p>DN-JD specific: institutions where the researcher will be enrolled to obtain a joint/double or multiple doctoral degree should be included</p> <p>DN and DN-ID: institution where the researcher will be enrolled to obtain a doctoral degree should be included</p>					

- Make sure individual research project are coherent with the overall Work Plan.
- Emphasize the consistency between the individual research projects and related secondments and highlight the links between different individual research projects.

Table 3.1 g Implementation Risks

- Table to be included in above sub-heading “Implementation Risks”

Please list the critical managerial, scientific and technical risks, relating to project implementation and detail the risk mitigation measures. Please include dealing with scientific misconduct as one of the critical risks for research.

- Include a list incorporating research risks and project management risks. Describe practical mitigation and contingency plans for both.
- Some potential management risks: partners leaving consortium, supervisor leaving consortium, resignation of a recruited researcher, implementation of the individual projects, failure of recruitment, not possible to implement secondment, IPR disputes, some doctoral candidates participating in multiple work packages, implying the risk of a high workload, etc.
- Strategy for dealing with Scientific Misconduct. What would you do if a doctoral candidate accused another of Falsification, Fabrication or Plagiarism? What processes are in place in the participants to deal with misconduct? Do the partners apply their own code of conduct? State that the consortium will abide by the **European Code of Conduct for Research Integrity**. Note: do not overstate the likelihood of this risk by including it in the risk table.

Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High)	Work package(s) involved	Proposed risk-mitigation measures

*A **critical risk** is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives.*

Level of likelihood to occur: Low/medium/high

The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.

Level of severity: Low/medium/high

The relative seriousness of the risk and the significance of its effect.

⚠ *The following sections of the European Code of Conduct for the Recruitment of Researchers refer specifically to recruitment and selection:*

Recruitment

Employers and/or funders should establish recruitment procedures which are open, efficient, transparent, supportive and internationally comparable, as well as tailored to the type of positions advertised.

Advertisements should give a broad description of knowledge and competencies required, and should not be so specialised as to discourage suitable applicants. Employers should include a description of the working conditions and entitlements, including career development prospects. Moreover, the time allowed between the advertisement of the vacancy or the call for applications and the deadline for reply should be realistic.

Selection

Selection committees should bring together diverse expertise and competences and should have an adequate gender balance and, where appropriate and feasible, include members from different sectors (academic and non-academic) and disciplines, including from other countries and with relevant

experience to assess the candidate. Whenever possible, a wide range of selection practices should be used, such as external expert assessment and face-to-face interviews. Members of selection panels should be adequately trained.

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

Required sub-headings:

- Appropriateness of the infrastructure and capacity of each participating organisation, as outlined in Section 6 (Participating Organisations), in light of the tasks allocated to them in the action;
 - Describe how the consortium has the necessary state-of-the-art infrastructure (databases, laboratories, research and scientific equipment, software, etc.), and premises to host and implement all aspects of the programme (research, training, administration, communications, exploitation, etc.).
 - Describe the overall operational capacity and staff resources are sufficient to host and train researchers.
 - Point out that consortium participants are leaders in their field and have all the research infrastructure, expertise and the appropriate capacity for training programmes.
 - Make sure that the hosting arrangements of the participating organisations (including assisting the doctoral candidates with relocation and settling into their new countries and research environments) are consistent across the consortium. Have in mind **EURAXESS service centres** on a national level or EURAXESS local points at universities/research organisations. If consortium partners have endorsed the European Charter for Researchers and The Code of Conduct for the Recruitment of Researchers (**Charter & Code**), you should say so.
 - If consortium partners have the **“HR Excellence in Research” logo**, state this too.
 - The list of organisations by country with the “HR Excellence in Research” or HRS4R Acknowledged Institutions is available on EURAXESS portal - <https://euraxess.ec.europa.eu/jobs/hrs4r>.
 - Non-academic consortium members can also point out any other quality labels they may have.
- Consortium composition and exploitation of participating organisations' complementarities: explain the compatibility and coherence between the tasks attributed to each beneficiary/associated partner in the action, including in light of their experience; Show how this includes expertise in social sciences and humanities, open science practices, and gender aspects of R&I, as appropriate.
 - Explain how the consortium and supervisors are the best choice to implement this programme including:
 - Complementarities/synergies between all participants and how these will be exploited to deliver an excellent programme (use a diagram or table).
 - How their previous experience makes them suitable for their tasks in this programme.
 - Also, state if you have had previous direct experience with cooperation in research projects (e.g., MSCA ITN, MSCA RISE, COST Action or another research project).
- Commitment of beneficiaries and associated partners to the programme (for associated partners, please see also sections 6 and 7). The role of associated partners and their active contribution to the research and training activities should be described. A letter of commitment shall also be provided in section 7 and must follow the template (included within the PDF file, but outside the page limit).

- Outline the commitment of each participant by showing that they are all highly active in the project – refer to earlier sections.
- It is vital to highlight strong non-academic sector involvement.
- Funding of non-associated third countries (if applicable): Only entities from EU Member States, from Horizon Europe Associated Countries or from countries listed in the [HE Programme guide](#) are automatically eligible for EU funding. If one or more of the beneficiaries requesting EU funding is based in a country that is not automatically eligible for such funding, the application shall explain in terms of the objectives of the action why such funding would be essential. Only in exceptional cases will these organisations receive EU funding. The same applies for international organisations other than IERO.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS

1. All participating beneficiaries and associated partners have the required capacities to host the doctoral candidates, granting them access to all necessary office space, IT tools, software packages and (online) library access.
2. The proposal clearly demonstrates the capacity and the role of each participating institution, and the high quality of the members is well demonstrated. The quality of the lead beneficiary, in particular, is outstanding, with an excellent track record of managing Innovative Training Networks. Many associated partners also have prior involvement in research networks and training programmes.
3. Environmental aspects of the proposal, in terms of credible contribution of the research towards a quieter and greener transport system, are well specified in the light of the MSCA Green Charter.
4. The consortium is very well-planned and consists of partners with complementary expertise. The academic participants contribute scientific domain knowledge, whereas the industrial partners have extensive professional software development capacity and practical links to industrial applications and environments.
5. The host institution offers appropriate hosting and administrative assistance which will facilitate the execution of the proposal.
6. Hosting arrangements meet Euraxess standards and the division of labour involved in hosting is clearly defined.

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS

1. Proposal lacks a sufficient description of hosting arrangements for the DCs.
2. There is a degree of inconsistency in some of the letters of commitment which might call into question the relevant organisations' involvement.
3. The provided description of infrastructure for some of the participants does not sufficiently emphasize the infrastructures that are of relevance to the project.
4. The large number of associated partners gives rise to possible imbalance and difficulty in managing the project.
5. Insufficient information is provided on the time that will be committed by key persons from some of non-academic organizations

STOP PAGE COUNT – MAX 30 PAGES (SECTIONS 1-3)

DOCUMENT 2 (no overall page limit applied)**4. Network organisation**

Please explain the management structure and organisation of the network, including the roles of the different actors, and modus operandi including project monitoring and decision making. Please describe the Joint Governing structure for DN-ID and DN-JD.

- Suggested Management Structure: Supervisory board (main body), External Advisory group, Project management team, Doctoral candidate committee, committees related to work packages: training/ doctoral studies committee, Communication and Public engagement committee, Research coordination committee, Dissemination, IP and exploitation committee.
- Describe each Committee (composition and role). Gender balance is very important.
- Explain decision-making processes (e.g., simple majority or 2/3 majority rules) and conflict resolution strategy.
- Describe the use of the Consortium Agreement and what it will cover – a good example is available from the DESCA website (<https://www.desca-agreement.eu/desca-model-consortium-agreement/>)
- Describe the financial management strategy – resource planning and allocation of finances. Ensure the financial resources are allocated transparently and efficiently across the consortium so that the budget is clearly linked to the delivery of the programme.
- Where doctoral degrees in participating organisations require 4 years, if possible, state where you will find the additional funds for the additional year: evaluators are specifically instructed by REA to reward this proactivity with extra points, but not penalise proposals which don't.
- Describe the internal communications strategy to keep the consortium and the doctoral candidates in regular contact, e.g., intranet or other document repository, regular face-to-face and/or virtual meetings.

5. Environmental aspects in light of the MSCA Green Charter²⁰

Please explain how the proposed project would strive to adhere to the MSCA Green Charter during its implementation.

- The MSCA Green Charter is a code of good practice for individuals and institutions who are in receipt of MSCA funding.
- The goal of the MSCA Green Charter is to encourage sustainable thinking in research management.
- Describe sustainable measures of implementation and procedures on organisational and consortium level.
- Some measures individuals and institutions are invited to consider are:
 - to reduce, reuse and recycle, promote green purchasing for project-related materials,
 - ensure the sustainability of project events,
 - use low-emission forms of transport,
 - promote teleconferencing whenever possible,
 - use sustainable and renewable forms of energy,
 - develop awareness on environmental sustainability, etc.

²⁰ The MSCA Green Charter constitutes a code of good practice for all recipients of MSCA funding – both individuals and institutions – and promotes the mainstreaming of environmental considerations in all aspects of project implementation. In so doing, the Charter seeks to reduce the environmental footprint of MSCA-funded projects, to raise awareness of environmental sustainability, and to serve as a catalyst in promoting best practice in sustainable research management.

- If you have included training for the Doctoral Candidates in ‘green aspects’, you may also include it here.

6. Participating Organisations

All organisations (whether beneficiaries or associated partners²¹) must complete the appropriate table below. Complete one table of maximum one page per beneficiary and half a page per associated partner (minimum font size: 9). Associated partners linked to a beneficiary should be described separately.

For **beneficiaries**:

Beneficiary Legal Name:	
General Description Include HR Excellence in Research and/or Athena SWAN logo here if applicable	<i>Short description of the activities relevant to the action</i> ➤ Add a general description of the beneficiary and a short description of the actual centre/department/school participating in the action.
Role and Commitment of key persons (including supervisors)	<i>Including names, title and the intended extent of involvement in the action (in percentage of full-time employment) 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	Max. 5 <i>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).</i> <i>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>

²¹ Please refer to the section on associated partners

For associated partners:

Associated Partner Legal Name:	
General description	
Key Persons and Expertise	
Key Research Facilities, Infrastructure and Equipment	➤ Please be sure to list all facilities that will be needed by doctoral candidates on secondment at this organisation.
Previous and Current Involvement in Research and Training Programmes	➤ As for the beneficiaries, detail any relevant EU, national or international research and training projects in which the partner is currently participating. Internal research projects (not funded by external sources) can also be included here. Do not leave this blank – it will be penalised.
Relevant Publications/datasets/softwares/ Innovation Products/ other achievements	<p>Max. 3</p> <p><i>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).</i></p> <p><i>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></p>

For associated partners linked to a beneficiary:

Associated Partner linked to a beneficiary Legal Name:	
General description and link to the concerned beneficiary	
Key Persons and Expertise	
Key Research Facilities, Infrastructure and Equipment	
Previous and Current Involvement in Research and Training Programmes	
Relevant Publications/datasets/softwares/ Innovation Products/ other achievements	<p>Max. 3</p> <p><i>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).</i></p>

	<i>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>
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7. Letters of Commitment

Please use this section to insert scanned copies of the required **letters of commitment**.

Associated partners must include a letter of commitment in Part B (document 2) of the proposal to ensure their real and active participation in the proposed network. Such letters must follow the template below and should be signed by an authorised person, scanned and included in section B.5. The expert evaluators will be instructed to disregard the contribution of any associated partners for which no such evidence of commitment is submitted.

In case the letter does not follow the template or fail to give enough information on the associated partner’s role and/or enough assurance on their commitment in the project (e.g. no signature, wrong proposal references, outdated letter...), the experts may penalise the proposal on these aspects under the implementation evaluation criterion.

For DN-JD, letters of pre-agreement must also be included from those academic beneficiaries/associated partners that will award the doctoral degrees, in part B (document 2) of the proposal. These letters should be signed by an **authorised legal representative** of the organisation in question so as to offer reasonable assurance regarding the commitment to award the joint, double or multiple doctoral degree(s). These letters should also indicate agreement with the principle that the awarding of such degrees is a precondition for funding. **A template** for these letters is provided below and **must be followed by all academic DN-JD applicants awarding the doctoral degree(s)**.

In case the letter does not follow in full the template or fails to give enough assurance on the commitment in the project (e.g. no signature, wrong proposal references, outdated letter...), the experts may penalise the proposal on these aspects under the implementation evaluation criterion. Missing letters of pre-agreement will lead to the exclusion of the entity, which may affect the eligibility of the proposal.

Letters of pre-agreement must be included in the PDF file (Part B, document 2); these should not be attached in a separate PDF file or as an embedded file since this makes them invisible.

- For DN-JD, you can rename this section 7 “Letters of Commitment and Letters of pre-agreement” and adding the pre-agreement letters after the letters of commitment or create a section 8 “Letters of pre-agreement”.

7.1. Template of Commitment letter for DN associated partners

- *On headed paper of the entity*

- *Beyond any additional information that the participating organisation wishes to indicate in its Letter of commitment, the following text should appear in all its parts and with no modifications:*

I undersigned²², in my quality of²³, commit to set up all necessary provisions to participate as associated partner in the proposal submitted within the call HORIZON-MSCA-DN-2022, should the proposal be funded.

On behalf of [*name of the entity*], I also confirm that we will participate and contribute to the research, innovation and training activities as planned in this project. In particular, our [*name of the entity*] will be involved in[*Free field for any additional information that the participating organisation wishes to indicate in order to describe its role and contribution to the project*].

I hereby declare that I am entitled to commit into this process the entity I represent.

Name, date, signature

²² First name and surname.

²³ Role in and name of the Institution/Doctoral School.

7.2 Template of pre-agreement letter for DN-JD participants awarding a joint/double or multiple degree

- *On headed paper of the entity*

- *Beyond any additional information that the participating organisation wishes to indicate in its Letter of pre-agreement, the following text should appear in all its parts and with no modifications:*

I undersigned²⁴, in my quality of²⁵, commit to set up all necessary provisions to award a joint/double/multiple²⁶ research doctoral degree in the frame of the DN-JD proposal²⁷ submitted within the call HORIZON-MSCA-DN-2021, should the proposal be funded.

I am aware of and agree with the principle that the setting up of such provisions is a precondition for funding.

The research doctoral degree will be awarded to those Marie Skłodowska-Curie researchers who will fulfil, at the end of their research work, the requirements as set out in the formal agreement to establish the joint/double/multiple research doctoral degree between the relevant participating organisations.

[Free field for any additional information that the participating organisation wishes to indicate]

I am aware that the formal agreement to establish the joint/double/multiple research doctoral degree is due by month 6 from the start date of the project and I commit to comply with this deadline.

I hereby declare that I am entitled to commit into this process the Institution/Doctoral School I represent.

Name, date, signature

²⁴ First name and surname.

²⁵ Role in and name of the Institution/Doctoral School.

²⁶ Choose the relevant one(s).

²⁷ Title of the proposal.

Additional ethics information

- If you entered one or more ethical issue/s in the ethical issues table in part A of the proposal, then you must also submit an ethics self-assessment field in part A. More information is available in [How to complete your ethics self-assessment guide](#).
- Follow the comprehensive information provided in the Template Part B-1.
- Read research, risk-benefit analyses and ethical issues: [A Guidance Document for Researchers Complying with Requests from the European Commission Ethics Reviews](#)
- If no ethics issues are associated with your project, then you should still use this heading and state that the proposal does not pose any ethics issues.
- More information on ethics issues in Horizon Europe is available in:
 - [REGULATION \(EU\) 2021/695](#) - articles 18. and 19.
 - [Work Programme 2021-2022 – General Annexes](#) – Ethics part starts on page 11.
- More information on ethics is available in [HE Programme guide](#) (from page 21.)