MSCA-PF-2024 Annotated Template. Produced by NTNU.
Last updated May 2024 by Research Advisors at the MH, AD and IE Faculties

NTNU's MSCA-PF-2024 "Annotated template"

Dear applicants,

Please find enclosed an annotated template containing tips and tricks for the Marie Skłodowska Curie (MSCA) Postdoctoral Fellowship call 2024(submission deadline: **11 September 2024**, 17:00 Brussels time).

We have created this annotated template to help applicants (and their supervisors) to address each section of the proposal and the evaluation criteria as best and as comprehensively as possible. The annotated template is based on the 2024 proposal template (which includes detailed instructions), the 2024 Guide for Applicants, and our analysis of the 2023 evaluation summary reports (i.e. reviewer feedback), from which we identified commonly occurring strengths and weaknesses.

The annotated template covers both Part B1 (**Excellence**, **Impact** and **Implementation**) and Part B2. We have included limited comments for part B2. This, however, does not mean that this section is less important than B1.

For each section and sub-heading in part B1 (e.g. 1.1, 1.2, 1.3 etc.), we have suggested **in red** what you should include and how you should structure it ("Suggested Content and Structure"). We have also provided some background on what should be addressed ("Context") under particular sub-headings. All our comments and suggestions are included in red throughout the B1 and the B2. You are not obliged to follow these guidelines, but they have been created to give you a good chance of addressing well the evaluation criteria. If anything in this template is unclear, then please do not hesitate to contact the EU Adviser at your Faculty for an explanation.

Before embarking on writing a MSCA-PF application, you must understand that the MSCA is about **research and training** (i.e. "training through research"):

- From the MSCA website: "The objective of PFs is to support researchers' careers and foster excellence in research. The Postdoctoral Fellowships action targets researchers holding a PhD who wish to carry out their research activities abroad, acquire new skills and develop their careers. PFs help researchers gain experience in other countries, disciplines and non-academic sectors."
- From the Guide for Applicants: "The objective is to improve researchers' employability and career prospects within academia and beyond, with a strong focus on interdisciplinarity and intersectoral experience."

This means that, in addition to presenting an original research project that is worthwhile and feasible within the proposed timeframe, every applicant must think carefully about their future career aspirations; and explain how the skills learned and work carried out during the Fellowship will enable you to achieve your career objectives and increase your employability.

In addition, here are some more tips to remember when preparing a proposal:

- First and foremost, ask your supervisor for help with the proposal
- Familiarise yourself with the template's detailed instructions, the Guide for Applicants and the MSCA Work Programme
- Acquaint yourself with the MSCA Green Charter and the MSCA Guidelines on Supervision
- Read the evaluation criteria before you begin (found p. 94 of the MSCA Work Prorgamme)
- Always remember to follow the formatting requirements specified in the template (including the use of tags)
- Allow sufficient time to get feedback on your application
- Upload your final proposal to the European Commission's Funding & Tenders opportunities Portal at least 24 hours before the deadline (you can submit as many times as you wish before the deadline, but please note that the Portal is likely to considerably slow down as we approach the submission deadline).

We wish you the best of luck with your application!

Yours sincerely,

The NTNU EU support team

Horizon Europe Programme

Standard Application Form

Instructions, please remove

Marie Skłodowska-Curie Actions - Postdoctoral Fellowships (HE MSCA PF)

Project proposal – Technical description (Part B)

Version 4.0
30 May 2024

HISTORY OF CHANGES		
Version	**Publication date**	**Changes**
1.0	18.06.2021	▪ Initial version
1.1	05.05.2022	▪ Updated definitions: artificial intelligence, critical risks. Alignment of wording of title 1.2 with the wording of the work programme.
2.0	11.07.2022	▪ Addition of tags
2.1	08.09.2022	▪ Added instructions on Artificial intelligence
3.0	20.03.2023	▪ Letter of commitment for non-academic placement no longer required ▪ Font size of text in tables - alignment with standard application form template ▪ Criteria 1.2 open science practices: link to external video added ▪ Revision of criteria 2.1 explanation ▪ Partial alignment of text with standard application form template for criteria 2.3 ▪ Addition of Section 8 “Environmental considerations in light of the MSCA Green Charter” ▪ Rephrasing of title of Section 9.
4.0	30.05.2024	▪ Reformatting of page numbers ▪ Criteria 1.2 Methodology revision to include AI ▪ Criteria 1.3 Two-way-transfer revision to include common weakness ▪ Criteria 2.2 Communication & Exploitation revision to include common weakness ▪ Criteria 3.1 Risks revision to include types of risks ▪ Open Science Practices Revision and additions

Instructions, please remove

Note

National Contact Points (NCPs) have been set up across Europe and beyond by the national governments to provide information and personalised support to Horizon Europe applicants in their native language. The mission of the NCPs is to raise awareness, inform and advise on Horizon Europe funding opportunities as well as to support potential applicants in the *preparation, submission and follow-up* of the grant applications. For details on the NCP in your country, please consult the National Contact Points page.

Instructions for Drafting Part B of the Proposal

Part B of the proposal contains the details of the proposed MSCA Postdoctoral Fellowship as well as the required supporting information. It will be used by the independent experts to undertake their assessment of the proposal. We therefore advise applicants to address each of the award criteria as outlined in the relevant sections, using both descriptive text and the tables provided. Please note that the explanatory notes included in the part B proposal template serve to explain the award criteria without being exhaustive. To draft a proposal, applicants should also consult the current version of the MSCA Work Programme.

Applicants must structure their MSCA-2023-PF proposal according to the headings indicated in the Part B proposal template.

Please note that this call will be a single-stage proposal submission and evaluation procedure. At the end of this document you can see the structure of the actual proposal that you need to submit, please remove all instruction pages that are watermarked. Applicants must ensure that their proposals conform to this layout and to the instructions given.

Please be aware that proposals will be evaluated as they were submitted, rather than on their potential if certain changes were to be made. This means that only proposals that successfully address all the required aspects will have a chance of being funded.

Applicants **must submit Part B of their proposal as two separate files:** part B-1 with a page limit applied, and part B-2 without a page limit.

Part B-1

Page limit: Sections 1, 2 and 3 together should not be longer than **10 pages.** **[note the strict page limit].** All tables, figures, references and any other element pertaining to these sections must be included as an integral part of these sections and are thus counted towards this page limit. The page limit for this part of the proposal will be applied automatically; therefore, you must remove these instruction pages before submitting. Do not add a cover page or a table of contents.

If you attempt to upload a proposal longer than the specified page limit before the deadline, you will receive an automatic warning and will be advised to shorten and re-upload the proposal. After the deadline, excess pages (in over-long proposals) will be automatically made invisible, and therefore will not be taken into consideration by the experts. Note that experts will be instructed to ignore hyperlinks to information that is specifically designed to expand the proposal, thus circumventing the page limit.

The following formatting conditions apply **[note the strict formatting requirements, we strongly recommend that you adjust the formatting before you start writing your B1 and B2]**:

- 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 formatting of the Annotated template is adjusted to fit this already]**.
- 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 number of pages compared to using the reference font (for example with a view to bypassing the page limit).

- The minimum font size allowed is 11 points. Standard character spacing and a minimum of single line spacing is to be used. **[The single line spacing is frequently missed, check this].**
- Text elements other than the body text, such as tables, headers, foot/end notes, captions, formulas, etc. may deviate, but must be legible and not be less than 8 points.

This document is tagged. Do not delete the tags; they are needed for our internal processing of information, mostly for statistical gathering. In that light, please do not move, delete, re-order, alter tags in any way, as they might create problems in our internal processing tools. Tags do not affect or influence the outcome of your application.

Part B-2

Part B-2, for which you will find a template at the end of this document does not have a page limit. It must comprise the CV of the researcher, the capacity of the participating organisation(s) and the commitment letter(s) of the associated partner(s) if applicable (only for Global Fellowships outgoing hosts and all proposals with a non-academic placement period). Part B-2 must be submitted as a separate document.

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).

Definitions

DEFINITIONS	
Artificial Intelligence[1]	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. 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) **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**
Critical risk	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

[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

	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.
Deliverable	A report that is sent to the Commission or Agency providing information to ensure effective monitoring of the project. There are different types of deliverables (e.g. a report on specific activities or results, data management plans, ethics or security requirements).
Impacts	Wider long term effects on society (including the environment), the economy and science, enabled by the outcomes of R&I investments (long term). Impacts generally occur some time after the end of the project. For this call Impacts refers to subsection 2.3 Example: *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.*
Milestone	Control points in the project that help to chart progress. Milestones may correspond to the achievement of a key result, allowing the next phase of 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.
Objectives	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. These may range from tackling specific research questions, demonstrating the feasibility of an innovation, sharing knowledge among stakeholders on specific issues. The nature of the objectives will depend on the type of action, and the scope of the topic.
Outcomes	The expected effects, over the medium term, of projects supported under a given topic. The results of a project should contribute to these outcomes, fostered in particular by the dissemination and exploitation measures. This may include the uptake, diffusion, deployment, and/or use of the project's results by direct target groups. Outcomes generally occur during or shortly after the end of the project. Example: *9 European airports adopt the advanced forecasting system demonstrated during the project.*
Research output	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.
Results	What is generated during the project implementation. This may

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

---------- Start of page count (max 10 pages) ----------

[This document is tagged (see instructions). Do not delete the tags; they are needed for processing.] #@APP-FORM-HEMSCAPF@#

Part B-1

1. Excellence #@REL-EVA-RE@#

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) #@QUA-LIT-QL@#

At a minimum, address the following aspects:

- Describe the quality and pertinence of the R&I objectives; are the objectives measurable and verifiable? Are they realistically achievable?
- Describe how your project goes beyond the state-of-the-art, and the extent to which the proposed work is ambitious.

Introduction

Context

The guidelines for subsection 1.1. are short, but these requirements must be addressed very well to convince the evaluators that your project is worthwhile to fund. This includes: the novelty of the overarching research idea/concept, and project objectives that have a sound basis/justification in theoretical framework and/or previous research (i.e. well placed within the state-of-the-art and clear how the research will advance it). Moreover, these objectives must be specific, measurable and verifiable. Furthermore, our analysis of evaluation reports shows that projects based on explanatory and/or hypothesis-driven approaches (or with clearly defined research questions) do much better than those based on exploratory or descriptive approaches ("fishing expeditions"). **Figure** 1 illustrates a suggested mind map for structuring the writing of subsection 1.1. and 1.2.

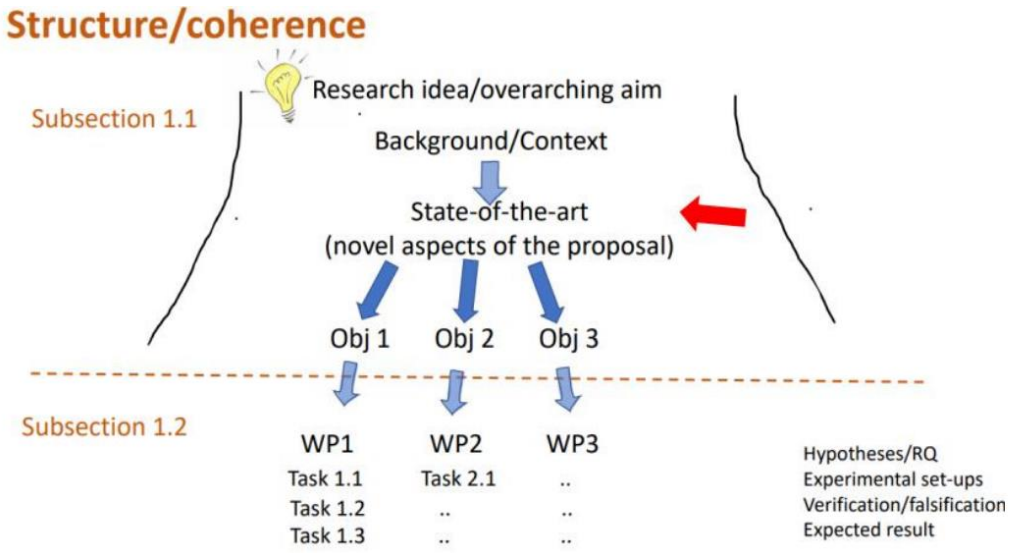

Figure 1:
Suggestion for how to structure the research part of MSCA-PF proposals. There should be clear coherence from the overall research idea/concept, through the state-of-the-art and the project's objectives in the subsection 1.1, and the corresponding work packages in subsection 1.2. The red arrow emphasizes on the importance of including a comprehensive – but relevant - state-of-the-art description in the proposal (RQ=Research Question).

TIP: The MSCA-PF is a personal fellowship, so refer to yourself in first person (this is clear, direct and conveys confidence). For example, "I will … My supervisor and I…etc."

Suggested content and structure[2]

The evaluators are busy people; therefore, get them to buy into your project proposal from the first page. This means that you should start with a "sales pitch" of your project (think about this as a "mini abstract".

Suggestion for how to structure your sales pitch (3-4 sentences per step):

Step 1: Set the stage, lay out the problem – Why care?

What problem does your research address and why is it important to address right now?

What has been done before to address the problem and what are the limitations of these approaches? What research gaps are there and why do they exist? Here, you need to make the evaluator aware of current practice and what is wrong with it.

- *After reading these few lines, the evaluators should be engaged in your research topic and care about the problem/issue that your research addresses.*

Step 2: Your solution

How will you address the problem and what do you hope to achieve with your research? What are the research questions/hypotheses to be tested?

What is the basis for your solution? – build credibility for your idea by mentioning previous work from you or your supervisor, including preliminary data/results/findings.

- *After reading these lines, the evaluators should understand that your project is feasible and will make an important, new contribution towards solving the problem.*

Step 3: Create a vision - So what?

What will be the results of your project?

Who (or what) will benefit from them (impact)?

- *After reading these lines, the evaluators should understand that your project will lead to desirable outcomes, for example for society or the economy.*

What will be the impact of the project on your career?

- *After reading these lines, the evaluators should understand that the skills acquired during the project will help you to achieve your future career ambitions*

TIP: What about training in the introduction?

Because training and career development is an essential element of the MSCA-PF, consider devoting a short paragraph (2-3 sentences) to the training and skills you plan to acquire. "*I will increase my professional network through……learn methods for ….*" Locate your fellowship at NTNU, under the supervision of [name], mention also other key partners. If applicable, also provide very short description of the Secondments or Placements (but be brief as these elements are to be elaborated in detail in subsequent sections, e.g., subsection 1.3)

Disclaimer: Although the template invites a description of the research and innovation objectives before the state-of-the-art, we recommend placing the state-of-the-art first to provide context for the objectives.

Beyond state-of-the-art

Context

Here, you must make the evaluators aware of current practice/knowledge in the field and why it is inadequate. What are the limitations of current practice or are there any knowledge gaps in your subject area and why do

[2] The structure is largely inspired by an article by Robert Porter entitled, "Crafting a sales pitch for your grant proposal" along with Friedland and Folt's guide "writing successful science proposals"

they exist? In our experience, an inadequate description of the state-of-the-art is a common weakness of proposals (it is either missing entirely or too general). Without in-depth state-of-the-art information, it is impossible for the evaluators to judge the novelty of your proposal. Therefore, the information must be specific and include the most up-to-date knowledge/references available in relation to your research idea and project objectives. At the same time, this section should not be treated like a textbook! You need to give the evaluators enough information to contextualise your research and understand how it differs and improves on what has been done before, while refraining from providing excessive, irrelevant details.

Suggested content and structure

Describe the relevant state-of-the-art and its limitations. Explain, in concrete terms, how your proposed research will overcome these limitations and go beyond the state-of-the-art (i.e. how is it conceptually novel?). For example, will it provide significant, new understanding or improvements compared to existing and/or competing theories, knowledge, and methodology?

This section could be summarised in a table (or figure) to give the evaluators a nice overview while breaking up the text:

State-of-the-art	Planned research	Beyond state-of-the art

TIP: As well as referring to the most recent state-of-the-art, you should include (if relevant) the research contributions to the topic by you and/or your supervisor. This can be in the form of published findings but also promising preliminary unpublished findings. This will build both credibility and feasibility for your research idea, and reduce the perceived level of risk (there is always some risk associated with launching new and bold concepts/ideas).

Quality and Pertinence of the R&I objectives:

Context

What does the research hope to achieve? In other words, what is **the main aim/goal of your research**? This should be a simple statement that should reveal the purpose of your research (i.e. why should the evaluators care?). The overarching aim/goal of your project must then be broken down to manageable and clearly defined research objectives. A commonly recurring weakness picked up by the evaluators is that the project's objectives are too broad, i.e., that they are not specific enough. Thus, make sure that the objectives are measurable, verifiable and specific. At the same time, be wary not to make your objectives too narrow, i.e. they seek to fill in a very small, niche gap in knowledge. You must be able to argue that achieving them will make an important contribution to advancing the field. We often see that when defining objectives, many do not specify in enough detail what is to be tested, measured, developed etc. and for what purpose. A tip here is to make sure that the key variables of interest are included in the objectives (and if phrased as a hypothesis to be tested, the predicted direction of the effect of X on Y). Depending on your field, you may be more familiar with using "research questions" rather than objectives – the same advice (i.e. make them specific) still applies here.

TIP: Refrain from using "weak verbs" like "investigate, study, explore, learn, understand" as they are rather broad and do not suggest a concrete outcome. Instead, favour verbs with a more precise meaning, like "identify, develop, produce, measure etc."

The objectives must also be realistically achievable. Remember that the duration of European Fellowship is limited to 2 years (3 years for Global Fellowships, with an additional 6 months in both cases if you include a non-academic placement). Two to three research objectives are appropriate for such MSCA-PF project. We recommend that the objectives are highlighted (in bold, colour, placed inside a box etc.) to make them stand out/break up the text.

The methodology section of the proposal (subsection 1.2) describes how the research objectives will be tested. Hence, the research objectives must correspond to the work packages (WPs) outlined in subsection 1.2. In MSCA-PF projects we recommend applying a 1:1 ratio between research objectives and WPs (as in Figure 1). Because the scope of the MSCA-PF also includes training activities for your personal career development, it is common to split the objectives into research and training objectives.

Example:
"To reach/achieve the overarching/overall aim my fellowship is divided into three research objectives (ROs) and corresponding work packages (WPs)."
RO1: Title …… (Research WP1). If applicable, one to two clarifying sentences supporting the RO.
RO2: Title …… (Research WP2). …..
RO3: Title …… (Research WP3). …

After the research objectives, list your training objectives. Two or three training objectives are common/appropriate. The first training objective is commonly linked to the research performed, often referred to as professional skills (for example hand-on skills, techniques, instruments, analysis, modelling) relevant for research objectives/WPs). There should also typically be one training objective related in transferable/soft skills (for example project management, entrepreneurship, teaching) and possibly one training objective dedicated communication and outreach activities. For training objectives, it is appropriate to collect them all into one training work package.

TO4: Title …. (Training WP4). If applicable, one or two clarifying sentences supporting the TO
TO5: Title …. (Training WP4). …..
TO6: Title …. (Training WP4). …..

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 of open science practices)

At a minimum, address the following aspects:

- 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.

- 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[3] approach is unnecessary in the context of the proposed work, please provide a justification.

- 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 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

[3] Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines.

account, please refer to this page.

⚠ If you plan to use, develop and/or deploy artificial intelligence (AI) based systems and/or techniques you must demonstrate their technical robustness. AI-based systems or techniques should be, or be developed to become:

- technically robust, accurate and reproducible, and able to deal with and inform about possible failures, inaccuracies and errors, proportionate to the assessed risk they pose
- socially robust, in that they duly consider the context and environment in which they operate
- reliable and function as intended, minimizing unintentional and unexpected harm, preventing unacceptable harm and safeguarding the physical and mental integrity of humans
- able to provide a suitable explanation of their decision-making processes, whenever they can have a significant impact on people's lives.

- 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 is adapted to the nature of your work in a way that will increase the chances of the project delivering on its objectives *[e.g. up to 1/2 page, including research data management]*. 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 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).

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

- 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 explain how the data will be managed in line with the FAIR principles (Findable, Accessible, Interoperable, Reusable).

⚠ *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.*

⚠ *Please also see the "how to evaluate open science in Horizon Europe proposals" video on the Funding & Tenders portal.*

Overall methodology

Context

The methodology/approach to achieve your research objectives is typically presented as work packages (broken down into tasks) here in subsection 1.2. Your work packages must correspond clearly with your research objectives established under section 1.1. Many lower-scoring proposals lack coherence between the objectives and WPs. This can typically arise because of a difference in the number of WPs and objectives, without indicating or describing how they are connected (we recommend a 1:1 relationship). Lack of coherence may also relate to first-time introduction of some of the state-of-the-art information (defining the project objectives) in the WP descriptions. This does not mean that you cannot go into theoretical detail about the objectives in the WP descriptions; however, the WP descriptions should **not** introduce new "objective-defining information". Increasingly we are seeing proposals submitted with elements of AI and a common weakness is that the techniques and robustness of the methods are not well described. It is particularly important when using AI in your proposal that you are very descriptive to convince the evaluators of the feasibility of the project.

Suggested content and structure

In addition to coherence between the objectives and WPs, the objectives/WPs themselves must also be integrated/ connected to each other. We therefore recommend starting subsection 1.2 by presenting a brief overview of your workplan. An effective way to achieve this is through a visual tool (PERT diagram or similar) to show interplay o between the WPs (for some examples, ask your EU adviser for redacted successful proposals). This visual aid will help the evaluator to better understand the overall study design /methodology of your project (for example, one WP might build on the outcome for another WP and so on, whereas other tasks might be performed in parallel). Importantly, the arrows between the WPs must indicate identifiable flows of results (data/knowledge) within the project. Without a clear and convincing overview of the methodology, the risk that the research project may be judged as fragmented, *i.e,* representing collection of largely independent small projects.

Work package descriptions

Each WP description should have a heading (*WP1- heading text*) explaining the main action/purpose of the WP (linking back to its corresponding objective defined in subsection 1.1). The workflow within the WPs should be organised as tasks. Make sure that the number of tasks is manageable; about 2-3 tasks are common for each WP. Name the tasks in the WP descriptions as follows: T1.1 and T1.2 would be the first and second task of WP1, respectively. You should use this WP and task nomenclature throughout the proposal (for example, in the Gantt Chart in Section 3, Implementation). For each WP, make clear what are the main expected results and how they feed into/are related to the other WPs.

A common weakness in lower scoring proposals is that the WPs and methodology are not presented in sufficient detail. As per the guidelines, you must describe and explain the assumptions that underpin your work; and explain how this will enable you to deliver your project's objectives. Therefore, in each WP, describe the methods including the concepts and models you will be using. What kind of data will be collected and how much? Who or what will be included? How will the data be analyzed? Based on this information, the evaluator must be able to assess whether your methods/approach are feasible and appropriate to answer your research objectives/research questions. To make this easier for them, you should justify your choice of methods/approach in a few lines. Why are they appropriate and feasible? Make clear your expertise in those methods and that of your supervisor/(s). Depending on your field, it may be relevant to define a benchmark of success for the parameters of interest.

If you will undertake a secondment and/or placement in a non-academic sector organization, the methodology section should also make it crystal clear what you will do there and the expertise that you will benefit from.

TIP: Risks and mitigation

Research that pushes the boundaries of knowledge (goes substantially "beyond state of the art") will always include riskier elements, that may be conceptual (i.e., the hypothesis is falsified), or operational (i.e., risks related to data sampling, analysis, instruments). In the WP descriptions, identify the risks/challenges that you might encounter and indicate how you will mitigate them. Avoid referring to rather trivial risks (for example, that eggs might break during transport). Instead, identify conceptual risks or risks associated with new and innovative methodology. Conceptual risks often suggest the need to address alternative or competing research questions/hypotheses. Make use of promising preliminary data/results if available to increase the feasibility of the WPs. You can also indicate as part of WP heading the risk and probability of the risk. Preferably, the riskier parts should be located towards the end of your work plan, such that the entire project will not fall apart in the early stages if a risk cannot be mitigated. Your project's milestones may correspond to successfully overcoming the identified key risks/challenges of the project.

Integration of methods and disciplines to pursue the objectives

Suggested content and structure

Describe how your project incorporates an interdisciplinary approach. **What** knowledge or tools/methods are you combining from different disciplines? Importantly, explain **why** is this necessary for addressing your objectives/research questions? You may also use this as an opportunity to highlight the two-way knowledge transfer: typically, you will bring a different (but complementary) disciplinary perspective than that of your supervisor(s), so make that clear. If your research will bring together knowledge from different sectors (for example, you have included a 6-month non-academic placement), highlight this here too.

A novelty with Horizon Europe is that you MUST now provide a justification if you do not consider that an inter-disciplinary approach is necessary for your project. However, our review of previous evaluation summary reports shows that evaluators have a marked preference for inter-disciplinary projects (i.e. more novel, more ambitious).

The gender dimension and other diversity aspects in the research content

As with the above section on interdisciplinarity, you MUST now provide a justification if you do not consider that a gender dimension or other diversity aspects are relevant for your project. All Horizon Europe-funded projects must actively integrate the gender dimension in the content of their planned research. To paraphrase the European Commission's 2020 "Gendered Innovation" report, integrating sex and/or gender analysis **adds value to research** in terms of excellence, creativity and business opportunities; helps researchers question gender norms and stereotypes, and rethink standards and reference models; leads to an in-depth understanding of diverse gender needs, behaviours and attitudes; and contributes to the production of goods and services better suited to new markets.

Suggested content and structure

This section is about explaining **why** gender and other diversity aspects are relevant and **how** you will address them. For example:

- Will women and men respond differently to your research?
- Have you questioned any gender assumptions that could influence your research questions?
- Do you expect your research findings affect differently men and women?
- (For medicine/health): does the disease/disorder you are studying/your research results are relevant for affect men or women disproportionately?

- **How** will you integrate sex/gender analysis into your approach/experimental design? For example, for medicine/health research involving study subjects (be they humans or animals), will you include the same number of male and females in your experimental design and analyse the results separately?

Note that this section relates only to the gender dimension in the research content and is **not** about gender diversity within your research field or gender policy at NTNU (these aspects are not evaluated and you will waste space if you describe them).

Although we would advise you to think very carefully about whether the gender dimension (and other diversity aspects) are relevant to your research, if you are strongly convinced that they are not, then you must state this and explain why you think it.

You will find further information on gender dimension here:

- For a basic but really helpful introduction, see **the 2016 EU video "Understanding gender dimension for MSCA projects"**: https://www.youtube.com/watch?v=Hq4eWo30RfY
- **The European Commission's 2020 "Gendered Innovation" report** includes 15 case studies that provide concrete examples of how sex and/or gender analysis can lead to new insights, discovery and innovation. It also provides definition of "sex", "gender" and "intersectionality" and key methodological considerations: https://op.europa.eu/en/publication-detail/-/publication/33b4c99f-2e66-11eb-b27b-01aa75ed71a1
- The **checklists and guidance provided by the Gendered Innovations project** at Standford University: http://genderedinnovations.stanford.edu/index.html
- Gender Action – Series of webinars on including gender in H2020 proposals: https://genderaction.eu/trainings/past/
- See subheading "Integrating gender in research and education content": http://eige.europa.eu/gender-mainstreaming/toolkits/gear/action-toolbox

Open Sciences Practices

Context

Horizon Europe funded-projects are expected to pursue **ambitious open science practices**.

Open Science is defined as "an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process." By asking applicants to ingrate and describe their open sciences practices in their methodology, the EC hopes to 1. increase the overall quality of the funded-research projects and 2. accelerate the advancement of knowledge and innovation via a systematic sharing of project results.

You MUST provide a justification if you do not consider that open science practices are appropriate for your project. Note, however, that this will likely result in a lower score.

Additionally, you should NOT describe your outreach activities in this section. These should be described in Section 2 Impact.

Suggested content and structure

The template provides examples of open science practices. These are helpfully defined in the Horizon Europe Programme Guide: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

We strongly recommend that you consult pages 38 to 54.

Under Horizon Europe, the following **mandatory open science practices** apply and you must describe how you will comply with them:

- Open Access (OA) to scientific publications. OA means that peer-reviewed academic publications are made freely available for anyone to read online (with the authors retaining the copyright to the publication). The Norwegian Ministry of Education and Research has clear guidelines on Open Access, more specifically that all publicly-funded Norwegian research articles should be made openly available by 2024. NTNU is implementing this policy in its Development Plan for Open Science (and of course the EU requires that you publish in OA). So, the question is not "will you publish in OA" but **how** will you publish in OA? There are two main routes: Gold open access (preferred route) means publishing in an Open Access Journal or Platform (i.e. your publication is made freely and immediately available for anyone to read). Typically, the journal will charge an

article processing charge, but this can – in general - be covered by the University Library at NTNU. In Green open access, the author publishes in a subscription journal and then self-archives the Author Accepted manuscript (i.e. the final version, after peer-review but without the Journal's formatting or logo) in a freely accessible institutional or specialist archive known as a repository. NTNU has a Rights and Retention Strategy which ensures that researchers can always use self-archiving to make the final version of their peer-reviewed manuscription openly available through Green OA, without embargo and without having to abide by any restrictions from the publisher. The strategy also means that as a researcher, you keep the copyright to your work, and NTNU will take on the legal responsibility for dissemination via the repository. NTNU's institutional repository for publications is called NTNU Open. NTNU recommends the use of the Creative Commons Attribution 4.0 International Public License (CC BY 4.0) which allows for the re-use scientific publications while crediting the author. As a researcher at NTNU, you are obliged to deposit the published version or the author accepted manuscript in NTNU Open (this applies too even if you have published in Gold Open Access). These polices/recommendations are aligned with your obligations for OA under Horizon Europe.

- Responsible management of research data in line with the FAIR principles of 'Findability', 'Accessibility', 'Interoperability' and 'Reusability', notably through the generalised use of data management plans, and open access to research data under the principle 'as open as possible, as closed as necessary'; This needs to be expanded on and made specific in the section below.
- 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 addition, you may decide that other Open Science Practices are appropriate for your work. These recommended open science practices could include, for example:

- Depositing an early version of your manuscript (i.e. before peer-review) on a pre-print server (like bioRxiV for biology, SocArXiv for social sciences or ArXiv for physical sciences) for even earlier sharing of your work;
- Early sharing of other research outputs and data;
- Pre-registration of a study protocol (i.e. specifying your hypotheses, study design and data analyses **before** the actual work is carried out and submitting it to a registry). This helps to contribute towards transparency as well as the reliability and reproducibility of your results. See the Center for Open Science's webpage on pre-registration for more info;
- Publishing different types of articles that reflect the full research journey; for example, an in-depth method article, software tool article, a registered report (this is a type of pre-registration that has undergone peer-review) etc.;
- Open peer review;
- Co-creation of your research design through engaging citizens, civil society or end users.

Evaluators in Horizon Europe have been instructed to reward (by a higher evaluation score) applicants who incorporate well-described recommended open science practices into their proposal. Do remember though to be realistic in terms of what you can achieved and explain why these practices are adapted to your work and will help you to deliver your project's objectives.

Research data management and management of other research outputs

Context

Research data management is essentially the active organization and maintenance of data throughout its life cycle (i.e. from planning and creation, through to analysis, preservation, sharing and reuse). Data management is part of good research practice. Your project will likely involve generating/collecting data (for example, numerical data, textual data, images, audio or video recordings) and/or other research outputs besides publications (for example, software, code). You must explain how these data/research outputs will be managed in line with the FAIR principles of data sharing (Findable, Accessible, Interoperable, Reusable).

If awarded, you will need to deliver **a Data Management Plan (DMP) by month 6 of your project**. This compulsory **Deliverable** should be included in your **Gantt Chart**.

Suggested content and structure

It is simply **not** sufficient to state "I will deliver a data management plan in line with the FAIR principles at month 6 of the project". You must demonstrate in your proposal that you have already reflected on your strategy for research data management, even though you will of course elaborate on this further in your DMP if your project is funded.

1. Outline **what data, data sets, or research outputs** your project will generate, be as specific here as possible (e.g. neuronal recordings of the entorhinal cortex of mice undergoing behavioural task X).
2. **How** will you make these data/research outputs available in line with FAIR principles? Try to highlight already in **which repository(ies)** you intend to share the data. You should favour repositories that are discipline-specific over generic ones, assign a persistent identifier to your data (e.g. DOI), and are trustworthy (well-known in your community and committed to keeping the data in the long-term). If known already, you should describe what file format you will use to share the data and how it will be described with rich (preferably standardised) metadata. If you cannot find a suitable disciple-specific repository for your data then you can use NTNU's research data archive in DataverseNO, which is open for all fields and disciplines.
3. Describe **the terms under which your data can be used**. This means assigning a license to your data so a third party accessing your data knows how it can be used. Aim to make your data as open as possible (for example through a CC-0 or CC-BY licence) and if access must be restricted (e.g. special categories of (aka "sensitive") personal data) explain why.

Some excellent resources here are:
NTNU's Development Plan for Open Science 2023-2025 and Guidelines for Open Science
Research Data@NTNU: NTNU's central support service to assist researchers and students with open sciences practices. The team offers regular courses on data management plans as well as archiving FAIR research data (note that these courses are offered through the Virtual Library, which offer a suite of courses which may be relevant to research and training plan – see the course catalogue). This in-house assistance would be good to mention in your proposal but should not replace actual critical thinking on the topic by you or your supervisor – you know your research field best!
PhD on track
FOSTER: offers practical guidance and training in Open Science, with a discipline-specific focus.

1.3 Quality of the supervision, training and of the two-way transfer of knowledge between the researcher and the host

At a minimum, address the following aspects:

- Describe the qualifications and experience of the supervisor(s). Provide information regarding the supervisors' level of experience on the research topic proposed and their track record of work, including main international collaborations, as well as the level of experience in supervising/training, especially at advanced level (i.e. PhD and postdoctoral researchers).
- Planned training activities for the researcher (scientific aspects, management/organisation, horizontal and key transferrable skills...).
- For *European Fellowships*: two-way transfer of knowledge between the researcher and host organisation.
- For *Global Fellowships*: three-way transfer of knowledge between the researcher, host organisation, and associated partner for outgoing phase.
- Rationale and added-value of the non-academic placement (if applicable).

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 MSCA Guidelines on Supervision.*[4]

Qualifications and experience of the supervisor(s)

Context

From this section, it must be clear that the supervisor(s) has/have **relevant scientific qualifications and experience with supervision of PhD and/or postdoctoral researchers**. If you will include a secondment or non-academic placement, you will need to indicate who will supervise your stay there and describe their track record and its relevance to the work you will undertake.

When writing this section keep in mind that the qualifications and experience of the supervisor(s) may be relevant not only for your scientific skill set but also your transferable one (as well as building your network); i.e. you can argue how this experience will contribute to your career aim(s).

Suggested content and structure

Describe the supervisor's:

- **Track record as a leading, internationally recognised researcher in their field**, including international network/collaborations, publications, patents, academic achievements, funding, project management, spin-off activity, intersectoral collaboration, editorial work, governmental advice, etc. Comments from the evaluators suggest that the fellow should be presented with new opportunities for international networking, so do make clear the international visibility of your supervisor and how you will be able to benefit from their network.
- **Experience with the research topic/project's methods.** Make it clear why your supervisor is an expert to supervise the proposed work, and in the case of multiple supervisors (for example, if you will undertake a secondment), how their expertise is complementary.
- **Experience with supervision** - How many PhD and/or postdocs have they supervised? (you should also mention master students if relevant, although it is expected that the supervisor has supervised PhDs and/or postdocs). Has your supervisor been involved in other training programs such as the MSCA Doctoral Networks, or any other training/mentoring program, for example at the institutional level? For very experienced supervisors, mention what has become of their previous group members (have they gone on to have successful careers, for example, by establishing their own research group)? If your supervisor has somewhat limited experience with supervising PhD or postdocs, you may wish to consider to include an additional, more experienced supervisor or "mentor", as long as you make clear what is their role and added value.
- **If you will undertake a secondment or non-academic placement**, do this same exercise for your supervisor based at that organisation. Emphasise how the skill set of this supervisor is different from that of your main supervisor (i.e. the secondment should have "added value").
- For Global Fellowships, do this same exercise for your supervisor based in a third country.

[4] While the MSCA Guidelines on Supervision are non-binding, funded-projects are strongly encouraged to take them into account.

TIP: Describe how you will interact with your supervisor(s) during the fellowship. you should meet regularly with your supervisor (i.e. once a week or every two weeks). Comments from the evaluators suggest that the interaction between the supervisor and researcher should be frequent, preferable weekly or bi-weekly and not monthly.

Training activities

Context

What new knowledge and skills will you gain during the fellowship? In addition to **technical skills**, think about important **transferable skills** that can be used in a variety of settings (e.g. science communication, project management, supervision/mentoring, academic writing, grant writing, entrepreneurship/commercialization activities etc.).

How will you get this new knowledge? Method of training, date of training (if known), person who will teach you (if known)

Why is it important for you to obtain this new knowledge in relation to your career aim(s)? Link to SO's, TO's or DO's where appropriate.

For transferable skills, NTNU offers several courses that are open to Marie Skłodowska Curie fellows (for example "Research Leadership", "Effective Grant Writing" – see **Appendix 1** attached to the end of this Annotated Template) and ask your EU adviser or supervisor for department-specific activities). Skills in communication towards the general public could be acquired through presenting results at outreach activities/infrastructures organised by NTNU (the Researcher's Night and/or NTNU's outreach magazine and webpage for research news Gemini.no - Norwegian SciTech News). In this section, you should also mention that you will establish a Career Development Plan with your supervisor at the beginning of the fellowship (this is one of the mandatory deliverables and should be included in your Gantt chart in section 3).

Suggested content and structure

This section can be summarized in a table:

Desired skill/competence	Level today	Level achieved by training	Linked to objectives	Means of training	Responsible
TA1 - New method	Medium	High	SO1 and SO3	Xxx	Secondment partner
TA2 - Project management	Low	High	TO1	Attend project management course (refer to task in WP)	NTNU
TA3 - Teaching	Low	Medium	TO2	Supervision of master student	NTNU
TA4 – Research data management	Low	High	SO1	Course on "Research Data Management and Open Science"	NTNU library
TAn – xxx					

TIP: Include the training activities (TA) in the Gantt chart in section 3, consider abbreviations TA1 ... TAn for later references

Two-way transfer of knowledge

Context

"Two-way" transfer of knowledge essentially means that there is a mutual benefit to be gained from your stay at NTNU (and your secondment institution, non-academic placement, or third country host institution, as relevant); that you will learn important skills that will enable you to achieve your career objectives and that in turn, you will bring new knowledge to NTNU that will strengthen the research environment here. In our experience, a common weakness is overly-focusing on one part of this transfer; either researcher to host or host to researcher. Both must be outlined. It is also important to have a in-depth knowledge of the host institution's research environment for this section to properly outline the transfer of topics, experience, networks and skills.

Suggested content and structure

Step 1: Focus on fellow:

- What new knowledge and skills will your supervisor, their research group and the wider research environment at NTNU impart on you during the fellowship? Link these to your scientific and training objectives and your career aim.
- How will you acquire this new knowledge? Describe the means and modes of knowledge transfer.
- How will you benefit from this new knowledge in relation to your career aims?

Step 2: Focus on NTNU:

- What new knowledge and skills will you impart on your host during the fellowship? Include both knowledge/skills you already have (underpinned by your CV) and skills you will acquire during your fellowship.
- How will you impart this new knowledge? Describe the means and modes of knowledge transfer.
- How will this new knowledge benefit your host (laboratory) and how will it be implemented?

This can be summarized/demonstrated in a table like the one below:

Knowledge	***Transfer from host to researcher***	***Transfer from researcher to host***	***Mode of transfer***
A1	*X*		
A2	*X*		
A3		*X*	
A4		*X*	

If you project involves a secondment or non-academic placement (or in the case of Global Fellowships, a host institution located in a third country), you should also make clear what new knowledge and skills you will gain there and how you will acquire those, and why it is important for your scientific and training objectives and/or career aim (i.e. this should also be captured in the above tables).

1.4 Quality and appropriateness of the researcher's professional experience, competences and skills

Discuss the quality and appropriateness of the researcher's **existing** professional experience in relation to the proposed research project.

Context

Here you need to tell the evaluators (they have no knowledge of you) of your research experience and skills; argue why you are already an accomplished researcher relative to your career stage, and why your existing knowledge and skills make you the best person to conduct the project.

This section is not about boasting but about showing confidence in yourself with the evidence to back it up. This evidence should also be clearly presented in your CV in part B2 (the evaluators are likely to cross-check between these two sections). Be personal (i.e. use: I/me/my)..

Suggested content and structure

Describe in brief:

- **Your research experience/results/achievements so far and the way in which they make you unique**; think of this as a "mini CV" where you include the most important/relevant selling points of yourself as a researcher (i.e. key qualifications). These could include:
  - Track record of peer-reviewed publications. In particular, highlight those where you are first author, but if you were co-author on paper and made an important contribution, make that clear too. In fact, if you describe your specific contribution to a particular paper (including those in which you were first author), you can use this as an opportunity to highlight, for example, creative thinking (like developing or tweaking a method) or analytical or other skills that may be relevant to your proposed project. If the findings of the paper were picked up by the scientific community (for example, highlighted in the news section of a journal) or the media, make that clear.
  - Scientific achievements (patents, university prizes, scholarships, industrial research experience, etc.). At this early career stage, no (reasonably recent) award is too small to mention! For example, a travel grant or best poster prize.
  - International network/collaborations. If you have experience of working internationally already, make that clear – this demonstrates not only your large network, but also your ability to integrate quickly into a new environment.
  - Previous activities that demonstrate that you are able of independent thinking (i.e. development of project ideas/new methods/procedures, etc.), acquiring research funding, and acquiring new knowledge (application of multi-/interdisciplinary aspects; working with new, but related research topics)
  - Leadership: Teaching, student mentoring, supervision, organisation of workshops or scientific expeditions, etc.
  - Management: project management, managing of research groups/laboratory facilities etc.

Don't run the risk of only describing your publication record! The point is to show that you are a **well-rounded** individual and professionally mature for your career stage**.**

- **While describing your past achievements, you need to make it explicitly clear how your background makes you ideally suited to carry out the project**. Essentially, describe how your existing scientific and technical know-how provides a solid base to achieve your project's objectives (with any "gaps" in knowledge being covered by the host institution). You could also consider to mention how your existing transferable skills (for example, in leadership, management or communication) will ensure the smooth execution of the project.

2. Impact #@IMP-ACT-IA@#

Context

In its most simple definition, "Impact" essentially means any positive effect (benefit) that your results will have in the short or long term. It is a way of convincing evaluators to invest in your research, because someone or something stands to benefit from it.

Getting a good score on impact for any grant proposal always means adopting **a service attitude** and tailoring your arguments to fit the goals of the specific funding scheme you are applying for. Think: what are the goals of the MSCA-PF scheme? What is the European Commission trying to achieve by funding my Fellowship? The answer to this can be found under the **"expected impact" section of the MSCA-2023-2024-workprogramme.** Read those goals and throughout this section think how your fellowship will contribute to furthering them.

2.1 Credibility of the measures to enhance the career perspectives and employability of the researcher and contribution to his/her skills development

At a minimum, address the following aspects:

- Specific measures to enhance career perspectives and employability of the researcher inside and/or outside academia
- **Expected** contribution of proposed skills development to the future career of the researcher.

Context

An important "expected impact" from the work programme is: *"Increased set of research and transferable skills and competences, leading to improved employability and career prospects of MSCA postdoctoral fellows within academia and beyond"*

Essentially, section 2.1 is asking you how to explain **how the Fellowship will contribute to achieving this goal**. Your "increased skill set" has to be relevant to your future career objective, and so accordingly you must describe where you want to be in long term and how the skills learned during the Fellowship will help you to achieve your ambition.

Suggested content and structure

1. **Explain your career aim(s)** – where do you see yourself in 5-10 years? Remember your career could be academic or non-academic (i.e. industry organisations and business, government, civil society organisations such as non-profit or charitable organisations (NGOs, trusts, foundations, etc.), cultural institutions, museums, hospitals, international organisations (like UN or WHO), etc.). You need to demonstrate that you are motivated to reach your career aim(s) described above/why is your career aim important to you/the society/research/public and private sectors? Although we advise you to describe your main career aim, you should nonetheless articulate alternative career paths (i.e. both inside and outside academia) and how the knowledge and skills learned through the fellowship will make you an attractive candidate for these various paths or different sectors.
2. **Describe how the project contributes to a set of new skills/competences** (both research skills and transferable skills) and how these skills will help you to achieve your career aim. Use enough details to describe your mid- and long-term career perspectives. Make sure to emphasize new, complementary research skills to be acquired and how these will boost your career, but: be realistic given the short 2-year time frame. Regarding transferable skills, be specific about courses, training and career development programs at host organisation, in addition to external training (refer to details provided in Excellence section). Identify any weaknesses/gaps in your skills that will be addressed during your stay at NTNU and how the planned training activities will help you to reach your career aims. This could include:
   - Learning new research methods/applications,
   - Widening of international network/collaborations,
   - Training in supervision skills,
   - Lecturing,
   - Applying for funding

Remind the evaluator that a detailed/specific career development strategy is part of implementing the project in accordance with European Charter for Researchers (note that a Career Development Plan is a mandatory deliverable at month 6 of the project and must be included in the Gantt chart).

TIP 1: Explain how the supervisor and host institution will provide opportunities for international networking and how this will benefit your career, for example, taking advantage of the MSCA PF as a springboard for new collaborations.
TIP 2: If your career aim is to achieve scientific independence and lead your own research team, consider to include supervision and leadership skills training as part of your MSCA-PF

2.2 Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities #@COM-DIS-VIS-CDV@#

At a minimum, address the following aspects:

- Plan for the dissemination and exploitation activities, including communication activities:[5] Describe the planned measures to maximize 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 measures that are planned, and the target group(s) addressed (e.g. scientific community, end users, financial actors, public at large). 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.
- Strategy for the management of intellectual property, foreseen protection measures: if relevant, discuss the 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.

⚠ 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.

Context

As you will have read under the "Expected Impacts" of the MSCA-2023-2024-workprogramme, "impact" in MSCA-PF goes beyond the benefit of the Fellowship on your own career. By investing in MSCA-PF Fellows, the European Commission also expects an increase in research and innovation output, more knowledge converted into products and ideas, and a knowledge-based society and economy. This means that **you must think carefully about how your results will be useful or beneficial to others.** How will you ensure that they can be used and how will you make sure that those who are interested in or affected by your results know about them? Keep in mind when considering this section who your target group is and how you can engage them using a variety of both traditional and modern communication tools, channels, messages and events. If applicable, how can you engage audiences on different levels (e.g. policy or industry)? It is also important that the scope of this engagement is wider than your immediate social networks.

Here three concepts can be distinguished:

Dissemination is the disclosure of the results of the project in any medium. Disclosure may sound passive, like a shop opening up, but it is an activity, like a shopkeeper attracting customers. It is a process of promotion and awareness-raising right from the beginning of a project. It makes research results known to various stakeholder groups (like research peers, industry and other commercial actors, professional organisations, policymakers) in a targeted way, to enable them to use the results in their own work.

Exploitation is the use of the results during and after the project's implementation. It can be for commercial purposes but also for improving policies, and for tackling economic and societal problems.

Communication means taking strategic and targeted measures for promoting the project itself and its results to a multitude of audiences, including the media and the public, and possibly engaging in a two-way exchange. The aim is to reach out to society as a whole and in particular to some specific audiences while demonstrating how EU funding contributes to tackling societal challenges.

These are the official definitions from the European Commission. It may be difficult to see the difference between dissemination and communication. The best tip that we can give you here is to **think about the target audience and the direct relevance/affect that your results will have on them**. With dissemination activities, you target

[5] In case your proposal is selected for funding, a more detailed Dissemination and Exploitation plan will need to be provided as a mandatory project deliverable during project implementation

individuals or groups with a direct interest in your results and who are likely to implement or use them in their line of work. A good example is presenting your work at a scientific conference. With communication activities, however, the audience is unlikely to be directly affected by your results in the short term. Communication activities run throughout the project and typically involve presenting your results to the public as a whole, or defined groups within the public (in a way that they can be understood by non-specialists) in order to

A) Raise interest and understanding in science and technology; and
B) Show them how research funding is being spent and benefiting the world (they are paying for it with their taxes after all).

Whether it be dissemination, exploitation or communication, you must always start with the same four questions: **Why? Who? What? How?**
Think clearly about your message, why you want to communicate it, who you want to communicate it to, and then devise a strategy to target specifically those individuals.

Suggested content and structure

Dissemination and exploitation activities

The dissemination and exploitation activities in your project should be viewed as strategic tools to maximise the impact of (1) your project results, (2) the new skills/competences obtained by the Fellow and (3) the new skills/competences obtained by the host. Even though the content below looks comprehensive, it could be made brief.

1. **Start by giving a brief overview of the main expected results generated by the project.** Make sure that this overview is fully in-line with the description in the excellence part.
2. **Describe how these results will be used (i.e. exploited) to maximize impact.** This could for example include:
   - Make the results publicly available or available to certain groups/communities, (provided there are no restrictions related to IPR or personal data).
   - Use of project results in further internal research and education activities (outside the project).
   - Commercial utilization of project results through e.g. further developing, creating or marketing a product or process, through licensing, spin-offs etc.
   - Use of project results in creating and providing a service.
   - Use of project results in standardisation activities.
3. **Formulate a dissemination strategy.** The dissemination strategy should be considered as a *tool* to ensure maximum exploitation and take-up of the action results, i.e. the dissemination strategy should be closely linked to the planned exploitation described above and be a tool to maximize impact.
4. **Specify the planned dissemination activities (be specific!).** Examples could involve (but select what makes sense for your project):
   - Scientific publications in international peer-reviewed journals (be specific i.e. indicate topic, target journal and when it will happen). Explain why you have chosen these particular journals – i.e. describe the underlying results that will form the basis of those publications and why they will be of interest to the targeted fields - and be realistic about how many publications you can publish within the project's timeframe.
   - Presentations at international conferences/meetings (be specific i.e. indicate topic, target conference and when it will happen). Explain why you chose these particular conferences/meetings.
   - Project website
   - Social media
   - Podcasts
   - Dissemination of results in specific magazines etc. to reach specific target groups
   - If possible, define KPIs (key performance indicators) for your dissemination (and communication) activities to help you to measure their impact (e.g. the size of the target audience reached to be reached).

Include the main dissemination "events" in the Gantt chart. In other words, you should be aware of the timeline, i.e. **who** to involve **when** at different stages of the project in order to maximize possible impact.

Strategy for the management of intellectual property

Suggested content and structure

Describe how intellectual property will be protected, e.g. to allow for proper exploitation. IP protection could be through e.g. patents, copyrights, trademarks etc. NTNU has a Technology Transfer Office that can assist you with developing an exploitation plan. Think beyond the project lifetime and indicate follow-up measures.
Regarding authorship/copyright, present an adequate IPR strategy and briefly indicate how planned open publishing will enhance the scientific (and potentially social and economic) impact of your project.
If IPR issues are not relevant for your research project, still make sure to state this and explain briefly why IPR management and protection measures are inapplicable.

Communication activities

Suggested content and structure

1. **Formulate a communication and public outreach strategy.** This should contain intermediate and final communication aims for the action (with deadlines). Describe target groups (be specific) e.g. (but select what makes sense for your project)
   - Policy makers
   - Decision makers
   - School children
   - Special groups among the public
   - Etc…

Explain how your message will be adapted to non-specialist audiences.

Who has an interest in your research? Who can contribute to your work? Who would be interested in learning about the project's findings and why? Who could or will be affected directly by the outcomes of the research? Who are not directly involved, but could have influence elsewhere?, and what type of reactions are expected from these groups i.e.

- Receiving feedback or engaging in dialogue
- Influencing the attitudes of decision-makers
- Having people make a decision or take action
- Ensuring that the project outcomes will be taken into production.

2. **Specify the planned communication activities (be specific!).** Examples could involve **one-way communication** (*but select what makes sense for your project*) e.g. newspapers, magazines, press releases, radio, TV, posters, video etc. or **two-way communication,** including co-creation activities e.g. dialogues/group discussions/workshops with end-users or citizens, school visits, open days etc. Make sure to include enough detail regarding user-engagement and co-creation processes, emphasizing the involvement of relevant scientific and non-scientific audiences. Stakeholder-informed communication processes are considered beneficial for effectively reaching multiple, non-academic audiences.

Remember to include the main communication "events" in the Gantt chart.

TIP 1: Check with your supervisor if the department already has some ongoing public outreach activities and see if it will be feasible for your project to benefit from these activities. For example, since 2005, NTNU has taken part in **European Researcher's Night**, which takes place across hundreds of cities in Europe on the last Friday of September every year. This event enables the public to engage with researchers and their research projects in a way that is interesting and fun. The event is integrated into a large, national celebration of science and research called **'forskningsdagene' (research days)** that takes place across the whole of Norway. The festival lasts for 12 days and includes events like **'forskningstorget'**, an interactive showcase of research activities for adults and children alike; and **'forskningskafe'**, an informal setting where researchers communicate their results to a local audience. Taking part in these events could be a good opportunity to communicate your research to the public;

most Norwegians understand English. Another channel might be the **NTNU/SINTEF popular science magazine Gemini**. Norwegian newspapers often pick up stories from Gemini, meaning an opportunity to increase your outreach to the public

2.3. The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts

- 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.
- 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.
  - 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.
- 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.

#§COM-DIS-VIS-CDV§#

Context

Here you need to make a clear case that your project's results will be useful, beneficial or valuable to others in the short-term and long-term.

Expected impact for science, society and the economy

Suggested content and structure

Make a list of **the expected results** (or refer to the list you made when describing your dissemination activities) (e.g. new knowledge on X, prototype, cell line, algorithm, a new method). Remember that any expected results outlined here need to be clearly related to your project's objectives.

For each expected result, **describe what will be the benefit for science, the economy and society** (including the environment, if relevant) **on the short-term and the long-term**, when these results are taken up and used by the target groups you identified in your dissemination plan. Make sure to include and describe impact and benefits beyond the life-time of the project. Remember that these benefits need to be realistic (avoid sweeping/tenuous statements) and you need to explain how they will be fostered by the communication and dissemination measures you outline in section 2.2. If possible, include quantifiable estimates of impact as mentioned above.

If you are conducting a basic research project where the potential economic or societal impacts are a very long way off (i.e. not directly relevant) we advise that you add a short statement to explain why they are not relevant, to draw the evaluators attention to this and ensure that you will not lose points. Scientific impacts are always relevant for MSCA-PF projects and should be carefully described.

TIP 1: If your project can be related to the UN Sustainable Development Goals, Horizon Europe policy priorities, IPCC, other whitepapers/greenpapers, EC directives/regulations, industrial challenges, make that clear here.
TIP 2: Scientific impact: many MSCA-PF projects are solely basic research-oriented without any obvious societal or economic impacts. Still, you may emphasize the relevance for and exploitability of your project results (e.g. new methods or procedures, database, etc.) in related scientific fields or even other disciplines. If impact on the economy and society are not directly relevant now, make sure you state that and explain why.

#§COM-DIS-VIS-CDV§#

3. Quality and Efficiency of the Implementation #@WRK-PLA-WP@# #@CON-SOR-CS@# #@PRJ-MGT-PM@#

Context
This section is about convincing the evaluators that your research is **feasible**. They might be thinking great idea, but can you actually do it? The evaluators will also want to ensure that your Fellowship will enable you to indeed **meet all your research and training objectives, and career ambitions**.

In section 3.1, you must convince the evaluators that **your research is realistic in terms of scope, scale, time and money.** You must also show that you have planned for the unexpected, that is any event that might delay or endanger the completion of your work ('risks'), and how you will deal with those. You will need to describe briefly **how you will manage your project** and, in particular, how you will monitor its progress to make sure the project is on track.
Feasibility also means that your **research complies with all applicable ethical and legal standards** and so, if relevant, you must describe how you will handle ethics issues (in section A, i.e. the online administrative forms, and in part B2).

In section 3.2, you need to convince the evaluators that NTNU is the **perfect host institution** for you and your project. More specifically, you will need to describe **how and why** you will be **extremely well integrated and supported** throughout your Fellowship. Note that the template specifies both "quality" (e.g. thorough integration, great quality support services, facilities and infrastructures) and "capacity" (e.g. availability of the supervisor(s), access to all required facilities and infrastructures).

In section 3, it is also important that you refer to **any other organisation** involved with the implementation of your project, be it in the form of a secondment during your Fellowship or a non-academic placement at the end of your Fellowship.

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

At a minimum, address the following aspects:

- Brief presentation of the overall structure of the work plan, including deliverables and milestones.
- Timing of the different work packages and their components;
- Mechanisms in place to assess and mitigate risks (of research and/or administrative nature).

A Gantt chart must be included and should indicate the proposed Work Packages (WP), major deliverables, milestones, secondments, placements. This Gantt chart counts towards the 10-page limit.

⚠ The schedule in the Gantt chart should indicate the number of months elapsed from the start of the action (Month 1).

Context

In this section, you must show the evaluators **what you are going to do and how long it will take**; you should also describe **the logic of your work plan** (e.g. you should justify the organisation, timing and resources allocated to tasks or work packages). You will have already presented the overall structure of your project and what you will do in section 1.2 (methodology). This section is about **presenting the work flow**. As noted above, you must convince the evaluators that your research is **realistic** in terms of scope, scale, time and money. You must also show that you have **planned for the unexpected.**

Definitions (some of these definitions are introduced on pages 6-7 but are repeated here for convenience):

- **A Gantt Chart** shows how the project will unfold by listing the project's activities with time. Evaluators will want to ensure that your **Gantt Chart perfectly aligns** with your proposed work plan. As such, it must be **complete** and include your various Work Packages, Tasks, Deliverables, Milestones and, if applicable, your secondments and placements. Do not forget to **reference your training activities** as well as you **communication and dissemination activities**. The timing of any activity must be **consistent** with your presentation of your work plan.
- **Work Packages** can be thought of as sub-projects which, when combined, form the complete project. Each Work Package aims to achieve one or more of the project's objectives. Work Packages may be overlapping (i.e. dependent on each other but not completely). Each Work Package can be broken down into **distinct tasks** that are necessary to complete the objective of that Work Package.
- The activities of the Work Package should result in specific outputs (i.e. "results"), which may be tangible (e.g. a prototype) or intangible (e.g. a report or document). These are **Deliverables** and can be thought of the building blocks of the project. As noted below, the MSCA Postdoctoral Fellowship scheme includes a minimum of 3 Deliverables.
- **Milestones** are 'checkpoints' throughout the project that enable you to **monitor its progress**. Milestones could correspond to the completion of a key deliverable (or set of deliverables) that enables the next phase of 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, you must decide which of several technologies to adopt for further development.
  You will also need to describe how you will manage your project, with a particular focus on progress monitoring, and how you will deal with problems if they arise. The evaluators want to see that you have set up appropriate milestones for your project, see how you will monitor the achievement of those milestones and how you will get the project back on track should you not achieve a milestone.
- **A risk** is any event that may delay or endanger the completion of the work in the project. Risks may be related to the scientific approach, the organisation of the work, or external factors like chemicals or animals that do not arrive on time. You must convince the evaluators that you are still able to achieve your objectives if risks arise.

Suggested content and structure

Workplan structure, including Deliverables and Milestones

In section 1.2, you will have described your work packages and approach (as a reminder, keep things simple: two or three scientific Work Packages are generally enough for a two-year project, with one to three Deliverables and one Milestone per Work Package).

Here in section 3.1, you will need to describe the workflow of your project. One way to approach this section is to **describe chronologically** the progression of the work from beginning to end, including your tasks, and highlighting all Deliverables and Milestones along the way, such that the evaluators can see how the project will progress. For example, if your project lasts for two years, you could split it into quarters and describe what you will do in each six-month period.

To start with, however, provide the evaluators with a brief overview of your work plan (e.g. "my project is divided into three Work Packages, each WP is split into up to three tasks and includes milestones (M) and deliverables (D)").

When describing your work plan, it is important that you **relate to your project's objectives**, so the evaluators find it easy to understand *what* you wish to achieve and *how* you have therefore structured your work plan. The **alignment** must be clear and explicit. To this extent, the evaluators will also be looking at the **quality and appropriateness of your Deliverables and Milestones**.

There are **three mandatory Deliverables** for all MSCA-PF projects:

1. A Data management plan (Month 6)
2. A Career development plan (Month 6)
3. A Communication, Dissemination and Outreach Plan (the month before the end of your project so typically Month 23 for the European PFs and Month 35 for the Global PFs)

In addition, we recommend that you include 1-2 Scientific Deliverables (per Scientific Work Package). If possible, these should be well spread out over the project period (i.e. do not collect them all at the end of the project) and should correspond to the most important results/outputs of the Scientific Work Packages (i.e. instead of having a deliverable correspond simply to a "scientific publication", they should describe your most important expected results, as **what** you expect to find out is far more informative for the evaluators, although of course your expected number of publications and target journals should be outlined in your dissemination plan). Similarly, we also recommend that you include one Milestone per Scientific Work package. A milestone should correspond to a critical "rate limiting step" (and not necessarily a project result/output) in the project, a delay in which would limit project progress. For example, establishing an important method/protocol in the project (that will be used in subsequent tasks or work packages); X no. of samples collected/participants recruited; first working version of a prototype established etc.

If you will undertake **a secondment**, make it clear which tasks will be carried out there and justify the timing of your secondment in relation to your work plan.

The same applies to your potential **placement in a non-academic organization** at the end of your Postdoctoral Fellowship. You should be extremely clear as to why and how this will add value to both your project and career development.

Timing of the different Work Packages and allocation of resources

In section 3.1, you must also explain the **timing of your various Work Packages and their duration**. The evaluators will want to understand that your various Work Packages, and their related tasks, Deliverables and Milestones, are indeed feasible.

As such, where possible, you should **highlight anything at your disposal that may facilitate a particular task** (e.g. the technique is already established in the institution; you already have prior experience with X technique; you will receive support from a Technician in the lab you will be joining). This is all the more important if some of your Work Packages partly overlap (i.e. convince the evaluators of the feasibility of managing overlapping tasks).

Similarly, if you are going to benefit from **an important in-kind contribution** from NTNU to support your research and training activities, you should make this clear. The evaluators will want to understand that, what you are planning to do, will indeed be achievable within the available budget.

TIP 1: Be realistic. Being over-ambitious (i.e. underestimating the effort required for a particular task) will cast doubt on your ability to achieve the objectives of your project and hence lose you marks during the evaluation.

TIP 2: Label your deliverables, milestones and risks (e.g. D1.1 for deliverable 1, in work package 1) and make them also visible in the narrative of your methodology in section 1.2 (or section 2.2 for any deliverables relating to communication or dissemination). This is a good way to achieve coherence between the various sections of your proposal and will ensure that the evaluators already have a reasonable understanding of your work plan when they come to read section 3.

Progress monitoring, risks and mitigation measures

Here, the evaluators will want to ensure that you have **both a convincing overview** of, **and suitable contingency plans** for, the research and/or administrative risks that may arise during your project. Although the template specifies "and/or", we advise that you **cover both the scientific and non-scientific risks** (see table below for some examples of administrative risks, adapt as you see fit)**.** It has been a common weakness that applicants do not adequately outline the different types of risk e.g. administrative, technological, developmental etc.

In grant writing, it is not a weakness to explain risks and mitigation measures. On the contrary, it is a way for you to demonstrate that your project idea is **sufficiently mature**: you have a detailed understanding of the challenges that may arise, and how you would deal with them, thus ensuring that your project's objectives remain feasible.

Describe briefly how you will manage your project and **keep things simple:** you are probably going to manage your project yourself, with the support of your supervisor. This may take the form of weekly meetings, with longer review meetings once every three months or so to check that the project is on track.

You should also describe the support that you will receive from NTNU in the management of your project. For example, you should mention that NTNU has EU research advisors, legal and financial experts with extensive experience in EU projects, and that these individuals will help you with administrative, legal and financial issues that may arise during grant preparation phase and the lifetime of your project. [note: this could be mentioned in Section 3.2 instead as indicated below].

Go through each Work Package and identify the most critical risks for each. Consider using a table to list the risks, their likelihood of occurring, their consequence on the overall work, and alternative strategies (i.e. mitigation measures) to follow if the risks materialize. If you are only going to provide a table, present the "mitigation measures" are presented in the form of a narrative. This helps with the clarity.

Risk	Likelihood	Impact on the work	Mitigation measures
	Low	High	
	Medium	Low	
The project falls behind schedule/deliverables are not achieved on time (Type: Administrative)	Low	Medium	Regular supervisory meetings will ensure the early identification (and resolving) of any potential risks. Project milestones will facilitate progress monitoring.
Poor involvement/collaboration with the secondment partner	Low	Medium	The collaboration with X will be established as early as possible. The secondment supervisor will frequently join supervisory

			meetings, to be informed of and provide input on the project's activities.

TIP 1: Remember to include appropriate Milestones in your Gantt Chart as they are designed to help you to monitor progress.
TIP 2: If a risk is unlikely, explain why (you can do this is in the mitigation measures column). This is reassuring for evaluators.
TIP 3: Do not have any high consequence, high likelihood risks; this is probably a sign that you need to redesign your project!

Gantt Chart

The evaluators will scrutinize your Gantt Chart. Not only is it an easy way for them to grasp the structure of your work plan at a glance, they will also want to ensure that it is perfectly aligned with your work plan. As such, your Gantt Chart **must be complete** and **capture all your Work Packages, Deliverables, Milestones, training activities, etc**. Your potential secondment(s) and/or placement should also be indicated.

Check and re-check that the timing of all your activities is correct.

For examples of Gantt charts, ask your EU adviser for examples of redacted successful proposals. Include a legend, and make sure to explain what the various Deliverables, Milestones and other activities listed correspond to (or describe this directly in the main text). Activities related to training (section 1.3), communication (section 2.2) and dissemination and exploitation (section 2.2) must be indicated in the Gantt Chart.

3.2 Quality and capacity of the host institutions and participating organisations, including hosting arrangements

At a minimum, address the following aspects:

- Hosting arrangements, including integration in the team/institution and support services available to the researcher.
- Quality and capacity of the participating organisations, including infrastructure, logistics and facilities should be outlined in Part B-2 Section 5 ("*Capacity of the Participating Organisations*").

Note that for GF, both the quality and capacity of the outgoing Third Country host and the return host should be outlined.

Associated partners linked to a beneficiary[6]

If applicable, outline here the involvement of any 'associated partners linked to a beneficiary' (in particular, the name of the entity, the type of link with the beneficiary and the tasks to be carried out).

Context

Here is your opportunity to explain why NTNU offers a welcoming and thriving environment ensuring both your scientific and personal growth, and is the **best place** to carry out your Fellowship. As noted above, if you are applying for a Global Postdoctoral Fellowship, you will also need to cover these aspects with respect to your Third Country host where you will spend your outgoing phase. Finally, if your project involves a secondment and/or a placement, you should also explain how and why they are an ideal fit for your project's objectives.

[6] See the definitions section of the MSCA Work Programme for further information.

Suggested content and structure

Hosting arrangements

Describe **how you will be included** into the existing scientific and social working environment at NTNU, thus demonstrating that you will not be working/left alone. You should be as specific as possible. Evaluators do not take kindly to limited or generic statements about hosting arrangements and the support in place so you can realise your ambitious project and career objectives.

Also describe how your integration will contribute to **transfer of knowledge/skills** from you to the research group and vice versa, thus making it clear that both you and NTNU will benefit from the Fellowship.

This can be done by agreeing on a simple plan describing how you will be integrated at NTNU, e.g.:

- **You and your supervisor** – Highlight (again and briefly) their track record, areas of expertise (i.e. best fit for your project), and the frequency of your supervision meetings. In line with the recent **MSCA Guidelines for Supervision**, make it clear that you will benefit from excellent supervision to support and monitor both your research and soft skills development (e.g. yearly appraisals or personal development reviews).
- **The research group** (research interests, size, master students, PhD-students, Postdocs) - How you will collaborate; what are the complementarities between you and the research group; the quality of the group (publications, achievements, etc); specific measures for your integration in the research group/host laboratory, including social activities/events, local seminars and workshops, teaching you may contribute to, etc.
- **Intended collaborations with the host** - Measures taken by the host to ensure that you will benefit from multi-/interdisciplinary aspects during the Fellowship, and vice versa. This is also helpful to explain clearly how and why you will be integrated beyond your immediate supervisor's research group.
- Clearly describe the **opportunities for international networking** (here both you and the research group at NTNU should establish new contacts) and conference attendance

Describe the support services available from NTNU in terms of:

- **Managing your project** -NTNU has EU advisors, legal, financial and intellectual property experts with extensive experience in EU projects. These individuals will help you with administrative, legal, financial and other issues that may arise during grant preparation phase and the lifetime of your project. NTNU also has a long history of welcoming MSCA Fellows which will ensure the smooth implementation of the administrative part of the project.
- **Supporting foreign nationals with the transition to Norway** - NTNU attracts researchers from across the world. These individuals, and their families, are supported by NTNU's dedicated International Researcher Support Office. The office gives advice on all aspects of moving to and living in Norway (e.g. immigration services tax, housing, childcare) and holds regular social events to create a welcoming environment for newcomers (e.g. Christmas party, city walks, ski lessons). The office also holds a 'språk-kafe' (language café) for employees to practice their Norwegian, and employees at NTNU can benefit from free Norwegian language courses from beginner to advanced level.

Quality and capacity of the participating organisations

In this section, you must convince the evaluators that you will have **access to all the required infrastructures, logistics and facilities** to carry out your project successfully. You must therefore be clear about what you will have (ample) access to.

Focus on your objectives or Work Packages and address the following points:

- **Describe the facilities** (e.g. technical infrastructure such as state-of-the-art equipment) and logistics (e.g. software programmes like Linux) that your host has that will enable you to achieve the objectives of the project. Explain how these facilities/logistics are state-of-the-art (and manned by fully trained staff). You may provide more details on the nature of these facilities in B2, this section is about convincing the evaluators that

you will have access to the right infrastructure, logistics and facilities to deliver your project (so relate to your project's objectives).

- **Do the same if your project includes a secondment and/or a placement in a non-academic sector organization**, i.e. what infrastructure, logistics and facilities does your secondment institution have that your host institution does not, and how will this benefit your project? In other words, you must demonstrate complementarity between the institutions.

#§CON-SOR-CS§# #§PRJ-MGT-PM§#

---------- End of page count (max 10 pages) ----------

Part B2 (no overall page limit applied)

4. CV of the researcher (indicative length: 5 pages)

Any information provided in Parts A and B of the proposal should be fully consistent. Always mention full dates (using format: dd/mm/yyyy) **[Note this formatting requirement, this is often missed, we recommend that you present the information under each subsection in reverse chronological order (i.e most recent first)]**. The CV should include the standard academic and research record. Any research career gaps and/or unconventional paths should be clearly explained.

At a minimum, the CV should contain:

a) The name of the researcher;
b) Professional experience (most recent first, with exact dates in format dd/mm/yyyy);
c) Education, including PhD award date (most recent first, with exact dates in format: dd/mm/yyyy).

The CV should include information on:

- Publications in peer-reviewed scientific journals, peer-reviewed conference proceedings, and/or monographs (they are expected to be **open access** either published or through repositories) and other outputs such as data, software, algorithms significant for your research path (they are expected to be open access in appropriate repositories to the extent possible; they should be **accompanied by a very short qualitative assessment of their scientific significance and not by the Journal Impact Factor**); **[Note: this is often missed, do NOT mention the Journal Impact Factor]**
- Invited presentations to internationally established conferences and/or international advanced schools;
- Organisation of international conferences, including membership in the steering and/or programme committee;
- Research expeditions led by the researcher;
- Granted patent(s);
- Examples of participation in industrial innovation;
- Prizes and Awards;
- Funding received so far;
- Supervising and mentoring activities;
- Other items of interest.

Applicants who have successfully defended their doctoral thesis *before* the call deadline but who have not yet formally been awarded the doctoral degree must clearly indicate the date of the successful PhD defence ("viva"). Researchers having their last thesis defence *after* the call deadline will be automatically declared ineligible for this call.

TIP 1: Make the most of these (5) pages to demonstrate that you have a **strong CV relative to your career stage**. Showcase **your skills, competences, achievements & commitments** to good science (e.g. open science practices). In Section 1.4 (part B1), the evaluators will want to understand your **trajectory and achievements** to date. They will also want to ensure that your **research experiences align well with the research project** that you are proposing. As such, you must ensure that your CV **clearly captures** your skills and competences.

TIP 2: Make sure to include any **research career gap** (e.g. parental leave, illness, military service) and/or unconventional path (e.g. clinical training). This is really important so evaluators can assess your CV fairly.

TIP 3: We suggest that **include a summary about yourself** (i.e. like a "personal statement" consisting of half a page to two-thirds of a page). This is an opportunity for you to 'speak' to the evaluator directly. What do you want to tell the evaluators about yourself (who you are, what drives you), your past achievements, and your potential/vision?
Use bold writing for your key points. You could call this section: Research profile and major achievements; Research track record and main achievements to date; Research profile and career perspectives. Possible points to include:

- Provide an overview of your research profile & experiences to date (e.g. MA & PhD)
- In so doing, showcase your key skills, competences & key achievements. E.g.
  - Interdisciplinary skills?
  - First-hand experiences of working in different settings?
  - Publications?
  - Tools, codes, software and/or datasets you may have shared?
  - Policies your research may have informed?
  - Conferences and/or webinars you may have organised?
  - Record of securing research funding and/or winning awards?
  - Mentoring experience?
  - Network of collaborators?
- Public engagement activities?Summarise what your research & career aspirations are.
- Describe how the Fellowship will support these aspirations - A reminder that this is a 'perfect fit' between yourself, your project, your training, your supervisor & NTNU

TIP 4: When presenting your **publication record**, you may wish to:

- Include a short summary statement about your publications record to date
- include sub-headings (e.g. publications under review, publications in a language other than English, monographs)
- include full references
  - Indicate co-first, # corresponding author, etc.
  - Highlight your last name **in bold** so the evaluator can easily identify you in the authorship list (do the same in the reference list included in your project proposal)
  - Highlight publications in peer-reviewed journals that did not involve your PhD supervisor
- Clearly **highlight your own contribution** within each of the selected publications
  - Include a short statement to explain your role & input within the publication
  - Also include a short statement on the publication's contribution to the field(s) – value & impact of the work
- Make it clear if a publication has had a particular impact (e.g. publication featured in a television broadcast)
- You may wish to add separate sub-headings for "peer-reviewed publications" and "submitted publications/publications under review" (in the latter case, preferably these publications should already be uploaded to a pre-print server with the DOI provided).

TIP 5: When describing your **invited presentations and international conferences**, you may wish to:

- Include the year of the event & organise the information in reverse chronological order
- Specify the name of the event (not just the acronym) & the location
- Include the title of your talk and/or poster & specify this (e.g. poster presentation)
- Clarify if you were invited, selected via competition/prize, etc.
- Indicate conferences that may have been postponed/cancelled due to the Covid-19 related restrictions

TIP 6: When describing your **Prizes and Awards**, we suggest you:

- Include the full name of the funder, not just the acronym
- Specify the value of the award in Euros
- If this is a high-profile award, make this clear

- Remember, all awards, no matter how "small" are valuable (e.g. travel grant to attend a conference, best poster/presentation etc.)

TIP 7: When describing your **Supervision or Mentoring experiences**, we suggest you think broadly –You may have trained peers in specific techniques and/or methodologies? You may have coordinated a team of students for a research expedition? You may have supervised dissertation projects of Undergraduate or Master students?

TIP 8: You may also wish to describe your "**major collaborations**" as this shows that you have an established network that extends beyond your institution. In this case, be clear about the topic(s) that link you to each collaborator and try to signpost evaluators to concrete activities or outputs (e.g. upcoming research list in X's lab, one paper in preparation, etc.)

5. Capacity of the Participating Organisation(s)

Please provide an overview list of all participating organisations (the beneficiary and, where applicable, all associated partners) using template table 5.1 below, and more detailed information for each of the participating organisations (using a separate table for each organisation) using template table 5.2 below.

Any inter-relationship between the participating organisation(s) or individuals and other entities/persons appearing (e.g. family ties, shared premises or facilities, joint ownership, financial interest, overlapping staff or directors, etc.) must be declared in the proposal.

Applicants should provide additional information regarding the administrative/legal relations between the department carrying out the work as described in the table below, and the entity/entities mentioned in Part A of the proposal (i.e. linked to the given Participant Identification Code – PIC).

Should the proposal be shortlisted for funding, all participating organisations will have to be registered with the European Commission's Participant Register Services. Therefore where this information is already known, please provide in Table 5.1 the (draft or validated) nine digit Participant Identification Code (PIC) for the beneficiary and, where applicable, each associated partner.

5.1 Template table: *Overview of Participating Organisations*

Organisation role	PIC	Legal Entity Short Name	Academic organisation (Y/N)	Country	Name of Supervisor
Beneficiary					
Associated partner linked to a beneficiary (if applicable)					
Associated partner for outgoing phase (mandatory for GF)					

Associated partner for secondment (optional)					
Associated partner for non-academic placement (optional)					
Other: _____					

5.2 Template table: *Capacity of the Participating Organisations*

Please complete a separate table for each participating organisation. For the beneficiary, this table should be maximum 1 page in length; for each associated partner, the table should be maximum ½ page in length.

Choose one of: *? Beneficiary (compulsory)* *? Associated partner linked to a beneficiary (if applicable)* *? Associated partner for outgoing phase (compulsory for GF only)* *? Associated partner for secondment (optional)* *? Associated partner for non-academic placement (optional)*
[Full name + Legal Entity Short Name + Country]
General description The Norwegian University of Science and Technology (NTNU) is Norway's largest University with more than 40,000 students. NTNU awards 400 PhD degrees yearly within the fields of technology, science, arts and humanities, social sciences and medicine. NTNU encompasses 9 Faculties and 55 Departments. NTNU was a major participant in Horizon 2020, with 248 signed projects. Participation in EU Research and Innovation programmes is a major priority for NTNU; therefore, the university has developed, over many years, a professional administrative project support team consisting of financial, legal and administrative advisors, to ensure the smooth implementation of EU projects. **Tips** 1. I will be joining the Faculty of XXX, in the Department of YYY and specifically the research group of [name of host academic] 2. Then give a description of the strengths of your host supervisor & their research group, and the wider Department 3. If there are other parts of the University with which you expect tointeract, also outline their strengths → Message: a fantastic Host Institution, a great match for my project

Role and profile of supervisor	**Tips** 1. Names, title, qualifications of the main supervisor 2. Research profile & main highlights of their track record 3. Highlight experiences of supervising early career researchers (e.g."my supervisor is committed to providing members of his group with the best possible supervision, through weekly lab meetings, weekly one-on-one meetings.")
Key research facilities, Infrastructure and Equipment	*Demonstrate that the beneficiary has sufficient facilities and infrastructure to host and/or offer a suitable environment for training and transfer of knowledge to the recruited experienced researcher.* *If applicable, indicate the name of the associated partner linked to a beneficiary and describe the nature of the link in the corresponding table.* **Tips** What facilities & equipment will you have access to during your Fellowship? Make it clear that everything you require is available at NTNU. Emphasise that the facilities & infrastructure are state-of-the-art & supported by fully trained staff Include references to software licenses that you may require "I will be given my own desk with a computer and access to high-speed internet services provided by the University. The library at NTNU subscribes to a wide range of online resources, including electronic journals, databases and electronic books in many subjects."
Previous and current involvement in EU-funded research and training programmes/actions/projects	*Indicate up to 5 relevant EU, national or international research and training actions/projects in which the institution/department has previously participated and/or is currently participating.* **Tips** Include main highlights. These should be specific to your supervisor & their research group or Department – the objective is to demonstrate that your supervisor & host group are experienced in supporting early career researchers. You can specify the number of Master, PhD & Postdocs that they have supervised / are currently supervising

6. Additional ethics information

Additional information that could not be included in Part A of the proposal (if needed).

7. Additional information on security screening

Additional information on security aspects that could not be included in Part A of the proposal (if needed).

8. Environmental considerations in light of the MSCA Green Charter

Please explain how the proposed project would strive to adhere to the MSCA Green Charter[7] during its implementation.

The MSCA Green Charter, which is a set of general principles and objectives that promote the **sustainable implementation of research activities** in line with the European Green Deal, the United Nation's 2030 Agenda and the Sustainable Development Goals. Funders are increasingly paying attention to the environmental impact of research activities: if your application is successful, you will need to report on how you applied the principles of the MSCA Green Charter during your Fellowship (e.g. how you sought to reduce your project's carbon footprint, increase awareness on environmental issues, or promote sustainable behaviours and policies). Under this (new for 2023) section of the MSCA-PF template, you must describe **how you make conscious attempts to reduce the carbon footprint or other environmental impacts** of your project; for example, by combining online conference attendance with in-person workshop attendance, or attending a conference in conjunction with fieldwork abroad. You can also refer to institutional measures that NTNU is taking to reduce its climate footprint. There are outlined in NTNU's "Miløutviklingsplan 2020-2030" (for example, the plan sets the goal that carbon emissions from travel – as measured per employee – will be 50% lower in 2020 than in 2019).

9. Required for Global Fellowships only: Letter(s) of commitment from associated partners (hosting the of outgoing phase)

Use this section to add scanned copies of the letter(s) of commitment, if applicable.

Minimum requirements:

- With heading or stamp from the institution;
- Up-to-date document, i.e. not dated prior to the call publication;
- Demonstrating the will to actively participate in the (identified) proposal;
- Explanation of the precise role.

Any additional information the organisation deems useful can be added in the letter.

Note that the expert evaluators will be instructed to disregard the contribution of any associated partners for which no such evidence of commitment is submitted.

[7] MSCA Green Charter https://ec.europa.eu/msca/green_charter
While the MSCA Green Charter is non-binding and adherence to it will not be subject to evaluation, funded projects are strongly encouraged to take into account the principles it sets out.

In case the letter fails to provide enough information on the associated partner's role and/or enough assurance of 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 GF proposals the absence of a letter of commitment will render the proposal inadmissible and the proposal will not be evaluated.

Non-binding example of template letter of commitment for PF associated partners:

I undersigned *[title, first name and surname]*, in my quality of *[role in the organisation]* in *[name of the organisation]* commit to set up all necessary provisions to participate as associated partner in the proposal *[proposal number and/or acronym]* submitted to the call HE-MSCA-2023-PF, should the proposal be funded.

On behalf of *[name of the organisation]*, I also confirm that we will participate and contribute to the research, innovation and training activities as planned in this project. In particular, *[name of the organisation]* 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

PART B TEMPLATE

---------- Start of page count (max 10 pages) ----------

[This document is tagged (see instructions). Do not delete the tags; they are needed for processing.] #@APP-FORM-HEMSCAPF@#

Part B-1

1. Excellence #@REL-EVA-RE@#

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) #@QUA-LIT-QL@#

At a minimum, address the following aspects:

- Describe the quality and pertinence of the R&I objectives; are the objectives measurable and verifiable? Are they realistically achievable?
- Describe how your project goes beyond the state-of-the-art, and the extent to which the proposed work is ambitious.

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 of open science practices)

At a minimum, address the following aspects:

- 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.

- 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[8] approach is unnecessary in the context of the proposed work, please provide a justification.
- 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 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 this page.

⚠ If you plan to use, develop and/or deploy artificial intelligence (AI) based systems and/or techniques you must demonstrate their technical robustness. AI-based systems or techniques should be, or be developed to become:

[8] Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines.

- technically robust, accurate and reproducible, and able to deal with and inform about possible failures, inaccuracies and errors, proportionate to the assessed risk they pose
- socially robust, in that they duly consider the context and environment in which they operate
- reliable and function as intended, minimizing unintentional and unexpected harm, preventing unacceptable harm and safeguarding the physical and mental integrity of humans
- able to provide a suitable explanation of their decision-making processes, whenever they can have a significant impact on people's lives.

- 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 is adapted to the nature of your work in a way that will increase the chances of the project delivering on its objectives *[e.g. up to 1/2 page, including research data management]*. 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 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).

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

- 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 explain how the data will be managed in line with the FAIR principles (Findable, Accessible, Interoperable, Reusable).

⚠ *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.*

⚠ *Please also see the "how to evaluate open science in Horizon Europe proposals" video on the Funding & Tenders portal.*

1.3 Quality of the supervision, training and of the two-way transfer of knowledge between the researcher and the host

At a minimum, address the following aspects:

- Describe the qualifications and experience of the supervisor(s). Provide information regarding the supervisors' level of experience on the research topic proposed and their track record of work, including main international collaborations, as well as the level of experience in supervising/training, especially at advanced level (i.e. PhD and postdoctoral researchers).
- Planned training activities for the researcher (scientific aspects, management/organisation, horizontal and key transferrable skills...).
- For *European Fellowships*: two-way transfer of knowledge between the researcher and host organisation.
- For *Global Fellowships*: three-way transfer of knowledge between the researcher, host organisation, and associated partner for outgoing phase.
- Rationale and added-value of the non-academic placement (if applicable).

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 postdoctoral researcher 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 MSCA Guidelines on Supervision.*[9]

1.4 Quality and appropriateness of the researcher's professional experience, competences and skills

Discuss the quality and appropriateness of the researcher's **existing** professional experience in relation to the proposed research project.

2. Impact #@IMP-ACT-IA@#

2.1 Credibility of the measures to enhance the career perspectives and employability of the researcher and contribution to his/her skills development

At a minimum, address the following aspects:

- Specific measures to enhance career perspectives and employability of the researcher inside and/or outside academia
- **Expected** contribution of proposed skills development to the future career of the researcher.

2.2 Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities #@COM-DIS-VIS-CDV@#

[9] While the MSCA Guidelines on Supervision are non-binding, funded-projects are strongly encouraged to take them into account.

At a minimum, address the following aspects:

- Plan for the dissemination and exploitation activities, including communication activities:[10] Describe the planned measures to maximize 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 measures that are planned, and the target group(s) addressed (e.g. scientific community, end users, financial actors, public at large). 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.
- Strategy for the management of intellectual property, foreseen protection measures: if relevant, discuss the 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.

⚠ 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.

2.3. The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts

⚠ 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.

⚠ 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.

⚠ The impacts of your project may be:

- Scientific: 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);
- Economic/technological: e.g. bringing new products, services, business processes to the market, increasing efficiency, decreasing costs, increasing profits, contributing to standards' setting, etc.
- Societal: e.g. decreasing CO2 emissions, decreasing avoidable mortality, improving policies and decision-making, raising consumer awareness.

⚠ 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;

[10] In case your proposal is selected for funding, a more detailed Dissemination and Exploitation plan will need to be provided as a mandatory project deliverable during project implementation

'Importance' refers to the value of those benefits. For example, number of additional healthy life years; efficiency savings in energy supply.

#§COM-DIS-VIS-CDV§#

3. Quality and Efficiency of the Implementation #@WRK-PLA-WP@# #@CON-SOR-CS@# #@PRJ-MGT-PM@#

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

At a minimum, address the following aspects:

- Brief presentation of the overall structure of the work plan, including deliverables and milestones.
- Timing of the different work packages and their components;
- Mechanisms in place to assess and mitigate risks (of research and/or administrative nature).

A Gantt chart must be included and should indicate the proposed Work Packages (WP), major deliverables, milestones, secondments, placements, if applicable. This Gantt chart counts towards the 10-page limit.

⚠ The schedule in the Gantt chart should indicate the number of months elapsed from the start of the action (Month 1).

3.2 Quality and capacity of the host institutions and participating organisations, including hosting arrangements

At a minimum, address the following aspects:

- Hosting arrangements, including integration in the team/institution and support services available to the researcher.
- Quality and capacity of the participating organisations, including infrastructure, logistics and facilities should be outlined in Part B-2 Section 5 ("*Capacity of the Participating Organisations*").

Note that for GF, both the quality and capacity of the outgoing Third Country host and the return host should be outlined.

Associated partners linked to a beneficiary[11]
If applicable, outline here the involvement of any 'associated partners linked to a beneficiary' (in particular, the name of the entity, the type of link with the beneficiary and the tasks to be carried out).

#§CON-SOR-CS§# #§PRJ-MGT-PM§#

---------- End of page count (max 10 pages) ----------

Part B2 (no overall page limit applied)

[11] See the definitions section of the MSCA Work Programme for further information.

4. CV of the researcher (indicative length: 5 pages)

Any information provided in Parts A and B of the proposal should be fully consistent. Always mention full dates (using format: dd/mm/yyyy). The CV should include the standard academic and research record. Any research career gaps and/or unconventional paths should be clearly explained.

At a minimum, the CV should contain:

a) The name of the researcher;
b) Professional experience (most recent first, with exact dates in format dd/mm/yyyy);
c) Education, including PhD award date (most recent first, with exact dates in format: dd/mm/yyyy).

The CV should include information on:

- Publications in peer-reviewed scientific journals, peer-reviewed conference proceedings, and/or monographs (they are expected to be open access either published or through repositories) and other outputs such as data, software, algorithms significant for your research path (they are expected to be open access in appropriate repositories to the extent possible; they should be accompanied by a very short qualitative assessment of their scientific significance and not by the Journal Impact Factor);
- Invited presentations to internationally established conferences and/or international advanced schools;
- Organisation of international conferences, including membership in the steering and/or programme committee;
- Research expeditions led by the researcher;
- Granted patent(s);
- Examples of participation in industrial innovation;
- Prizes and Awards;
- Funding received so far;
- Supervising and mentoring activities;
- Other items of interest.

Applicants who have successfully defended their doctoral thesis *before* the call deadline but who have not yet formally been awarded the doctoral degree must clearly indicate the date of the successful PhD defence ("viva"). Researchers having their last thesis defence *after* the call deadline will be automatically declared ineligible for this call.

5. Capacity of the Participating Organisation(s)

Please provide an overview list of all participating organisations (the beneficiary and, where applicable, all associated partners) using template table 5.1 below, and more detailed information for each of the participating organisations (using a separate table for each organisation) using template table 5.2 below.

Any inter-relationship between the participating organisation(s) or individuals and other entities/persons appearing (e.g. family ties, shared premises or facilities, joint ownership, financial interest, overlapping staff or directors, etc.) must be declared in the proposal.

Applicants should provide additional information regarding the administrative/legal relations between the department carrying out the work as described in the table below, and the entity/entities mentioned in Part A of the proposal (i.e. linked to the given Participant Identification Code – PIC).

Should the proposal be shortlisted for funding, all participating organisations will have to be registered with the European Commission's Participant Register Services. Therefore where this information is already known, please provide in Table 5.1 the (draft or validated) nine digit Participant Identification Code (PIC) for the beneficiary and, where applicable, each associated partner.

5.1 Template table: *Overview of Participating Organisations*

Organisation role	PIC	Legal Entity Short Name	Academic organisation (Y/N)	Country	Name of Supervisor
Beneficiary					
Associated partner linked to a beneficiary (if applicable)					
Associated partner for outgoing phase (mandatory for GF)					
Associated partner for secondment (optional)					
Associated partner for non-academic placement (optional)					
Other: _____					

5.2 Template table: *Capacity of the Participating Organisations*

Please complete a separate table for each participating organisation. For the beneficiary, this table should be maximum 1 page in length; for each associated partner, the table should be maximum ½ page in length.

Choose one of: *? Beneficiary (compulsory)* *? Associated partner linked to a beneficiary (if applicable)* *? Associated partner for outgoing phase (compulsory for GF only)*

? Associated partner for secondment (optional) *? Associated partner for non-academic placement (optional)*	
[Full name + Legal Entity Short Name + Country]	
General description	
Role and profile of supervisor	
Key research facilities, Infrastructure and Equipment	*Demonstrate that the beneficiary has sufficient facilities and infrastructure to host and/or offer a suitable environment for training and transfer of knowledge to the recruited experienced researcher.* *If applicable, indicate the name of the associated partner linked to a beneficiary and describe the nature of the link in the corresponding table.*
Previous and current involvement in EU-funded research and training programmes/actions/projects	*Indicate up to 5 relevant EU, national or international research and training actions/projects in which the institution/department has previously participated and/or is currently participating.*

6. Additional ethics information

Additional information that could not be included in Part A of the proposal (if needed).

7. Additional information on security screening

Additional information on security aspects that could not be included in Part A of the proposal (if needed).

8. Environmental considerations in light of the MSCA Green Charter

Please explain how the proposed project would strive to adhere to the MSCA Green Charter[12] during its implementation.

[12] MSCA Green Charter https://ec.europa.eu/msca/green_charter
While the MSCA Green Charter is non-binding and adherence to it will not be subject to evaluation, funded projects are strongly encouraged to take into account the principles it sets out.

9. Required for Global Fellowships only: Letter(s) of commitment from associated partners (hosting the of outgoing phase)

Use this section to add scanned copies of the letter(s) of commitment, if applicable.

Minimum requirements:

- With heading or stamp from the institution;
- Up-to-date document, i.e. not dated prior to the call publication;
- Demonstrating the will to actively participate in the (identified) proposal;
- Explanation of the precise role.

Any additional information the organisation deems useful can be added in the letter.

Note that 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 fails to provide enough information on the associated partner's role and/or enough assurance of 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 GF proposals the absence of a letter of commitment will render the proposal inadmissible and the proposal will not be evaluated.

Non-binding example of template letter of commitment for PF associated partners:

I undersigned *[title, first name and surname]*, in my quality of *[role in the organisation]* in *[name of the organisation]* commit to set up all necessary provisions to participate as associated partner in the proposal *[proposal number and/or acronym]* submitted to the call HE-MSCA-2023-PF, should the proposal be funded.

On behalf of *[name of the organisation]*, I also confirm that we will participate and contribute to the research, innovation and training activities as planned in this project. In particular, *[name of the organisation]* 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

Appendix 1: Examples of courses available relevant for Early Career Researchers at NTNU

Research skills training – Yearly courses offered by NTNU across all Faculties

Course title	Key information about the course
"Open Access publishing"	-Key themes covered: • Why Open Access is critical • The different types of Open Access • Authors' rights • Rules and guidelines • Tips on how to find an Open Access option for your paper
"Research data management and open science"	-Key themes covered: • What is Open Science? • What is FAIR data, and how can this be useful in your own research/within your research group? • How can you publish research data? • How do you ensure compliance with the relevant requirements and guidelines?
"Data Management Plan (DMP) in one-two-three"	-Key themes covered: • Overview of funders' and NTNU's Data Management requirement • How to set up a DMP • What tools are available to you • The various components of a DMP
"Copyright"	-An introductory course to copyright and best practice in handling third party material, such as images, maps and music -Key themes covered: • What is copyright? • How can you publish third party material? • What is a Creative Commons license?
"Introduction to Research Ethics"	-Although this course is aimed at PhD students, it is likely to be relevant to MSCA Postdoctoral Fellows. -The course provides a basic orientation within general research ethics topics. -Key themes covered: • Understanding and awareness of research ethics • The basics of the "infrastructure for research ethics"
"Research-based innovation"	-Although this course is aimed at PhD students, it is likely to be relevant to MSCA Postdoctoral Fellows. -The course aims to increase the understanding of innovation and entrepreneurship among early career researchers (at the individual, project and societal level). -Key themes covered: • Understanding of the origin of a business idea • Knowledge about different theoretical cornerstones related to innovation and commercialization, including resource acquisition (e.g. knowledge, funding) • Knowledge about problem understanding, identifying and understanding user and customer needs

	• Understanding different innovation processes • Possibilities and boundaries related to intellectual property
"Responsible Research and Innovation"	-See for example: https://www.ntnu.edu/studies/courses/KULT8880#tab=omEmnet -This course prepares PhD candidates and early career researchers within biotechnology, life science and neighbouring scientific fields to adopt Responsible Research and Innovation (RRI) in their research practice.

Competence-building – Yearly courses offered by NTNU across all Faculties

Course title	Key information about the course
"EndNote introductory courses"	-Particularly relevant for researchers and students -Key themes covered: • How to create an EndNote library and organise it effectively • How to import, edit and record references • Collect and edit references in Word
"Digital presentation Techniques"	-Relevant for all NTNU employees, including researchers -Advice and tips on how to communicate effectively online -Key themes covered: • How to prioritise content in a digital presentation • Digital presentation techniques tips and tricks
"Engaging with the media"	-Particularly relevant for researchers and students -The Communication Division at NTNU manages the University's media profile and engages with local, regional, national and international newspapers, magazines, online and broadcast media to • Issue press releases and publicise newsworthy activity at NTNU • Coordinate responses to media enquires about research at NTNU -Additionally, the Communication Division also works with researchers to help them to present their work in a way that maximises coverage. To this end, they provide media training to support researchers who are likely to speak to the media.
"Writing clearly: the 'golden pen'"	-Relevant for all NTNU employees -Introductory course on the most important writing techniques -Key themes covered: • Who are you writing for and why? • The art of creating clear sentences • Choosing the right words
"Scientific publishing and research communication"	-This course is likely to be relevant to MSCA Postdoctoral Fellows. -Key themes covered: • Insight and practical skills in scientific publishing and research communication in general • How to use structured literature searching to keep updated within the research field • Understanding the principles for good citation practice • Key principles for clear and effective writing • Copyright limitations associated with reusing others' work

	• Understanding of the important principles and guidelines for publishing in scientific journals • Key aspects of Open Access publishing • Understanding of Open Data and the use of data management plans • Communicating research to different audiences
"Publishing in international journals"	-Particularly relevant for researchers, especially early career researchers who have either had some experience in publishing or are intending to publish internationally -This workshop aims to explore the ways in which ongoing research can be translated into publications in high-ranking international journals within and across disciplines -Key themes covered: • The key milestones of the publishing process (from pre-submission to review and publication) • Language-specific, genre-specific and discipline-specific practices
"Effective grant writing: planning and writing a high-quality grant proposal"	-Relevant to early career researchers who are planning their first or second research grant proposal -Advice and tips are relevant to all grant applications, regardless of the funder or disciplinary area -Key themes covered: • What funders are looking for: decipher call texts, strategic documents and evaluation criteria • The different elements of a grant proposal and how to construct them • Grant proposal writing style and how it differs from that of an academic paper

Career development – Yearly courses offered by NTNU across all Faculties

Course title	Key information about the course
"Building a competitive CV in academia: playing the long-game"	-Relevant for all early career researchers, particularly those who are considering applying for a Postdoctoral Fellowship, a Research Council of Norway's Young Research Talent or a European Research Council Starting Grant in the years to come -Key themes covered: • What funders are looking for when they assess that you have a 'strong CV in relation to your career stage' • The different elements of a competitive academic CV • How to best present and showcase your skills, competences and achievements, including evidence of independence, creativity and leadership
"Research Leadership"	-Relevant for all early career researchers -key themes covered: • Understanding leadership in a research context • Transitioning into a leadership role • Personal leadership preferences, skills and dilemmas • Organisation and development of research group environments
"PhD supervisor seminar"	-Relevant for all researchers at NTNU who are assigned at least one PhD candidate as either main or co-supervisor -Key themes covered:

	• PhD supervision at NTNU • Various approaches to research supervision • How to manage and support research candidates • Working across cultures • Research ethical dilemmas and considerations
"Project Management" "Applied Project Management"	-NTNU offers a selection of courses on Project Management. These courses can be made available to MSCA Postdoctoral Fellows on a case-by-case basis. -Key themes covered: • The project management lifecycle – planning, communicating and other supporting resources • People – who is who in project teams? • Key concepts of stakeholders' management • Tools and techniques for planning, including identification of project scope, work breakdown structure, resource planning, estimates, budgeting and scheduling • Introduction to the principles of project risk management • Introduction to the principles of project evaluation and earned value method
"Science Conversations @NTNU" – Webinar series for ambitious researchers	-Science Conversations @NTNU were initiated in 2021. These web-based conversations between active researchers focus on topics that transcend disciplines. Early stage and more experienced researchers meet, share experiences and ideas, and give advice to those who may wish to pursue a scientific career. -The webinars have covered topics such as "how to build and lead a strong research group", "build a strong project portfolio", "innovation and impact", "eco-friendly Science". -For further details, please see the website: https://www.ntnu.edu/science-conversations/

Courses offered by specific Faculties

- We suggest you discuss with your supervisor(s) and EU Advisor(s) whether the Faculty/Department where you will be hosted runs courses and workshops that will likely be relevant to you.
- As an example, **the Faculty of Medicine and Health Sciences** offers two workshops in October of each year on the **Research Council of Norway's Researcher Projects funding schemes**. The half-day workshops cover both the Young Talent and Scientific Renewal Schemes. Supported by Research Advisors, panel evaluators and successful applicants, they provide a detailed introduction to the schemes as well as top tips and advice for candidates' applications. All MSCA Postdoctoral Fellows are welcome to attend these workshops.

Research skills training and competence-building courses offered by the Research Schools

- From time to time, the Research Schools at NTNU organise workshops for their early career researchers. **On a case-by-case basis, MSCA Postdoctoral Fellows can attend these courses.**
- For example, the Digital Life Norway Research School is organising a two-day Horizon Europe proposal writing workshop in October 2021. The Norwegian Research School of Global Health (NRSGH) is organising, for its part, an extensive course on Systematic review and meta-analysis in the fall of 2021.
- The School of Health Innovation programme, - an initiative from the University of Oslo, in partnership with NTNU, Karolinska Institutet and the University of Copenhagen, - offers courses for researchers in Scandinavia. Two may be particularly relevant to MSCA Postdoctoral Fellows:

Health innovation and entrepreneurship: Learn how to commercialize research or ideas into business ventures and how to innovate services in a clinical setting. The course is organized in three modules with separate dates and venues.

Entrepreneurship in healthcare: Experience one of Scandinavia´s most advanced support system for healthcare entrepreneurs, combining academic learning, practical cases from healthcare companies, 1-1 mentorship with the aim of further developing your research idea into commercialization, and how to develop a new service for patients in a clinical setting.

Horizon Europe courses offered by the Research Council of Norway

- All NTNU employees are eligible to register and attend for free the **Horizon Europe courses offered by the Research Council of Norway** (RCN).
- The RCN offers a very extensive course portfolio which includes **introductory courses** to Horizon Europe; **grant proposal writing courses**; and **topical workshops** in innovation management, impact and exploitation, or Open Access. The workshops combine presentations, case-studies and practice group exercises.
- For more information, see: https://www.forskningsradet.no/en/EUs-framework-programme/horizon-europe/horizon-europe-courses/