MSCA

Marie Skłodowska-Curie Actions

Developing talents, advancing research

MSCA DN – DOCTORAL NETWORKS 2023

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Punto Nacional de Contacto MSCA.
15/09/2023.

enterprise
europe
network
Business Support on Your Doorstep

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FECYT INNOVACIÓN

fundación para el conocimiento madri+d

Receipt of proposals

Admissibility/eligibility check

Allocation of proposals to evaluators

Individual evaluation

Experts assess proposals **individually**.

Minimum of three experts per proposal (but often more than three).

Consensus group

All individual experts discuss together to agree on a **common position**, including comments and scores for each proposal.

Panel review

The panel of experts reach an **agreement** on the scores and comments for all proposals within a call, checking **consistency across the evaluations**.

if necessary, resolve cases where evaluators were unable to agree.

Rank the proposals with the same score

Finalisation

The Commission/Agency reviews the results of the experts' evaluation and puts together the **final ranking list**.

MSCA DN 2022: CRITERIA AND EQUAL SCORES

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

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

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

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

MSCA DN 2023: AWARD CRITERIA

EXCELLENCE
Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)
Soundness of the proposed methodology (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality of open science practices)
Quality and credibility of the training programme (including transferable skills, inter/multidisciplinary, inter-sectoral and gender as well as other diversity aspects)
Quality of the supervision (including mandatory joint supervision for industrial and joint doctorate projects)
50%

IMPACT
Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity, including the potential for: a) meaningful contribution of the non-academic sector to the doctoral training, as appropriate to the implementation mode and research field b) developing sustainable elements of doctoral programmes
Credibility of the measures to   enhance the career perspectives and employability of researchers and contribution to their skills development
Suitability and quality of the measures to maximise expected **outcomes and impacts**, as set out in the dissemination and exploitation plan, including communication activities
The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts
30%

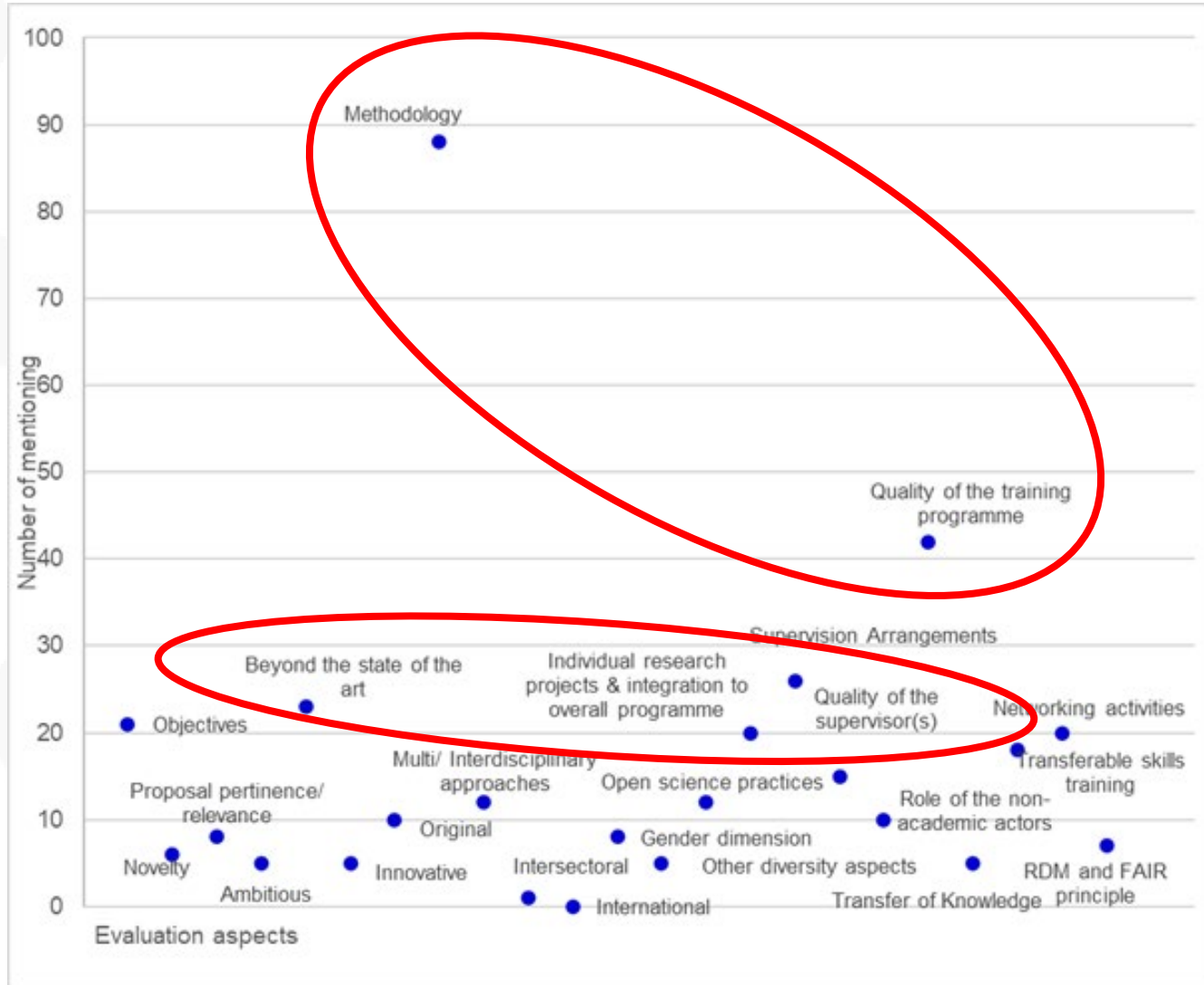| QUALITY AND EFFICIENCY OF THE IMPLEMENTATION |
|---|
| Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages |
| Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise |
| 20% |

MSCA DN Excellence strengths
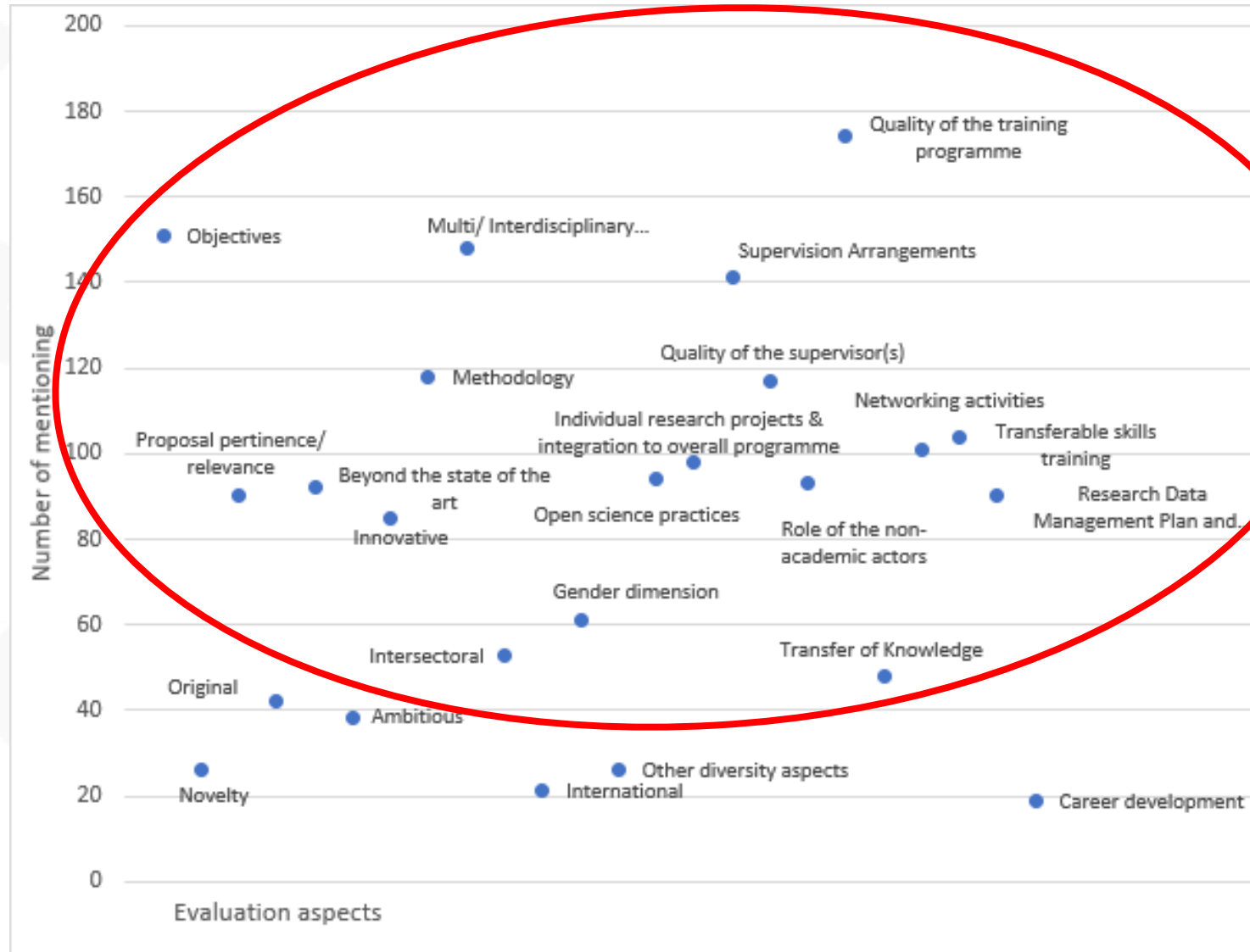
MSCA DN Excellence weaknesses

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)

<u>Introduction, objectives and overview of the research programme.</u> It should be explained how the individual projects of the recruited researchers will be integrated into – and contribute to – the overall research programme. All proposals should also describe the research projects in the context of a doctoral training programme. Are the objectives measurable and verifiable? Are they realistically achievable?

- The originality of the proposal is not convincingly demonstrated.
- The research approaches chosen to address the scientific questions are not entirely justified and are not sufficiently supported by an adequate description of the state of the art.
- The specific scientific objectives are poorly defined and not measurable.

- The work packages presented do not reflect well the research objectives proposed.
- The programme and its objectives span a disparate collection of topics. The overview and the state-of-the-art is general, and lack details on each aspect.

- The feasibility of some individual DC projects is insufficiently demonstrated.

WEAKNESSES - EXCELLENCE

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)

Pertinence and innovative aspects of the research programme (in light of the current state of the art and existing programmes / networks / doctoral research training) Describe how your project goes beyond the state-of-the-art, and the extent the proposed work is ambitious.

- The theoretical modelling is not convincingly demonstrated to be innovative, and the advance beyond the present state-of-the-art is not sufficiently explained.
- The innovative approach has not been sufficiently elaborated. The research is based on methods and approaches currently available.
- The proposal does **not show significant advancements beyond the state-of-the-art**.
- The state-of-the-art is not well documented or discussed.

- Envisaged advancements beyond the current state-of-the-art are insufficiently discussed.

1.2 **Soundness of the proposed methodology** (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality and appropriateness of open science practices)

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.

- The proposed overall **research methodology lacks detail**. The proposal outlines the methods and disciplines on which the methodology will draw upon, but does not clearly specify how they will be integrated.
- The **methodology has some shortcomings**. For example, it is insufficiently clear how the data collected will be related to the current ISO norms on soundscape, the uncertainty of data acquisition is insufficiently described in the context of the extensive requirements for AI training and the operational limitations of XXXXX
- The methodology is **not described** in sufficiently convincing **detail** and it is not entirely appropriate to **address** the **proposed objectives**.
- The proposal does not sufficiently elaborate the way that the **individual research projects (IRPs) contribute** to the overall **research programme**. The selection of the proposed IRPs among the wide pool of subjects that the proposal identifies is not clearly substantiated.

WEAKNESSES - EXCELLENCE

1.2 **Soundness of the proposed methodology** (including interdisciplinary approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality and appropriateness of open science practices)

Integration of methods and disciplines to pursue the objectives: Explain how expertise and methods from different disciplines will be brought together and integrated in pursuit of your objectives. If you consider that an inter-disciplinary approach is unnecessary in the context of the proposed work, please provide a justification.

- The inter/**multi-disciplinary aspects** of the proposed research programme are not clearly specified, and only addressed in a rather **generic** manner.

- The tools to be applied from **various disciplines are not discussed critically enough** to show how they will convincingly mobilise the planned interdisciplinarity of the research and it is not sufficiently clear how the diverse key concepts, methods and methodologies will be brought together.

WEAKNESSES - EXCELLENCE

1.2 Soundness of the proposed methodology

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.

- The gender dimensions (e.g. origin of cell lines, potential particularities of replication stress on the X- or Y chromosome)

- are inadequately addressed. Gender aspects are poorly worked-out. Breast cancer gender-specificity is insufficiently justified, because rare male breast cancer incidence was not clearly considered.

- Although gender aspects of the research work proposed are partly considered, this important issue is not sufficiently addressed in several of the individual research projects.

WEAKNESSES - EXCELLENCE

1.2 Soundness of the proposed methodology

Open science practices: Describe how appropriate open science practices are implemented as an integral part of the proposed methodology. Show how the choice of practices and their implementation are adapted to the nature of your work, in a way that will increase the chances of the project delivering on its objectives.

- Open Science practices are not appropriately addressed in the proposal. It is not clearly identified what types of **open science practices** are planned to be implemented and how they are adapted to the nature of the action. This is a major shortcoming.

- The open science practices regarding software are not fully convincing, because the option implemented by default is minimal, namely complementing the figures in publications with the numerical data.
- The proposal does not sufficiently elaborate on how it plans to comply with the mandatory open science practices, and on how it will adopt recommended practices in the methodology.
- Research data management and open science practices are not sufficiently considered. For instance, the measures to ensure reproducibility of research outputs are missing, and means to adhere to the FAIR principles are not outlined.

WEAKNESSES - EXCELLENCE

1.2 Soundness of the proposed methodology

Research data management and management of other research outputs: Applicants generating/collecting data and/or other research outputs (except for publications) during the project must provide maximum 1 page on how the data will be managed in line with the FAIR principles

- The mandatory open science principles are not fully satisfied. In particular, it is not described in enough detail how data and software tools will be made available after satisfying internal collaboration rules. The research data management is not described in sufficient detail with respect to compliance with the FAIR principles.

- The proposal is not sufficiently clear regarding the alignment of the research data management with FAIR principles.

- Open science practices are **not fully convincing**, as the emphasis has mostly been placed on using data repositories. Data management and **FAIR principles are mentioned but lack a convincing description** of actions to take place by specific responsible partners.

WEAKNESSES - EXCELLENCE

1.2 Soundness of the proposed methodology

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

- The technical data of artificial intelligence elements and their robustness are not adequately documented. This is a minor shortcoming.
- The technical robustness of AI techniques for model development, control optimization, and prediction is not
- clearly explained.
- The robustness of the AI technologies to be employed are not well evidenced.
- The issues of AI-based methods are not convincingly addressed. The proposal fails to describe with adequate detail the measures to evaluate the use of AI ensuring its robustness.
- The AI methodology is not described in sufficient detail, especially related to the specific AI-methods to be used, the underlying data, and how the quality is ensured. Furthermore, the technical robustness of the planned use of AI is not clearly outlined.
- The image analysis and AI training are rather superficial, which may influence reaching the project's goals.
- AI is not included in training activities although required for planned research.
- The specific involvement of methods based on artificial intelligence are not described in sufficient depth, and making the robustness of the approach difficult to assess.

WEAKNESSES - EXCELLENCE

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

<u>Overview and content structure of the doctoral training programme</u>, including network-wide training events and complementarity with those programmes offered locally at the participating organisations (include table 1).

- The network-wide training events, although presented, are not well developed. Specifically, the number and **duration** of these events are low. There is insufficient clarification in the proposal on how the local actions at the hosting institutions will complement the training at the network-wide level.
- **Training in key transferable skills** (i.e. leadership, collaborative and interpersonal skills, communication skills) is **not sufficiently emphasized** to support the excellence of the proposal.
- Provisions for transferable skills and diversity aspects are not sufficiently detailed. This is a minor shortcoming.
- The **planned contributions** of some **associated partners** to global DN formation (beyond the award of the PhD degree) are not sufficiently presented.

WEAKNESSES - EXCELLENCE

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

Role of non-academic sector in the training programme.

- The added value of some non-academic partners in the training programme is not sufficiently demonstrated; part of what is offered by the private company overlaps with what already exists from the academic beneficiaries.
- The local training of the individual Doctoral Candidates at non-academic beneficiaries is not clearly described.
- The role of the non-academic sector in the training is modest. The secondments in the non-academic partners are too short to be meaningful and not all DCs will be exposed to intersectoral secondments.
- The training programme insufficiently covers interdisciplinary and inter-sectoral aspects.

- Beyond the non-academic associated partner, the role of other companies in the training programme is too generic.

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

Qualifications and supervision experience of supervisors.

- Details of how the supervisors will be assigned to individual DCs and how the personal interactions between DCs and their supervisors will take place are not outlined in sufficient detail.
- Details on how all Doctoral Candidates will get additional co-supervisors from the consortium, PIs and co-mentors from the non-academic sector, are insufficiently addressed.
- The experience of some of the individual supervisors in PhD student training or history of collaboration is insufficiently detailed. Furthermore, feedback mechanisms for supervision are not sufficiently described and specific information about doctoral candidates' and supervisors "frequent meetings" is unclear.
- The experience of some supervisors in mentoring Ph.D. students is insufficiently documented.
- The academic background and track record of the co-supervisors is not fully specified, and the time allocation dedicated by senior researchers to coordination, management, training or supervision roles is insufficiently explained.
- The **individual experience of the supervisors is unequal**, some having little experience. The ways to overcome this limited experience are insufficiently explained in the proposal.
- The proposal does **not** sufficiently **demonstrate** that **some of the main supervisors have enough** experience in doctoral supervision.
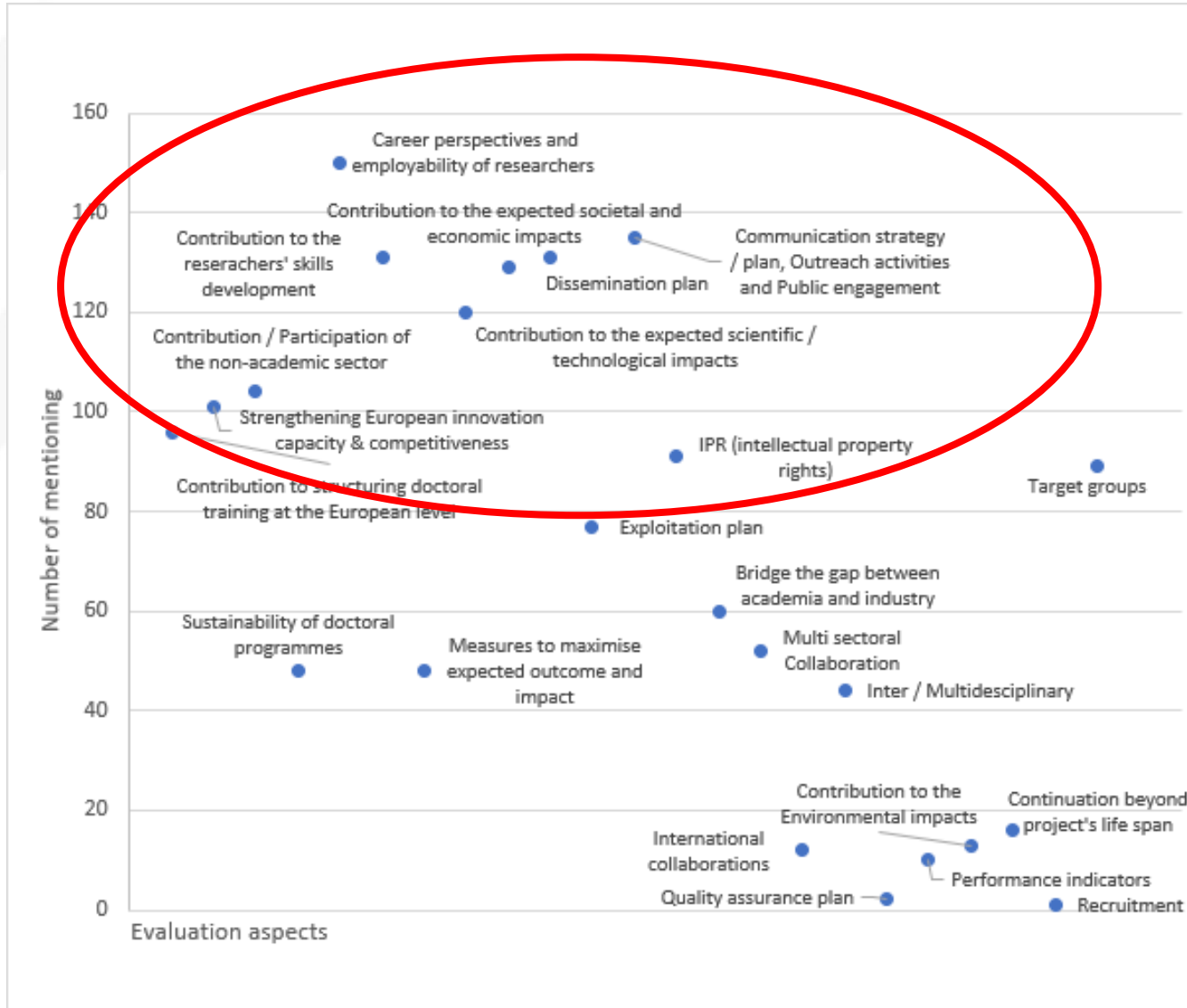
WEAKNESSES - EXCELLENCE

1.4

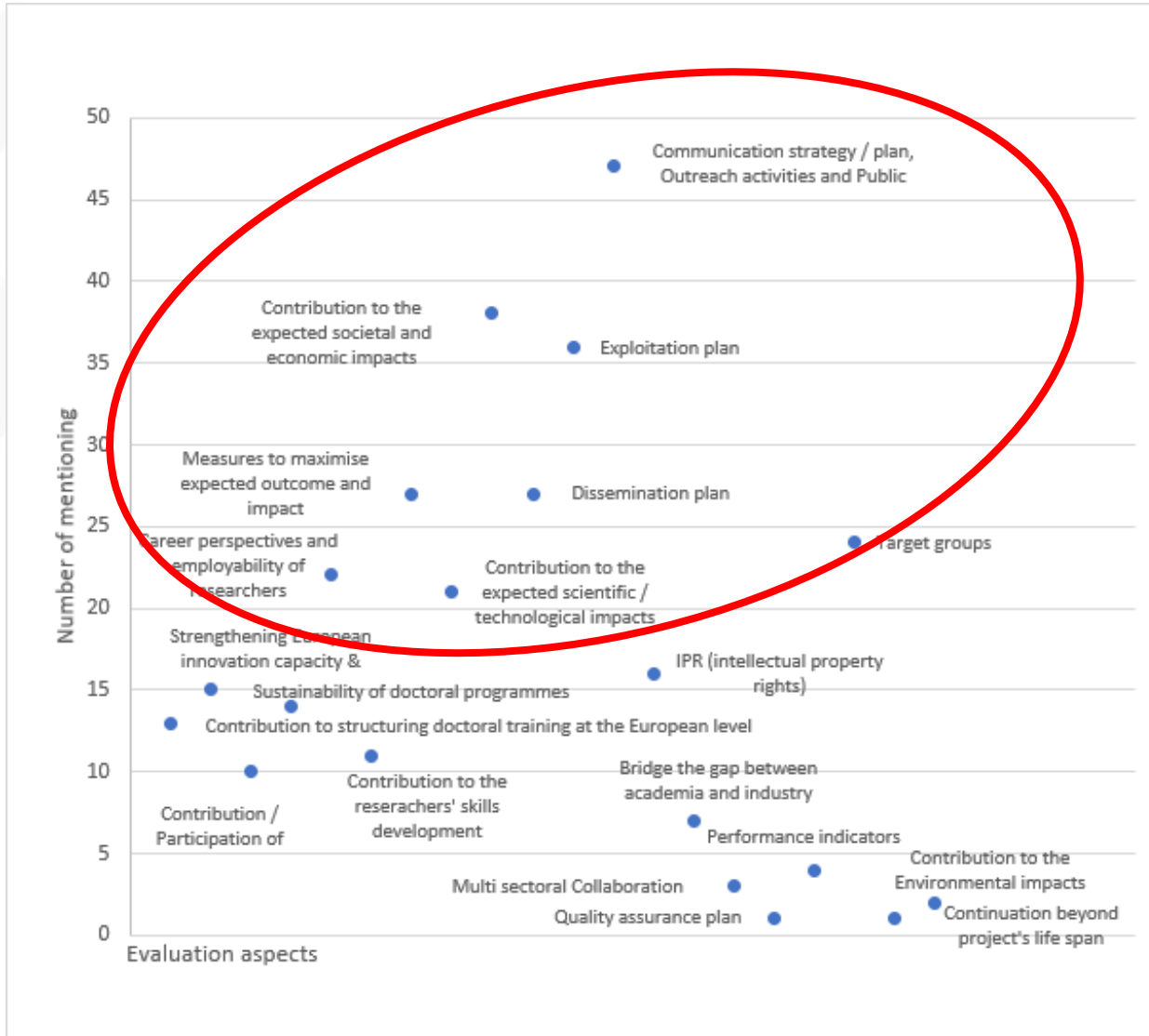**Quality of the supervision** (including mandatory joint supervision for industrial and joint doctorate projects)

Quality of the joint supervision arrangements (including mandatory joint supervision for DN-ID and DN-JD).

- The role of the industrial co-supervisor in the progress monitoring mechanisms at the local level is not articulated in sufficient detail.
- The description of co-supervision practices for secondments, and especially for the ones involving supervisors from the industrial sector, is not sufficiently detailed.
- Some aspects of the joint-supervision are not detailed. For instance, the progress monitoring aspect and the time commitment of supervisors, are not sufficiently elaborated.

- The training **expertise of the supervisors is not well addressed**. Expertise of supervisors in the field of XXXXXX biology is not convincingly demonstrated.

- **Supervision arrangements** during the mandatory secondments are not clearly mentioned.

MSCA DN Impact strengths

Number of mentioning (y-axis)

Evaluation aspects (x-axis)

- Career perspectives and employability of researchers
- Contribution to the expected societal and economic impacts
- Contribution to the reserachers' skills development
- Communication strategy / plan, Outreach activities and Public engagement
- Dissemination plan
- Contribution / Participation of the non-academic sector
- Contribution to the expected scientific / technological impacts
- Strengthening European innovation capacity & competitiveness
- IPR (intellectual property rights)
- Contribution to structuring doctoral training at the European level
- Target groups
- Exploitation plan
- Bridge the gap between academia and industry
- Sustainability of doctoral programmes
- Multi sectoral Collaboration
- Measures to maximise expected outcome and impact
- Inter / Multidesciplinary
- Contribution to the Environmental impacts
- Continuation beyond project's life span
- International collaborations
- Performance indicators
- Quality assurance plan
- Recruitment

MSCA DN Impact weaknesses

WEAKNESSES - IMPACT

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

- It is not sufficiently elaborated how the consortium will contribute to strengthening the European innovation capacity.
- The proposal fails to convincingly describe how to make Europe more competitive in the areas related to the proposed research program. For example, it is not evident how it will contribute to reduce the gap between academia and industry.

meaningful contribution of the non-academic sector to the doctoral training
- It is mentioned that three industrial representatives will be involved but there is only one industrial partner declared in part B Section 1.
- The proposal does not convincingly demonstrate that it will help to bridge the gap between the non-academic sector and academia.
- The training contribution by the non-academic sector is not presented in sufficient detail.
- The contribution of the non-academic sector to research and transferable skills training is not credibly
- addressed.
- The contribution of the non-academic sector to the research training through secondment, is not well
- supported by a clear description of its relevance and added value.

WEAKNESSES - IMPACT

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

Developing sustainable elements of doctoral programmes after the end of the DN funding

- The structuring effect for doctoral training in Europe is moderate, as there are already multiple doctoral networks with similar competence makeup, particularly in ******.
- Contribution of the project to structuring training at the EU level is poorly described. Potential synergies with other research programmes and with public/private partnerships are mentioned without a formal commitment (e.g. planned meeting, or co-activities).
- The ability of the proposed programme to structure doctoral training at the European level is not well addressed.
- Measures to ensure the sustainability of doctoral training at the European level are described in too generic terms and with few concrete actions.
- Concrete sustainable elements of doctoral programmes after the end of the action are not sufficiently delineated.
- The proposal does not provide a clear explanation of how the proposed doctoral training programs would be sustainable beyond the lifetime of the programme.
- Only limited sustainable elements of doctoral programmes after the end of the Doctoral Network funding are addressed (availability of the taught material and sustainability of researchers recruitment according to the code of conduct for the recruitment of researchers).
- The plan for developing sustainable elements of doctoral programme are not convincingly developed as they mainly rely on establishing an Alumni Association.

WEAKNESSES - IMPACT

2.2 **Credibility of the measures to enhance the career perspectives and employability of researchers and contribution to their skills development** (impact of the research and training on the fellows' careers)

- The needs of the job market and the way the trained researchers will fit to those is not fully clear.
- The measures to enhance career perspectives and employability of the DCs are poorly described. Insufficient detail is provided on how specific research skill and expertise, coupled with transferable skills that will be received during the training programme, will enhance their career perspective either in academic or non-academic sectors

- Exposure to top-notch events in cybersecurity involving field awareness beyond the EU dimension is insufficiently planned, i.e. DEFCON cyber-security challenges and competitions.
- The new technical and complementary / transferable skills and competences that the DCs will acquire via the proposed project are not sufficiently explained.
- The researchers' training exposure to the non-academic sector is restricted to the size, scope, and market needs of smaller companies, limiting researchers' exposure to large (possibly national) broadcasters.

WEAKNESSES - IMPACT

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

Plan for the dissemination and exploitation activities, including communication activities:

- Both a plan for direct engagement with the public and a plan to make the research activities known to society at large are almost entirely missing.
- The expected number of publications is not realistic.
- The number of planned publications appears limited for a project of this size.
- The exploitation and the IP protection strategy are not explained in sufficient detail. The active involvement of the DCs in the identification and protection of exploitable results is not appropriately foreseen. Moreover, there is no clear indication on which individual projects are expected to produce results capable of being translated into products/methods.
- While generating some knowledge for European industrial sectors, it is not clear how this knowledge will be exploited or taken forward to industrial partners.
- The strategy to communicate the proposed activities to non-academic audiences is not well elaborated. It is not sufficiently clear what these non-academic audiences are and thus how the research could understand what the public interests are and how to bridge the divide between the wider public and research.
- The dissemination activities targeting external industrial audiences and the corresponding exploitation plans are not adequately developed in the proposal.

WEAKNESSES - IMPACT

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

Strategy for the management of intellectual property, foreseen protection measures

- The strategy for the management of intellectual property and foreseen protection measures are insufficiently described although the project aims to develop new technologies and toolkits with industry involvement and will generate data and software packages.
- Plans to share intellectual property lack sufficient detail with respect to how agreements between beneficiaries and non-academic beneficiaries will be signed.
- The IP strategy to ensure that all data and knowledge generated within the network will be secured for future marketability is not adequately addressed

- Planned arrangements between partners in terms of IP management is insufficiently detailed.
- Measures for the management of intellectual property lack details

WEAKNESSES - IMPACT

2.4 **The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts (project's pathways towards impact)** 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 expected scientific impact in connection with diverse fields of XXXXX is not properly elaborated.
- It is not sufficiently described to which extent and how the expected scientific outcomes will have a noticeable impact on the continued future research in the field.
- The scientific impact is not credibly described. Statements are very general, and not fully supported by
- explanations.
- The description of contribution to the scientific and societal expected impacts is generic and insufficiently considers quantifiable indicators.
- The specific impacts of the new products to be derived from the proposal are not clearly specified.
- The proposal acknowledges the needs for impact but provides insufficient details of how to influence the different stakeholders or the angles of the intended impact.
- The argument for the expected economic impact is unconvincing and not sufficiently specifically explained in relation to the project
- The expected societal impact is not clearly demonstrated in the proposal.
- The economic and societal impact is overestimated
- Societal impacts are insufficiently discussed from an environmental perspective.

MSCA DN Implementation strengths
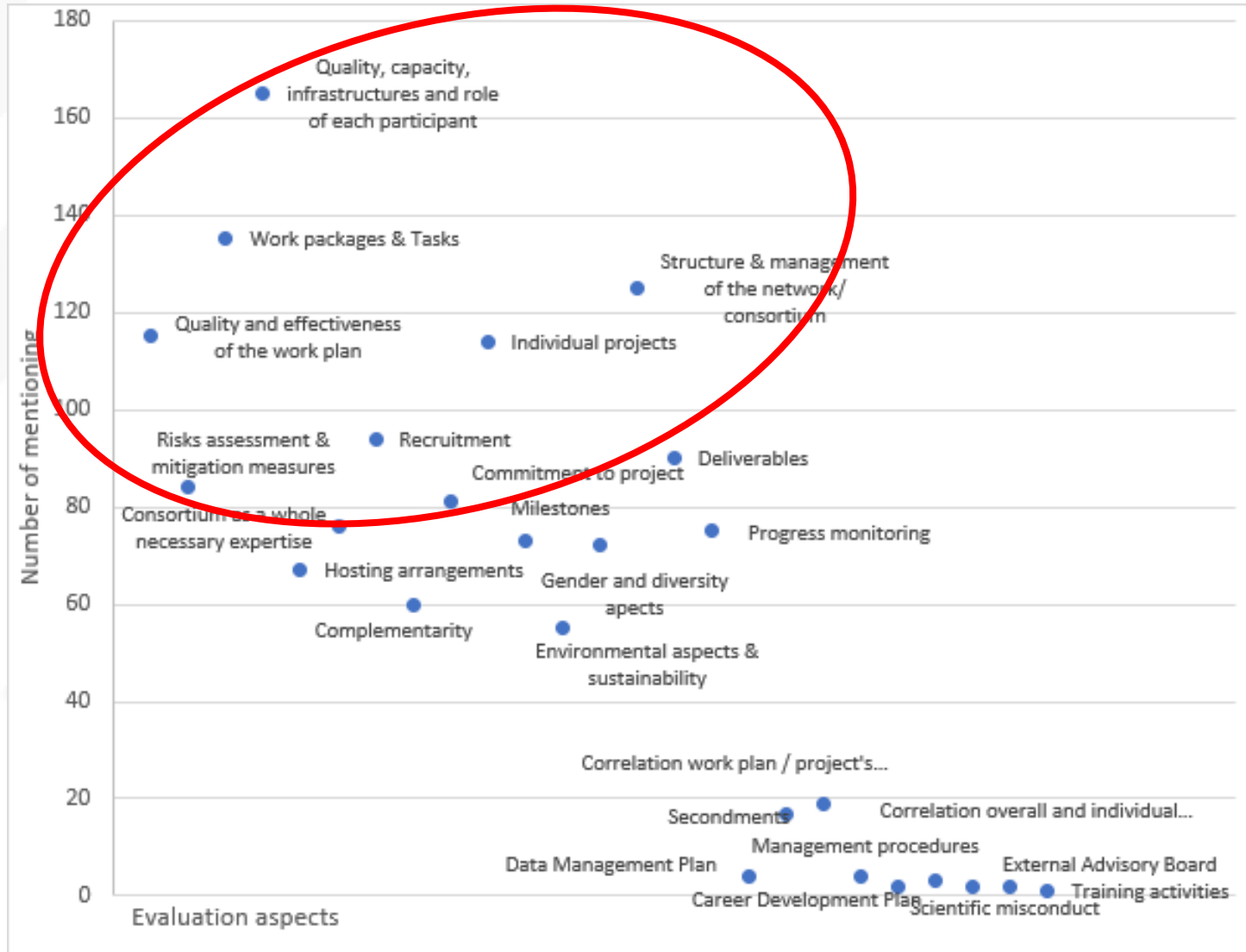
MSCA DN Implementation weaknesses
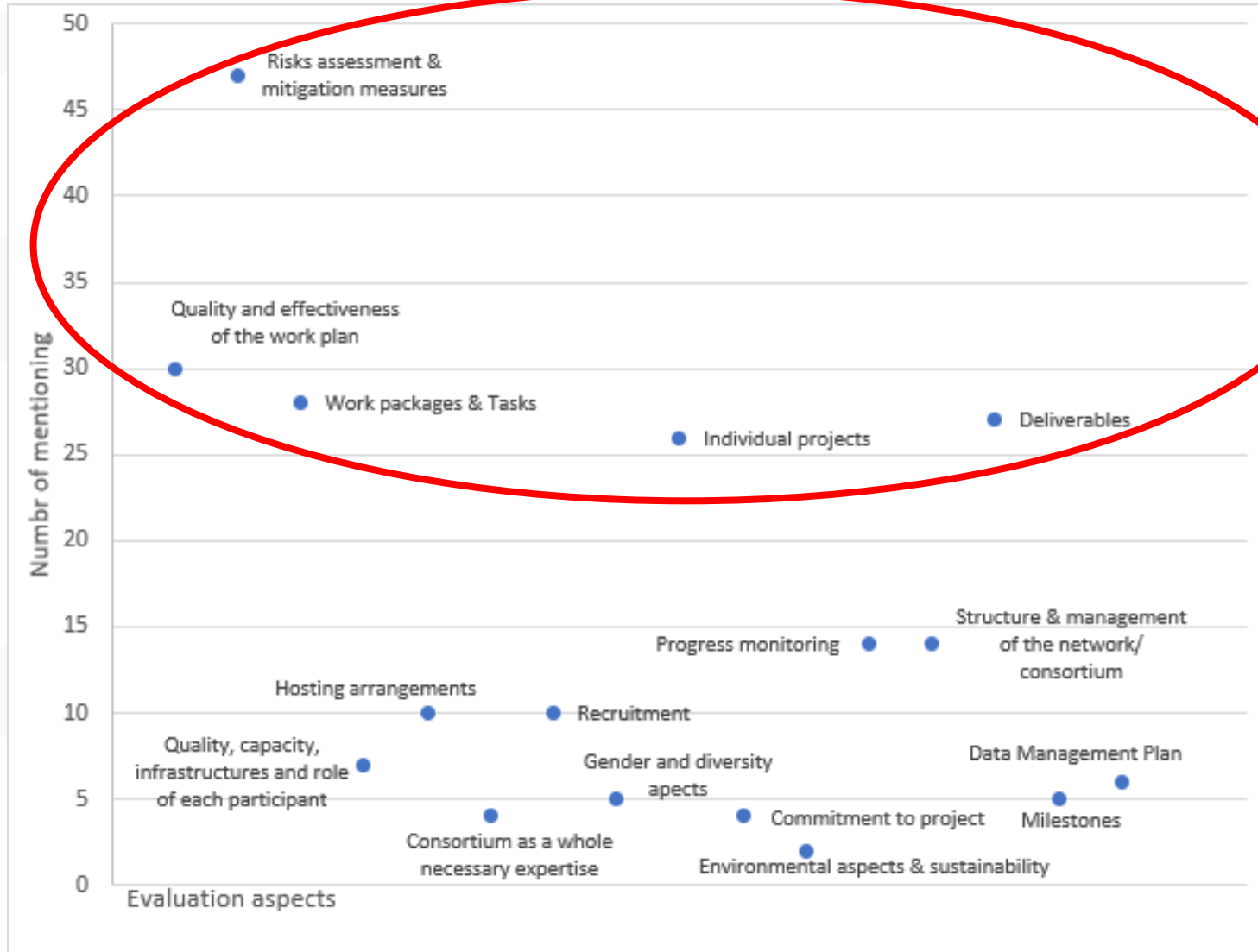
WEAKNESSES - IMPLEMENTATION

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

- The workplan is not credible. The tasks proposed are too ambitious and not credible for the duration of the project.
- The Work Plan structure is not sound since the individual Work Packages are not sufficiently interconnected, fellow's research projects are assigned to two different Work Packages with no link nor research interaction between them. Details on the different tasks of the Work Plan are insufficiently considered in the proposal.
- Mechanisms for dealing with scientific misconduct in the consortium are not adequately addressed.
- The list of milestones and deliverables is not fully developed. For example deliverables related to individual projects are not clearly described, and no clear milestones are foreseen for several WPs.
- Research-related milestones are insufficiently considered making it difficult to monitor the progress of the project efficiently.
- The risk analysis is significantly oversimplified and not complete,
- The recruitment strategy does not explicitly take into account the requirements of local doctoral schools
- The management structures foreseen are too complex. The proposal does not include either mechanisms for conflict resolution.
- Certain risks and mitigations are insufficiently described, such as those related to social arrangements for the Doctoral Candidates and to the risk of a Doctoral Candidate leaving the consortium.
- Scientific and technical risks are not explicitly identified, and no risk mitigation measures are presented for them.

WEAKNESSES - IMPLEMENTATION

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

- Insufficient information is provided to fully assess the infrastructure available to carry out the tasks allocated at the participating organizations.
- The hosting arrangements are not sufficiently justified, in particular regarding the very limited time devoted to the project by some supervisors.
- The necessary administrative, human resource support, and hosting arrangements for the integration and
- commitment of doctoral candidates to the host lab are not sufficiently described.
- Involvement of industrial partners in the management structure is unusually low for an otherwise highly exploitable project.
- The need to access larger EU infrastructure is not well explained.
- The specific infrastructure required to Doctoral Candidates to carry out their research, such as computing capacity, is not sufficiently detailed for all of the partners.
- The proposal lacks sufficient detail to demonstrate how the complementarities between the expertise of the members of the consortium are exploited.
- The role of the non-academic partners in the secondment plan is not described in detail.
- The role of each beneficiary in the different tasks of the Work Plan is insufficiently described.
- The proposal fails to sufficiently demonstrate that the consortium has the necessary experience with 5G
- networks operation

About the project :

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

General Approach:

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

About the evaluation:

- The **weighting of criteria** is 50% -30% -20%. You need to perform at close to 100% on each
- **Follow the template** –the evaluators need to find all key points
- The reviewers may not be specialists in the field
- **"picture is worth a thousand words":** use visuals to provide global information at a glance

¡Muchas gracias!

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