MSCA Doctoral Networks

Marie Skłodowska-Curie Actions

Marie Sklodowska-Curie Actions

Doctoral Networks

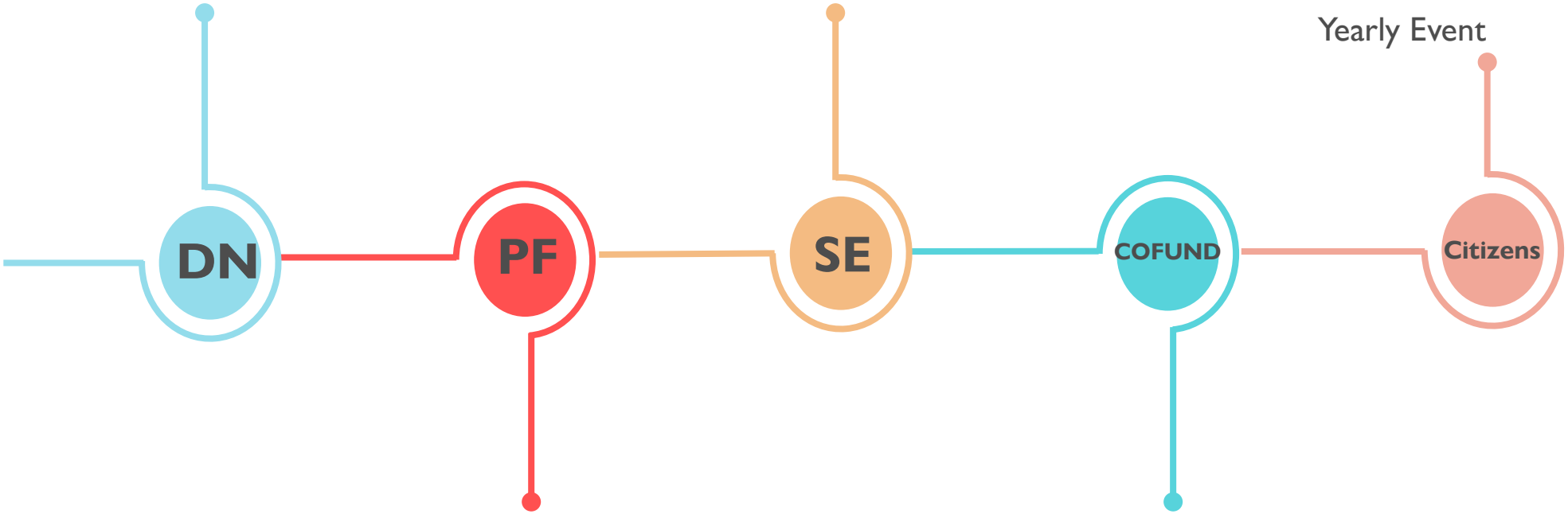
Joint Doctorates
Industrial Doctorates
Other Doctoral Programmes

Staff Exchanges

Secondments Inter-
-sectoral | -national | -disciplinary

MSCA & Citizens

Yearly Event



Postdoctoral Fellowships

European Fellowships
Global Fellowships

COFUND

Co-financed Programmes:
Doctoral and Postdoctoral

PERIN Portugal in Europe Research and Innovation Network

Marie Sklodowska-Curie Actions – 2025 calendar

Doctoral Networks

Opens: 28 May.'25
Closes: 25 Nov.'25

DN

Staff Exchanges

Opens: 27 Mar.'25
Closes: 08 Oct.'25

SE

MSCA & Citizens

Opens: 20 Jun.'23
Closes: 25 Oct.'23

Citizens

PF

Postdoctoral Fellowships

Opens: 09 Apr.'25
Closes: 10 Sep.'25

COFUND

COFUND

Opens: 23 Jan.'25
Closes: 24 Jun.'25

PERIN Portugal in Europe Research and Innovation Network

Doctoral Networks

Main objectives:

- Respond to **well-identified needs** in various R&I areas (bottom-up)
- Expose the researchers to the **academic and non-academic sectors**.
- Offer training in research-related, as well as competences relevant for **innovation and long-term employability**.
- Focus on **research and transferable skills**, (inter-sectoral secondments), **career development plan, supervision, internationalization / attractiveness**

Doctoral Networks

Modalities:

Multi-beneficiary Action to set up **doctoral programmes**, including:

- **Industrial Doctorates** (ID): Training in academia and industry, Joint supervision
- **Joint Doctorates** (JD): Joint collaborations leading to a joint/multiple doctoral degree, Joint selection and supervision; pre-agreement for joint degrees required
- **Doctoral Networks** (standard): Training in academia and/or industry

Doctoral Networks

Size

- Up to **540 person-months** (for all types of DN)

540 PM (**example**)
15 PhD students recruited for 36 months each

Duration

- **Programme**: max. 48 months (max 60 months in JD)
- **Fellowship**: between 3 and 36 months (max. 48 months in JD)
- **Secondments**: worldwide (standard up to 1/3 of the fellowship duration; **JD/ID no limit**)
- **Industrial doctorates**: 50% in the non-academic sector; academic and non-academic organisations jointly supervising can be in the same country

528 PM (**JD example**) 11 PhD students recruited for 48 months each

Doctoral Networks

Eligible participants:

- **Consortia** of universities, research institutions and research infrastructures, businesses including SMEs, and other socio- economic actors
- At **least three independent legal entities**, each established in a different Member State (MS) or Horizon Europe Associated Country (AC); minimum of 1 beneficiary from a MS (on top of this minimum, any entity from any third country can join; no minimum for associated partners)
- Should none of them be entitled to award a doctoral degree, a university or a consortium/grouping of academic/research institutions entitled to award a doctoral degree must be added to the project as an associated partner or an associated partner linked to a beneficiary.

Doctoral Networks

Summary of Tasks				
Role in the network	Recruitment of Researchers	Training and/or Hosting of Seconded Researchers	Participation in Supervisory Board	Directly Claims unit contributions
Beneficiary	✓	✓	✓	✓
Associated Partner	x	✓	✓	x

Doctoral Networks

Joint Doctorates

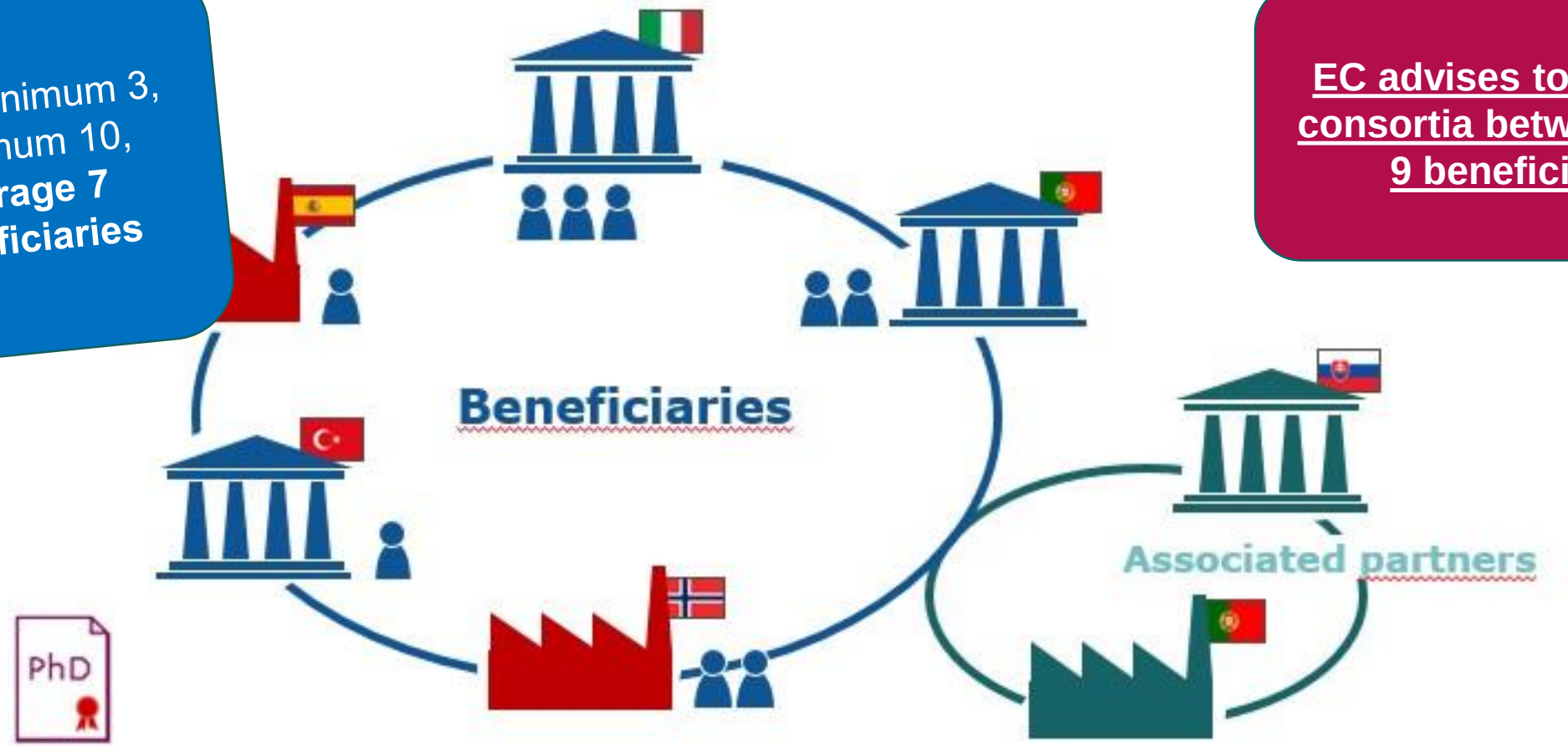
- At least three independent legal entities must be entitled to award doctoral degrees
- At least one of the institutions conferring a joint, double or multiple doctoral degree must be established in an EU Member State and/or Horizon Europe Associated Country
- Applicants must provide, at the time of the submission of the proposal, **a pre-agreement to award a joint, double or multiple degree** to the doctoral candidate(s)
- The proposal should indicate from which institutions a researcher is expected to receive the degree(s)
- Must set up a joint governance structure with joint admission, selection, supervision, monitoring and assessment procedures.

Doctoral Network – example consortium

MSCA-NET

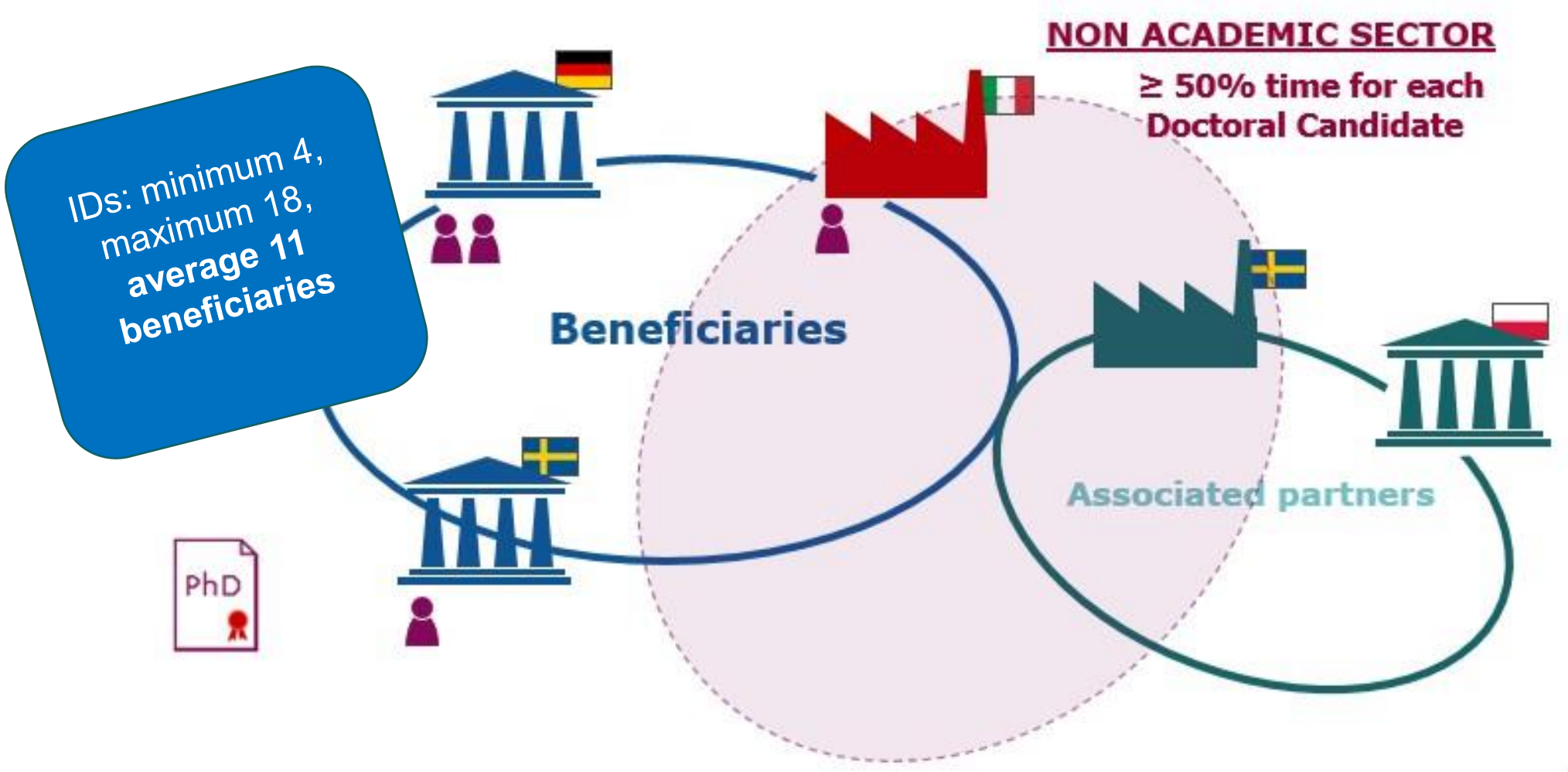
DNs: minimum 3, maximum 10, **average 7 beneficiaries**

EC advises to keep the consortia between 6 and 9 beneficiaries



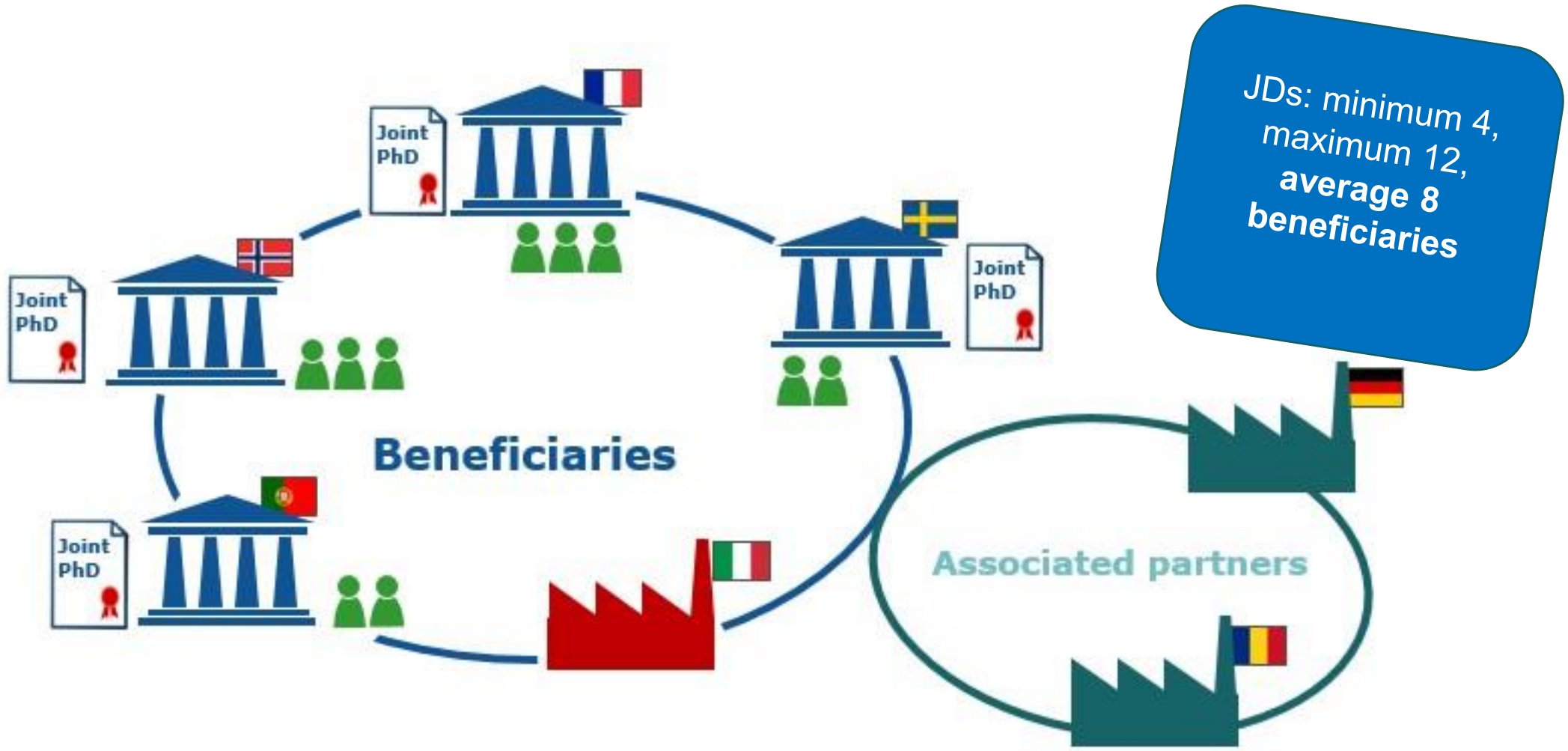
Industrial Doctorate – example consortium

MSCA-NET



Joint Doctorate – example consortium

MSCA-NET



JDs: minimum 4, maximum 12, **average 8 beneficiaries**

Doctoral Networks

Eligible participants:

EU COUNTRIES

- Member States (MS) including their outermost regions
- The Overseas Countries and Territories (OCTs) linked to the MS.

NON-EU COUNTRIES

- Countries associated to Horizon Europe (AC)
- Low and middle income countries: See HE Programme Guide.
- Other countries when announced in the call or exceptionally if their participation is essential

SPECIFIC CASES

- Affiliated entities established in countries eligible for funding.
- EU bodies
- International organisations (IO):
  - International European research organisations are eligible for funding.
  - **Other IO are not eligible (only exceptionally if participation is essential)**
  - **IO in a MS or AC are eligible for funding for Training and mobility actions and when announced in the call conditions**

Doctoral Networks

Academic and non-academic sectors

Academic sector

- ✓ public or private higher education establishments
- ✓ public or private non-profit research organisations
- ✓ International European Research Organisations

Non-academic sector

- ✓ any socio-economic actor not included in the academic sector

Doctoral Networks

Eligible participating organisations:

- **All beneficiaries must recruit at least one doctoral candidate.** They are required to host at their premises and supervise recruited researchers, or use associated partners linked to them to do so.

- **Not more than 40% of the EU contribution may be allocated to beneficiaries in the same country** or to a single international organisation.

Doctoral Networks

Eligible researchers:

- Supported researchers must be **doctoral candidates** (not already in possession of a doctoral degree at the date of recruitment)
- Researchers must be **enrolled in a doctoral programme**, in at least 1 EU Member State/Associated Country
- **Any nationality**
- **Mobility rule**: must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 36 months immediately before their recruitment date.

Country of the main activity: where the researcher is physically based when carrying out the main activity **and** the country of the institution for which the main activity is performed (e.g., employer)

Doctoral Networks

- **Size** of Doctoral Networks: **540 pm**
- **All beneficiaries must recruit** at least one researcher
- Fellow: **only doctoral candidates**
- Maximum fellowship duration **36 months (48 in JD)**
- Secondments: **up to 1/3 the duration of the fellowship- This limitation does not apply in thecase of Industrial Doctorates and Joint Doctorates.**
- Industrial doctorates: doctoral candidates must spend at least **50% of the duration of the fellowship in the non-academic sector**

Doctoral Networks

Resubmissions:

- All proposals **must indicate if they are resubmitted** from the previous MSCA Doctoral Networks call under Horizon Europe.
- Proposals submitted to the previous call of MSCA Doctoral Networks under Horizon Europe and having received a **score of less than 80%** must not be resubmitted the following year.

Doctoral Networks

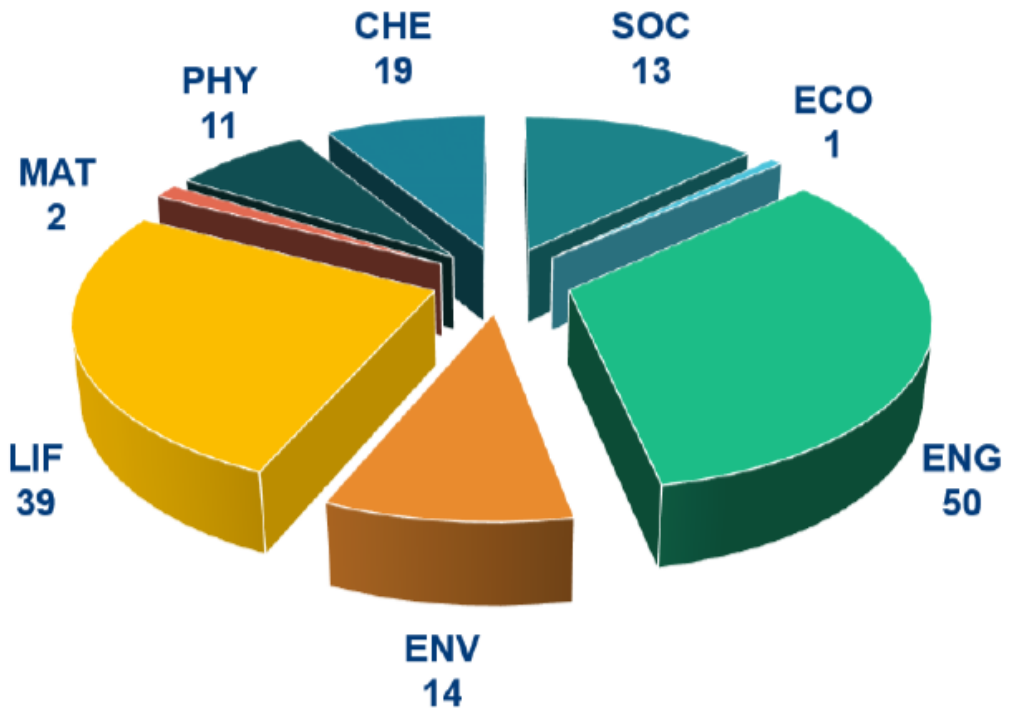
Resubmissions:

- Any proposal involving **70% or more of the same recruiting organizations** as in another proposal submitted to the previous call of the MSCA Doctoral Networks under Horizon Europe that has received a score of **less than 80% will be assessed for whether it is a resubmission**, irrespectively of the applicants' self-declaration. The assessment will be carried out by external expert evaluators based on the similarity of objectives as well as on the similarity of the scientific approach proposed to reach such objectives.

		DN	DN-ID	DN-JD
BENEFICIARY (IES)	Minimum Number of beneficiaries	3	3	3
	Minimum MS or AC	3	3	3
	Minimum MS (beneficiaries)	1	1	1
	Academic sector	No restrictions	No restrictions	No restrictions
	Non-academic sector	No restrictions	No restrictions	No restrictions
	Max no. of person months	540	540	540
	Max 40.0% budget for 1 country/international organisation	Mandatory	Mandatory	Mandatory
Beneficiary or associated partner/associated partner linked to a beneficiary awarding PhD		Mandatory (beneficiary or associated partner/ associated partner linked to a beneficiary)	Mandatory (beneficiary or associated partner/ associated partner linked to a beneficiary)	Mandatory (please see minimum requirements for DN-JD)
Joint/double/multiple award of PhD		Optional	Optional	Mandatory (Researchers must be enrolled in a doctoral programme leading to the award of a doctoral degree in at least 1 EU MS or AC)
Joint/double/multiple degree – letter of pre-agreement		N/A	N/A	Mandatory
Joint supervision for researchers		Encouraged	Mandatory (from the 2 sectors)	Mandatory
Researchers enrolment in the PhD		Mandatory	Mandatory	Mandatory
Stay in non-academic sector		Encouraged	Min. 50% of fellowship duration	Encouraged
Secondments		≤ 1/3	No limitation	No limitation
Max Project duration		48	48	60
Fellowship duration		3-36 months	3-36 months	3-48 months
Ranking lists		8 (Scientific) panels		
Budget		~EUR597.8 Million		

DN 2022 Call - success rates per panel/ mode

149 Main list proposals

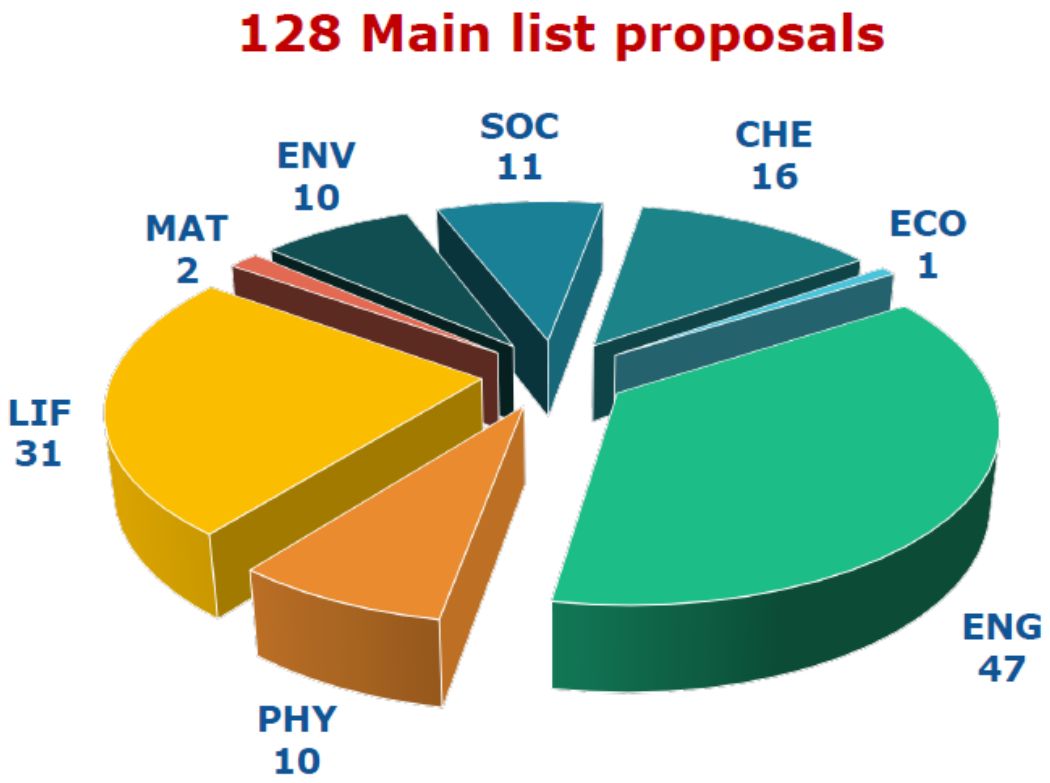


Panel	DN	DN-ID	DN-JD	Total
CHE	14	3	2	19
ECO	0	1	0	1
ENG	38	8	4	50
ENV	13	0	1	14
LIF	35	1	3	39
MAT	1	0	1	2
PHY	10	1	0	11
SOC	12	0	1	13
Total	**123**	**14**	**12**	**149**
Success Rate	**15.4%**	**19.2%**	**16.0%**	**15.8%**

CHE	ECO	ENG	ENV	LIF	MAT	PHY	SOC	Total
15.4%	11.1%	15.9%	15.9%	16.5%	11.1%	15.5%	15.7%	15.8%

European Commission

DN 2023 Call - success rates per panel/ mode



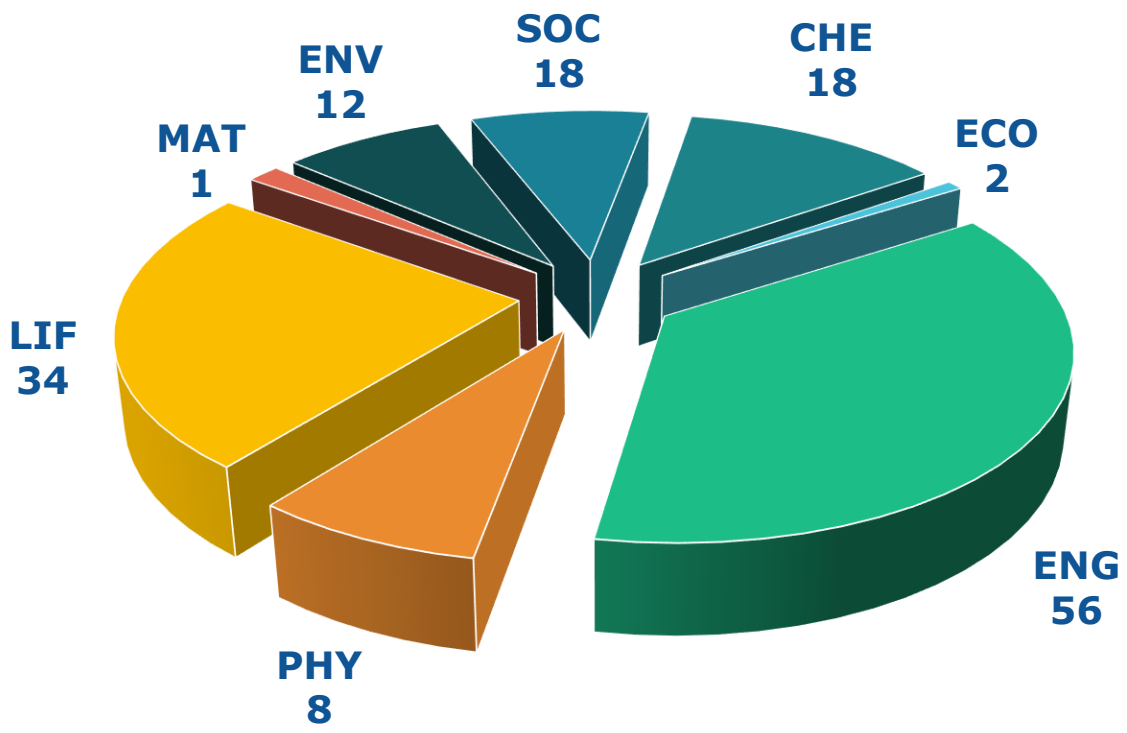
Panel	DN	DN-ID	DN-JD	Total
CHE	14	1	1	16
ECO	1	0	0	1
ENG	42	3	2	47
ENV	10	0	0	10
LIF	27	3	1	31
MAT	2	0	0	2
PHY	8	0	2	10
SOC	9	1	1	11
Total	**113**	**8**	**7**	**128**
Success Rate	**12.3%**	**12.3%**	**8.9%**	**12.1%**

CHE	ECO	ENG	ENV	LIF	MAT	PHY	SOC	Total
11.8%	5.6%	12.2%	12.2%	12.1%	15.4%	12.3%	12.2%	12.1%

European Commission

DN 2024 call
Success rates per panel/ mode

Main list * proposals



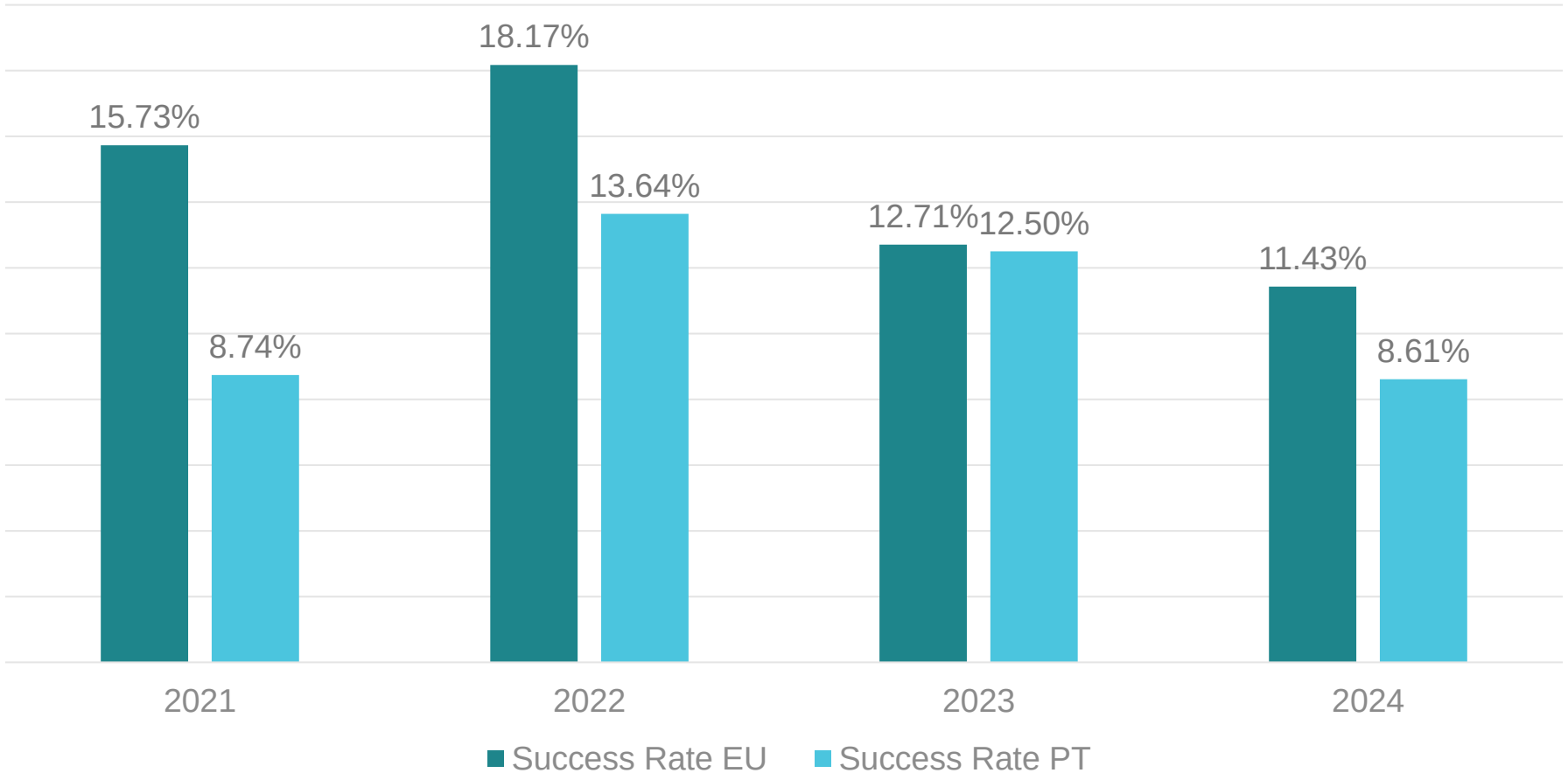
Panel	DN	DN-ID	DN-JD	Total
CHE	15	2	1	18
ECO	2			2
ENG	47	6	3	56
ENV	11		1	12
LIF	33		1	34
MAT	1			1
PHY	8			8
SOC	16		2	18
Total	**133**	**8**	**8**	**149**
Success Rate	**10.7%**	**10.1%**	**9.2%**	**10.6%**

CHE	ECO	ENG	ENV	LIF	MAT	PHY	SOC	Total
10.8%	11.1%	10.8%	10.0%	10.3%	5.9%	8.6%	12.7%	10.6%

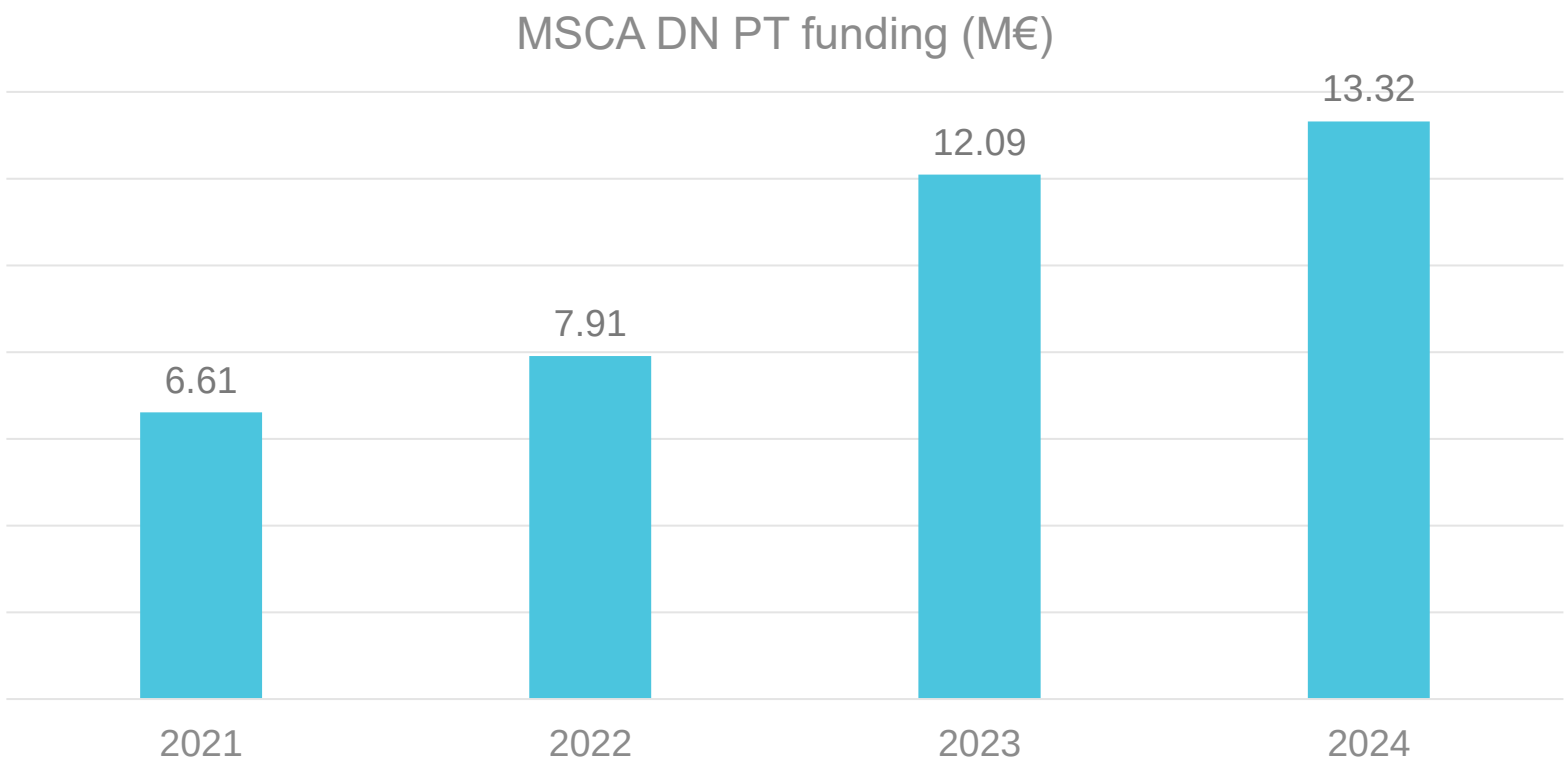
*pending the signature of the GAs

PERIN Portugal in Europe Research and Innovation Network

MSCA Doctoral Networks in Horizon Europe
Success rates EU vs PT



MSCA Doctoral Networks in Horizon Europe
Funding obtained by Portuguese institutions



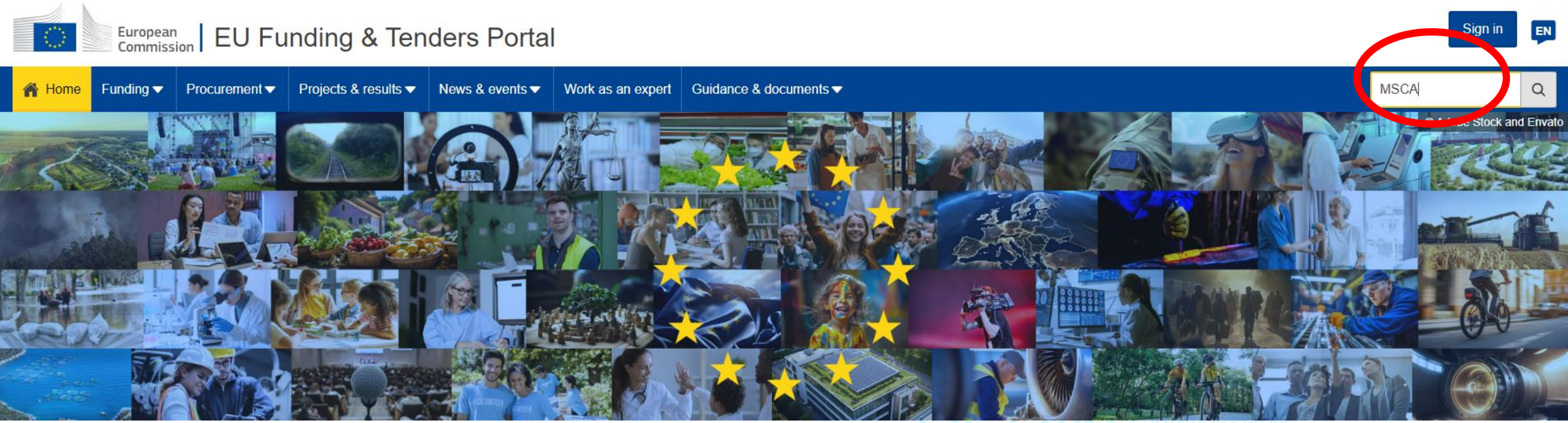
Proposal submission

MSCA Doctoral Networks

PF - Proposal submission

Applications are submitted through the **Funding and tender opportunities portal**:

- Find your call: MSCA Doctoral Networks 2025
- Sign into the portal and register your organization (get a PIC number)

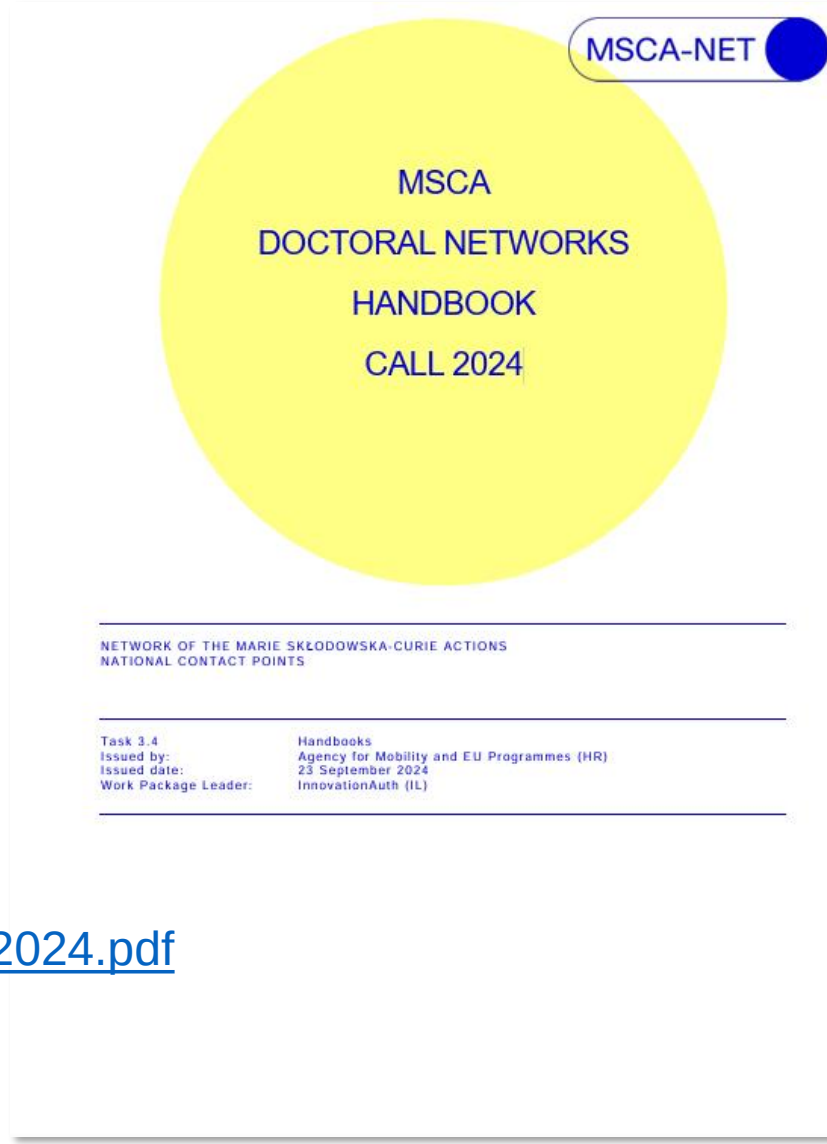


DN - Proposal submission

- Read **all guidance documents**:
  - **Guide for Applicants**: overview of rules, financial aspects, etc.
  - MSCA Work Programme and annexes
  - Standard application form
  - Frequently Asked Questions
  - MSCA Guidelines on Supervision:
  - MSCA Green Charter:
  - Submit specific queries to the **Research Enquiry Service** (funding, validation of participants, etc.)

DN - Proposal submission

- The 2025 version will be available soon
- There are very few differences, use this one while the 2025 one is not available



https://msca-net.eu/wp-content/uploads/2024/09/MSCANET_DN_handbook_2024.pdf

DN – proposal submission

Gender Equality Plan

https://op.europa.eu/en/publication-detail/-/publication/ffcb06c3-200a-11ec-bd8e-01aa75ed71a1/language-en/format-PDF/source-232129669

PF - Proposal submission

European Commission | Funding & tender opportunities

Single Electronic Data Interchange Area (SEDIA)

SEARCH FUNDING & TENDERS | HOW TO PARTICIPATE | PROJECTS & RESULTS | WORK AS AN EXPERT | SUPPORT

Part A (structured data)

Part B (description of action)

Page limit:

Part B-1: 34 pages (**30 pages** + start page, table of contents and list of participating organisations)

Part B-2: no limit

DN - Proposal submission

Part A proposal template:

- **3 submission links**, 1 per modality (standard DN, Industrial Doctorates, Joint Doctorates)
- **Associated partners register** in the tool like beneficiaries (with a validated or temporary PIC)
- **Scientific panel** and **keywords selection** (**MSCA keywords is available** on https://rea.ec.europa.eu/system/files/2021-10/MSCA%20Keywords.pdf)
- **Unit-cost budget table**

DN – proposal submission

DN specificities of Part B proposal template:

Part B1:

- Follows the **award criteria**
- **34 page-limit** (30 + table of contents and list of participating organisations)
- **Instructions** included in the template

Part B2:

- **Description of participants**
- **Letters of commitment**

Living guidelines on the responsible use of generative AI in research

When considering the use of generative artificial intelligence (AI) tools for the preparation of the proposal, it is imperative to exercise caution and careful consideration. The AI-generated content should be thoroughly reviewed and validated by the applicants to ensure its appropriateness and accuracy, as well as its compliance with intellectual property regulations. Applicants are fully responsible for the content of the proposal (even those parts produced by the AI tool) and must be transparent in disclosing which AI tools were used and how they were utilized.

Specifically, applicants are required to:

- **Verify the accuracy, validity, and appropriateness of the content and any citations generated by the AI tool and correct any errors or inconsistencies.**
- **Provide a list of sources used to generate content and citations, including those generated by the AI tool. Double-check citations to ensure they are accurate and properly referenced.**
- **Be conscious of the potential for plagiarism where the AI tool may have reproduced substantial text from other sources. Check the original sources to be sure you are not plagiarizing someone else's work.**
- **Acknowledge the limitations of the AI tool in the proposal preparation, including the potential for bias, errors, and gaps in knowledge.**

Portugal in Europe

https://research-and-innovation.ec.europa.eu/document/2b6cf7e5-36ac-41cb-aab5-0d32050143dc_en

Living guidelines on the responsible use of generative AI in research

GENERAL GUIDELINES | 20 March 2024

Living guidelines on the responsible use of generative AI in research

An ERA Forum stakeholders' document.

English (567.15 KB - PDF) Download

https://research-and-innovation.ec.europa.eu/document/2b6cf7e5-36ac-41cb-aab5-0d32050143dc_en

DN 2025 call
Budget, Modes & Planning

Call budget ~ **€598 m**

DN

Doctoral Networks

Participants implement a joint research programme

DN-ID

Doctoral Networks Industrial Doctorates

Doctoral training with the non-academic sector

DN-JD

Doctoral Networks Joint Doctorates

Doctoral programme to deliver joint degrees

Call Opening:	**28 May 2025**
Call Closure:	**25 November 2025**
Remote Allocation of proposals:	**December 2025**
Remote Evaluation phase:	**January 2026 – February 2026**
Central Panel Review:	**Early March 2026**
Launch Grant preparation:	**April 2026**
Grant agreement signature:	**July 2026**
Project starting dates:	**September 2026 – March 2027**

Europe
d Innovation Network

Award criteria

MSCA Doctoral Networks

DN – award criteria

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives	Contribution to structuring doctoral training at European level and strengthening European innovation capacity	Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology	Credibility of the measures to enhance the career perspectives of researchers and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
Quality and credibility of the training programme	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities	
Quality of the supervision	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	**30%**	**20%**

DN – award criteria

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives	Contribution to structuring doctoral training at European level and strengthening European innovation capacity	Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology	Credibility of the measures to enhance the career perspectives of researchers and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
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Quality of the supervision	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	**30%**	**20%**

1.1 *QUALITY AND PERTINENCE OF THE PROJECT'S RESEARCH AND INNOVATION OBJECTIVES (AND THE EXTENT TO WHICH THEY ARE AMBITIOUS AND GO BEYOND THE STATE OF THE ART)*.

REQUIRED SUB-HEADINGS:

- **Introduction, objectives and overview of the research programme.** It should be explained how the individual projects of the recruited researchers will be integrated into – and contribute to – the overall research programme. All proposals should also describe the research projects in the context of a doctoral training programme. Are the objectives measurable and verifiable? Are they realistically achievable?
- **Pertinence and innovative aspects of the research programme** (in light of the current state of the art and existing programmes / networks / doctoral research trainings). Describe how your project goes beyond the state-of-the-art, and the extent the proposed work is ambitious.

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

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OBJECTIVES

Specific	Measurable	Attainable	Relevant	Time-Bound
Make sure your goals are focused and identify a tangible outcome. Without the specifics, your goal runs the risk of being too vague to achieve. Being more specific helps you identify what you want to achieve. You should also identify what resources you are going to leverage to achieve success.	You should have some clear definition of success. This will help you to evaluate achievement and also progress. This component often answers how much or how many and highlights how you'll know you achieved your goal.	Your goal should be challenging, but still reasonable to achieve. Reflecting on this component can reveal any potential barriers that you may need to overcome to realize success. Outline the steps you're planning to take to achieve your goal.	This is about getting real with yourself and ensuring what you're trying to achieve is worthwhile to you. Determining if this is aligned to your values and if it is a priority focus for you. This helps you answer the why.	Every goal needs a target date, something that motivates you to really apply the focus and discipline necessary to achieve it. This answers when. It's important to set a realistic time frame to achieve your goal to ensure you don't get discouraged.

- Use SMART objectives that address the gaps in the state-of-the-art and correspond to the needs of training a new generation of researchers in Europe
- Show clearly, how individual doctoral projects contribute to overall objectives
- Scientific objectives should correspond to Work Packages (structured under 3.1)

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. The state-of-the-art and the overview of the action are appropriately reviewed and relevant. Recent concepts will be elaborated and verified, and the action has the potential to advance the state-of-the-art in the field. The specific objectives are clearly presented, and they are timely and pertinent. *2. The integration of the individual projects into the overall concept is credibly described; each project is in line with the objectives of the consortium and addresses its overarching investigation and research sub-questions.* *2. The specific research objectives are very ambitious, well defined - including clear, measurable means to verify their achievement - and are reflected in the proposed structure of work packages.* *3. Proposal, with very good innovation potential, is state-of-the art and promises a complementary approach to other European and non-European projects running on the same topic.* *4. The planned research is comprehensively formulated in four research work packages. The proposed methodology is convincingly detailed and strongly supported by various background studies, mostly carried out by the members of the participating teams.* *5. The objectives of the proposal are very clear and well defined with sufficient key performance indicators (KPIs) for proper verification and assessment.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. The level of ambition in the research objectives is uneven: most of the proposed research is a continuation of current research, and the innovative aspects are a small part of the proposal. *2. The state of the art in the fields of research that the proposal focuses on is not addressed in appropriate detail. Due to this, the proposal does not successfully justify advances in the state of the art in the research fields addressed.* *3. The logical structure of the Work Packages and their interconnection regarding the research workflow are not fully convincing.* *4. The state of the art is not convincing because the presented literature review and the gaps in the literature presented are insufficient.* *5. The scientific originality/innovation is not adequately demonstrated against similar research performed in other areas of the world.* *6. Key metrics associated with research objectives are not sufficiently described which may hinder the effective monitoring progress towards achievement.*

https://msca-net.eu/wp-content/uploads/2024/09/MSCANET_DN_handbook_2024.pdf

DN – proposal submission

Excellence

1.2 Soundness of the proposed methodology

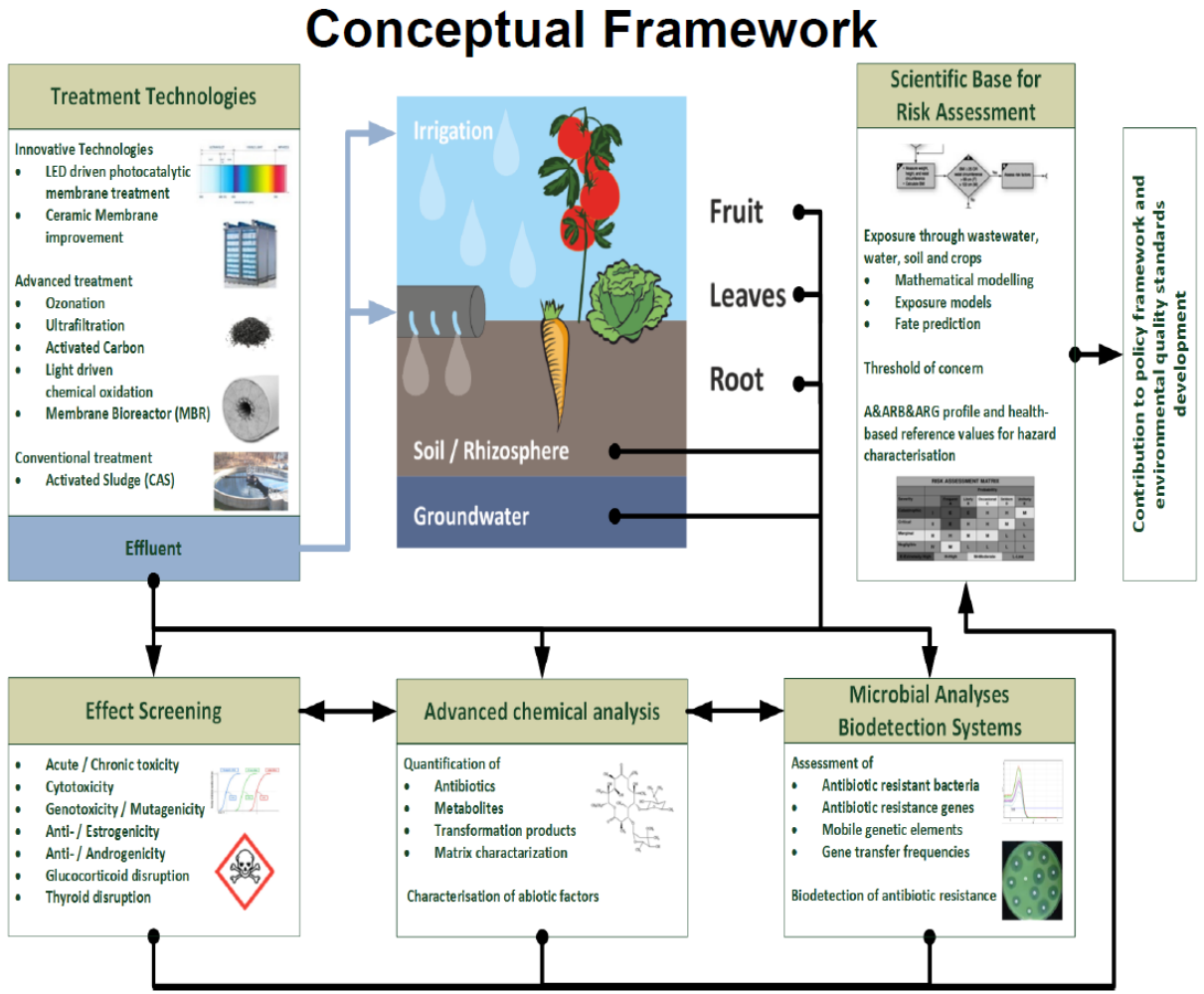
- Gender dimension and diversity aspects
- Open science practices
- *Research data management and management of other research outputs*

MSCA-NET

METHODOLOGY

- Explain the concepts, models and assumptions emerging from the state of the art
- Which techniques, methods, intruments will be used to achieve your scientific objectives
- **Explain multi-/interdisciplinary aspects**

- Identify any challenges: these will later be presented under risk assessment in section 3.1



Source: ANSWER ITN

GENDER ASPECTS

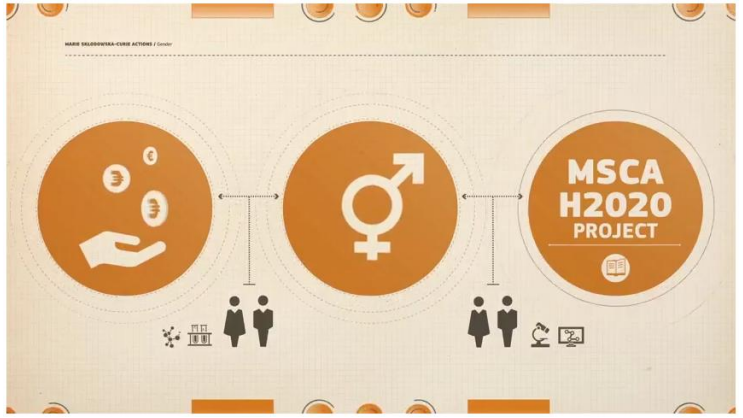
Definitions

Gender balance refers to share of different genders in a research team; NOT to be discussed here, but under 3.1.

Gender equality refers to equal treatment of men and women (for example by employers) – Gender equality plan is an eligibility criterion for public bodies, HE institutions and RES organisations.
NOT to be discussed here, but under 3.1.

Gender dimension and other diversity aspects in R&I content refers to the integration of sex and/or gender analysis through the entire R&I cycle, from the setting of research priorities through defining concepts, formulating research questions, developing methodologies, gathering and analysing sex/gender disaggregated data, to evaluating and reporting results and transferring them to markets into products and innovations which will benefit all citizens and promote gender equality. This has to be addressed under 1.2

- How to deal with gender issues in the proposal?
  - The MSCA-NET Policy Brief on Gender Equity provides an overview of the gender equality requirements under MSCA, guidance on the evaluation criteria, and how to approach the gender dimension of research when developing your proposal.
  - Describe how you are going to integrate gender dimension into your research – *or why you consider that this is not relevant for your research.*



Award criteria 1.2

MSCA-NET

OPEN SCIENCE PRACTICES

Definitions

Open Science is an approach based on open cooperative work and systematic sharing of knowledge and tools as early and widely as possible in the process.

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

For more information on how to address Open Science in project proposal, you can consult:

- OpenAIRE Guides for Researchers Open Science in Horizon Europe proposal.
- MSCA-NET Policy Brief: Open Science

Source: Meaningful Interactions Lab (mintlab)

Open Science Practice		Mandatory	Recommended
Early and open sharing of research	• Preregistration, registered reports, preprints, etc.		Yes
Research output management	• Data management plan (DMP)	Yes	
Ensure reproducibility of research outputs	• Information on outputs/tools/instruments and access to data/results for validation of publications	Yes	
Open access to research outputs through deposition in trusted repositories	• Open access to publications • Open access to data • Open access to software, models, algorithms, workflows etc.	Yes, for peer-reviewed publications and research data ('as open as possible as closed as necessary')	Yes, for other research outputs.
Participate in open peer-review	• Publish in open peer-reviewed journals or platforms		Yes
Involving all relevant knowledge actors	• Involve citizens, civil society, and end-users in co-creation of content (e.g., crowd-sourcing, etc.)		Yes

As a peer-reviewed publishing service you can also use Open Research Europe, the European Commission's open access publishing platform for scientific articles for Horizon 2020 and Horizon Europe.

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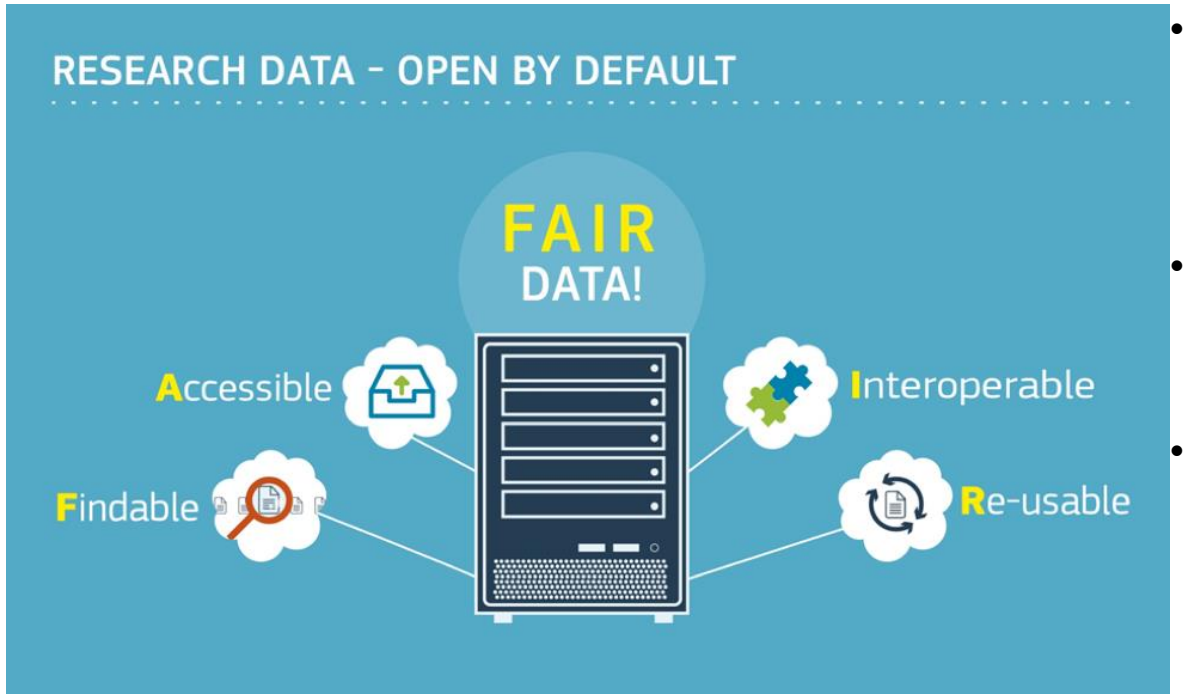
RESEARCH DATA MANAGEMENT



- Applicants generating/collecting data and/or other research outputs (except for publications) during the project must provide maximum 1 page on how the data will be managed in line with the FAIR principles (Findable, Accessible, Interoperable, Reusable)
- Proposals selected for funding under Horizon Europe will need to develop a detailed data management plan (DMP) – see 3.1
- HE programme guide is a good source of information and contains links to further information
- OpenAIRE has guides, factsheets, use cases, webinars, and a helpdesk for all Framework programme participants.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. The proposal is based on a rigorous, but flexible interdisciplinary methodology that is appropriate for the project objectives, given the complexity of the topic, the diversity of the partners from different countries involved and the multiplicity of the projects that individual researchers will undertake. *2. Open Science is well considered. A Research Data manager will support compliance with requirements for data generated in the project, that will be made available as open pre-prints and in an open repository. Data management will follow FAIR principles.* *3. The highly relevant gender dimension is well acknowledged and the plan on how to address it is outlined in detail.* *4. The proposal makes very clear that all members, be it doctoral candidates or supervisors, will be trained in diversity and gender aspects and on how to deal with these issues on the daily work.* *5. Quantitative and qualitative methods are well-justified in relation to the research aims. The balance between novel and established research methods is suitably explained.* *6. The research methodology is fully elaborated. It is sound and robust and will deliver results due to a deft combination of qualitative and quantitative methods. The concentration on selected methods, well known in science, is a correct strategy to proceed with this action. The correct distinction between methodology and research methods is a significant advantage.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. The methodological overview does not provide sufficient detail about how individual projects would achieve and verify their objectives. It is not sufficiently clear which approaches/theories would be used to answer each research (sub)question and how they would be implemented in each project. *2. Open Science practices are not fully substantiated. The specific expertise of supervisors in open science practices is not sufficiently evident.* *3. The integration of each individual project into the overall research programme is not sufficiently identified. The individual research projects do not sufficiently reflect the intentions of the proposal to obtain synergies from the multiple disciplines present in the overall programme.* *4. The testing of the technical robustness of AI-related elements is not sufficiently fully elaborated.* *5. Given the declared Industrial Doctorate modality, the role of the non-academic partners is not sufficiently described. The short description is generic and does not provide details of their role.*

https://msca-net.eu/wp-content/uploads/2024/09/MSCANET_DN_handbook_2024.pdf

1.3 QUALITY AND CREDIBILITY OF THE TRAINING PROGRAMME (INCLUDING TRANSFERABLE SKILLS, INTER/MULTIDISCIPLINARY, INTER-SECTORAL AND GENDER AS WELL AS OTHER DIVERSITY ASPECTS)
REQUIRED SUB-HEADINGS:

- **Overview and content structure of the doctoral training programme**, including network-wide training events and complementarity with those programmes offered locally at the participating organisations (please include table 1).
- **Role of non-academic sector in the training programme**.

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

	Main Training Events & Conferences	ECTS[5] (*if any*)	Lead Institution	Action Month (*estimated*)
1				
2				
3				
4				

DN – Award criteria 1.3

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

Inspiration:

- EU Principles for Innovative Doctoral Training
- Vitae Research Development Framework
- ResearchComp: European Competence Framework for Researchers

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TRAINING PROGRAMME

TRAINING

Specialized Training Courses that provide professional and personal development opportunities beyond what ESRs are generally exposed to in the course of their PhD training

Complementary/soft skills courses, such as writing and publishing research, preparation of research proposals and project management, entrepreneurship/commercial exploitation of research results, presentation skills, ethics, IPR, gender balance in research, etc.

Local Scientific Training Courses

Strong interaction with private sector (e.g. via ESRs' secondments)

Trainings are adapted to researcher's **specific needs** (**Personal Career Development Plan**, updated every year)

Source: ANSWER ITN

- Balance between
  - Individual training-through-research
  - Local doctoral programme
  - Network-wide training
- And
  - Scientific training
  - Transferable skills training
  - Inter-sectoral exposure

EXAMPLE – Network wide training events

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Table 1.2b Main Network-Wide Training Events, Conferences and Contribution of Beneficiaries

([C] Compulsory Attendance; [E] Elective)

	Main Training Events & Conferences	ECTS	Lead Institution	Project Month
1	Kick-off Meeting (includes Introduction to OOC, Research Integrity, Gender/Sex in Research/ Open Science)[C]		TCD	6
2	Tumor histology[E]		TCD	6
3	Antibody technology in cancer research and therapy[E]		TCD	6
4	Animal models in cancer research and drug discovery[E]		TCD	6
5	Whole body imaging in xenograft cancer models[E]		TCD	6
6	Drug discovery & medicinal chemistry[E]		UNISI	6
7	Biomarker discovery[E]		UVEG	6
8	Cancer cell metabolism[E]		Seahorse	12
9	Training in mitochondrial and cellular respiratory physiology[E]		Oroboros	12
10	Generic skills in communicating science[C]		QUB	18
11	Fluorescence and electron microscopy imaging of cells[E]		Andor	18
12	Computational Biology[E]		QUB	18
13	Year 1 Meeting[C]		QUB	18
14	Outreach event for OOC patient/advocacy groups[C]		QUB	18
15	NMR Mini Boot Camp of BioBank Analyses and Metabolomic Transformation in Cancer[E]		TCD	24
16	Analytical techniques in glycobiology[E]		NIBRT	24
17	Project management targeted to industrial needs[C]		NIBRT	24
18	Innovation Academy & Career Development Workshop (includes Gender Issues, WiseR)[C]	30	TCD/QUB	24, 30, 36
19	Year 2 Meeting		TCD	30
20	TRACT Marie Sklodowska-Curie ITN Open Day/Exploit			
21	Closing Symposium[C]			

'Animal Models in Cancer Research and Drug Discovery' (Organiser: TCD; **Duration:** 2 days**):** This event will include four lectures on the use of animals in cancer research: xenograft, transgenic, gene-targeted and CRISPR generated cancer models and the technologies that have been developed to evaluate and analyse tumour status. Students will gain hands-on-experience, of benefit for subsequent training events (see below). TBSI is equipped with a state-of-the-art transgenic facility, *in vivo* animal imaging capabilities (with multiphoton intravital microscope), histology suite, MoFlo 4-Color High Performance Cell Sorter and an 800 MHz NMR spectrometer.

'Whole Body Imaging in Xenograft Cancer Models' (Organiser: TCD; **Duration:** 2 days**):** *In vivo* live imaging of tumour xenografts has become a key technology to understanding cancer development and metastasis and in the evaluation of cancer therapeutic drugs. Students will have the opportunity to carry out imaging of xenograft animals, and evaluate and quantitate the growth over time. This course will also be open to wider research community.

EXAMPLE – Network wide training events

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Table 1.2 b Main Network-Wide Training Events, Conferences and Contribution of Beneficiaries

	Main Training Events & Conferences	ECTS (*if any*)	Lead Institution	Project Month (*estimated*)
Technical Training				
1	VHDL design/implementation in FPGAs (1 week)		UNIPI	9
2	Effective parallel programming in modern C++ (2 days)		SDS	10
3	HLS (High Level Synthesis, 3 days)		ICCS	11
4	Designing in FPGA SoCs e.g. Zynq (1 week)		ICCS	11
5	Course on MRF (3 days)		IMAGO7	36
6	Technology in space applications, with reference to ASI and ESA research activities (2 days)		KI	46
Schools				
1	GPU programming school (2 days)		SDS	22
2	School at Fermilab (2 students/year, 2 months)		UNIPI	18,30,42
3	CMS detector upgrade school (1 week)		UNIPI	33
4	MAX Design flow and OpenSPL programming (3 days)		MAX	24, 34
Administrative and Management Trainings, transferable skills				
1	Italian language courses (2-months lessons)		UNIPI	When in Pisa
2	SixSigma Quality Management		GEGR-E	27
3	PHD+, technology transfer		UNIPI	36-38
4	TRIZ Problem Solving Tool		GEGR-E	39
Scientific Contribution in Conferences/Workshops				
1	PUMA Workshops		All	11,19,26,37,48
2	Contributions to Hipeac CSW		SDS	19,31,43
3	1 IMAGO7 event		IMAGO7	14
4	FTK workshops @CERN		UNIPI	17, 29, 41
5	Special Session Organization at Conferences/Workshops		ICCS	1/year

EXAMPLE – Network wide training events

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Table 1.2 b Main Network-Wide Training Events, Conferences and Contribution of Beneficiaries

#	Main Training Events & Conferences (OBLIGATORY FOR ALL ACTIVE ESRs)	ECTS	Lead Benef	Month
1	**Kick-Off Meeting and Initial Training Days – RADEF, University of Jyväskylä (FI):** *[including researchers, supervisors, scientists in charge and related industrial partners]* It will be organized at RADEF part of the University of Jyväskylä and will set and share the training goals of the RADSAGA network. Almost all the researchers will be recruited at that stage. Presentations of the individual research projects will be made by the supervisors, while the researchers will make poster presentations. The event will be preceding or following the Jyväskylä summer school, thus allowing the ESRs to participate. Visits of RADEF test facilities and electronic laboratories will be organized, with concrete lab demonstrations. It will be followed by blocked technical and scientific training courses, such as "Radiation Safety" or "Electron, photon and Ion Beam Based Methods in Materials Science" as well as a presentation by Industry related to the "challenges for electronic components in radiation environments".	5	JYU	10
2	**Initial Training – University of Montpellier 2 (FR)** Organized as RADFAC event, this meeting allows the RADSAGA ESRs not only to meet the RADECS community to give an overview about their on-going thesis project, to exchange ideas and recommendations, but at the same time also exchanging ideas with other European PhD students active in the field of radiation to electronics. It will be preceded or followed by a blocked general training course on "Radiation Effects on Electronics" including also practical training on tools relevant for the network (*e.g.* TCAD), as well as an environmental training course delivered by a RADSAGA external SME company (TRAD) specialized in radiation testing.	5	UM2	12

Table 1.2 c List of scientific and technical trainings
(selection of what is available, obligatory courses underlined and bold)

#	Training	Knowledge gained	Institute	ECTS
1	IC Design software	Cadence-based full custom design: (i) setting up an initial Cadence environment; (ii) doing a Cadence design; (iii) full custom layout and verification	KUL	2
2	Analogue IC design	Study of different building blocks for analogue circuits with special focus on the integration of Op-Amps, filters (time continuous and switched-capacitor) and the integration of AD and DA converters.	KUL	6
3	Digital IC design	Deepen the knowledge about digital integrated circuit design. The common thread throughout the course is the optimisation of digital circuits in view of the energy versus performance trade off.	KUL	3
4	Reliability and Yield for Micro- and Nano-electronic Components	Basic concepts, tools and methods used in the field of reliability and main failure mechanisms that are important in integrated electronic components, both at the level of the integrated circuit and of the packaging and microsystems. The role and the impact of defects in semiconductor technology are emphasized.	KUL	3
5	METIS code	METIS is a software code for prediction of radiation effects in electronic devices.	AGIF	1
6	**Industr. experience in EEE and rad.engineering**	Lecture about methodologies, constraints and challenges linked to the development and implementation of electronic control and power systems in industrial applications.	ADS	1

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. Network-wide events are adequate and will significantly boost the main doctoral training programme, improving research efficiency, employability and career prospects of researchers. *2. Non-academic partners play an very meaningful role in the training through secondments, allowing them to feed into the research design and offer intersectoral work experience, which is convincingly described.* *3. The transfer of knowledge is credible because the DCs precisely specify the acquired skills and knowledge which will be crucial to reach the proposal aims.* *4. The doctoral training programme, which efficiently combines training through research, local training, and network wide training, is very well described in ample details and is sound. The training of the supervisors in diversity, integrity and ethics and the commitment of the DCs to master/undergraduate supervision are very good ideas.* *5. Very promising twice-monthly on-line lectures are planned to regularly cover project-related training and topics, and to support subject matter training as well as transferable skills and gender/diversity aspects.* *6. Secondments are well planned to ensure both types of mobility, international and inter-sectoral. Host, supervisor, timing, length and purpose for each secondment are indicated.*

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. The proposal does not provide sufficient details on the course content (e.g. ECTS). *2. It is not sufficiently clear why the selected non-academic organisations are suited to each research project.* *3.The integration of the individual researchers' projects into the overall research and doctoral training programme is not fully elaborated.* *4. Some of the secondments are relatively short (only one month) and it is not fully plausible that they will be meaningful for the recruited researchers.* *5. The local training is not clearly described in a way to show clear benefits to the research project and to the doctoral programmes for each doctoral candidate. There is a great discrepancy in quality of local and network-wide training.* *6. The complementarity between the doctoral network training and the existent local PhD training programmes is not convincingly demonstrated.* *7. The training programme does not sufficiently go beyond conventional training methods.*

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1.4 QUALITY OF THE SUPERVISION (INCLUDING MANDATORY JOINT SUPERVISION FOR INDUSTRIAL AND JOINT DOCTORATE PROJECTS) REQUIRED SUB-HEADINGS:

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

The role and scientific profile of the supervisors should only be listed in the "Participating Organisations" tables in section 6.

Refer to the Charter and Code & Guidelines for MSCA supervision

SUPERVISION

Supervision

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

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

- Ensure it is very clear who will supervise each doctoral candidate
- In case of ID and JD, explain the arrangements for joint supervision, and the synergy
- Explain the supervision experience of each supervisor
- Ensure there are adequate monitoring and feedback mechanisms in place
- Think in advance about conflict resolution

PI	Expertise & Publications	Supervision Experience & Leadership Roles	ESR
Prof. Jose Bagan, MD, DDS, PhD (UVEG)	Oral medicine and pathology, discovery of novel biomarkers for treatment of OSCC; 326 publications	43 PhDs completed; 3 PhDs in progress; Head of Stomatology and Maxillofacial Surgery; Coordinator of Doctoral Programme in Clinical Dentistry; Director of research and teaching at University General Hospital in Valencia; Director of the School of Doctoral Programmes for UVEG	1, 3
Prof. Richard Kennedy, MB, BAO, Bch, BSc, PhD, FRCP (QUB)	Medical oncology and drug discovery, 90 publications	10 PhDs completed; 6 PhDs and 4 clinical fellows in progress; Director for undergraduate academic training in medicine	2, 4

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. The quality of the supervision is very high, having a carefully balanced set of experts in the different areas of the proposal. The qualifications of the supervisors on the proposal topic are extensively described and are of very good quality. The supervisors possess a high level of research experience and a very good track record, very good international collaboration, and a high level of experience in supervising and training at an advanced level. *2. Measures are in place to ensure appropriate support and review procedures, as well as the necessary feedback mechanisms. The plan to brief all supervisors on the Guidelines for MSCA supervision at the beginning of the project ensures a consistent approach and quality among all partners.* *3. Supervision arrangements are overall appropriate to support DCs and provide progress and review procedures. Beneficiaries not entitled to award PhDs will be supported with a co-supervision and partnership with universities. DCs will maintain regular contact with supervisors through regular visits, additional to secondments, to monitor and discuss their progress.* *4. The quality of the proposed supervision measures is very high. The joint supervision arrangements are convincingly described, with biweekly formal meetings involving the two supervisors. Furthermore, supervision training and common good practices will be addressed at the kick-off meeting.* *5. A fruitful structure is included for the co-supervisions of doctoral projects, with at least one supervisor being a member of a different node, to offer a distinctive view on the research and to foster new collaborations.* *6. In addition to the Thesis Board, the Supervision Agreement and Career Development Plans provide useful guidance to students. Also, the inclusion of a mentor outside of the supervisory team provides additional support to doctoral students.*

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. Given the high complexity of the activity and the planned co-supervision, the proposed review, evaluation procedures, project reports to relevant boards, feedback mechanisms and means of working among the advisory team are insufficiently detailed. *2. The allocation of researchers to supervisors is not efficiently balanced and some supervisors are overloaded.* *3. The proposal does not sufficiently explain which structures (meetings, internal reports) will be adopted by the supervisors to follow the progress of the DCs towards scientific and training goals.* *4. Supervision arrangements and division of responsibilities between the main- and co-supervisors are insufficiently detailed.* *5. Some aspects of the joint-supervision are not detailed. For instance, the progress monitoring aspect and the time commitment of supervisors, are not sufficiently elaborated.*

https://msca-net.eu/wp-content/uploads/2023/09/MSCANET_DN2023_final.pdf

DN – award criteria

Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives	Contribution to structuring doctoral training at European level and strengthening European innovation capacity	Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology	Credibility of the measures to enhance the career perspectives of researchers and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
Quality and credibility of the training programme	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities	
Quality of the supervision	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	**30%**	**20%**

2. IMPACT

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2.1 Contribution to structuring doctoral training at the European level and to strengthening European innovation capacity

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

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

2.4 The magnitude and importance of the project’s contribution to the expected scientific, societal and economic impacts

2.1 CONTRIBUTION TO STRUCTURING DOCTORAL TRAINING AT THE EUROPEAN LEVEL AND TO STRENGTHENING EUROPEAN INNOVATION CAPACITY, INCLUDING THE POTENTIAL FOR:

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a) **meaningful contribution of the non-academic sector to the doctoral training**, as appropriate to the implementation mode and research field

- Demonstrate how the exposure of ALL the fellows to the non-academic sector is meaningful, i.e. it has sufficient duration and content to ensure:
  - a) the employability of the trained fellows in the non-academic sector and
  - b) excellence and impact of the research training.
- Explain how the contribution of your non-academic sector participants to this particular programme is essential to improving inter-sectoral collaboration in research training in this area.

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b) **developing sustainable elements of doctoral programmes**

- A key policy goal in this area is overcoming differences/ fragmentation in doctoral training across Europe – bringing a degree of consistency, as described in the Erasmus Mundus Joint Doctorate Handbook
- The harmonisation of institutional processes involved in developing joint degrees will help to bring consistency to the doctoral experience across Europe
- Explain how your EJD will help with developing the consistency of the doctoral experience – unified selection, recruitment, monitoring, awarding processes etc.
- Explain how you will continue the joint degree process in the consortium after the JD is over

You can add the two following sub-headlines:

c) **contribution to structuring doctoral/ early-stage research training at the European level**

- There are two agreed set of ‘rules’ for doctoral/ research programme elements: Salzburg II Recommendations & Principles for Innovative Doctoral Training, which derives from the Salzburg II Recommendations
- Explain how your programme adheres to those ‘rules’ – i.e. take the seven Principles for Innovative Doctoral Training and explain how your DN incorporates each of those Principles
- Explain how your programme will help the further development and spreading of best practice in European collaborative research training programmes
- Describe how you will continue the programme after the DN is over e.g. seeking further funding or at a minimum informally continuing the collaboration

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d) **strengthening European innovation capacity**

- Explain how the research programme and the doctoral candidate's work (including dissemination/ exploitation/communication/ outreach activities) will contribute to Europe's economy and/ or society
- Explain how the research and training programme will help bringing ideas to market. The role of the participants from the non-academic sector in this respect should be described, either in terms of research commercialisation, training in entrepreneurship/ tech transfer to the fellows, etc.
- Expand on link to EU research/ policy goals
- If your programme builds on an existing DN, COST Action or other funded project, explain how it does so, making it very clear that you are proposing to go beyond the work already funded by those projects
- Could your research contribute to the development of a new European Standard? If yes, describe this briefly here and explain the details in Section 2.3 under 'Exploitation'

EXAMPLE – Contribution of the non-academic sector to the training and contribution to structuring doctoral training at the European level

Contribution of the non-academic sector to the doctoral/research training

Non-academic partners will provide **state of the art training in drug design, biomarker discovery, exosome analysis, metabolism and therapeutics**. To achieve the ambitious objectives, all the ESRs will be seconded to SME/industry companies relevant to their chosen project across Europe for minimum periods of 3 months for intensive training in advanced technologies and research areas central to the theme. The SME/industry partners have been specifically identified as leaders in their field in terms of both technology and its application to cancer research and their involvement is essential for a full and integrated training program for the ESRs. will also **provide very useful networks of contacts to the researchers employed on the network grant for their future careers**. The specific capabilities of each SME/industry partner are incorporated into the programme overview. A potential impact of the close collaboration between the academic and non-academic partners may be the development of joint PhD programmes in future and also the exchange of other researchers between the sectors.

Structuring training across Europe

The programme has been designed with close reference to the EU Principles for Innovative Doctoral Training[32] and it is expected that the programme will contribute to the mainstreaming of a multidisciplinary, intersectoral, structured approach to doctoral training in the host institutions and beyond. will provide evidence of the benefit of a multidisciplinary, intersectoral approach to PhD training to support changes in curriculum in the participating beneficiaries. will also demonstrate that formal links between academic and industry partners in the design of multidisciplinary structured doctoral programmes at a European level are an invaluable resource in the training of future ESRs. A number of PIs in the academic beneficiaries are already responsible for doctoral curriculum design. For example, was the Co-ordinator of the cancer stream of the very successful PhD programme 'Molecular and Cellular Mechanisms underlying inflammatory processes' in (2011-2015). ( ) is Co-ordinator of the structured doctoral programme in Dentistry and is Director of the School of Doctoral Programmes for the entire .
The consortium also plans to interact with current and future related and research actions funded by the Commission, as described below

EXAMPLE – Contribution to strengthening European innovation capacity

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2.2.2 *Strengthening European innovation capacity*

will strengthen European innovation capacity specifically in terms of contributions to European capabilities for cancer diagnostics and therapeutics for OOC. **Patentable and commercially exploitable discoveries relevant to OOC are expected to arise from the project**, including new diagnostic kits (swab-based genotyping) for diagnosis and therapy monitoring, and novel therapeutics. Despite efforts to screen for and pre-operatively select OAC patients for potentially curative surgery, the five-year survival rate in early stage disease is only 25-35%. The incidence of OAC in men has also risen 50% in the last 25 years[33]. This is due to late diagnosis of disease and resistance to chemotherapy. In order to identify novel therapeutic agents and improve outcomes for OOC patients, there is an urgent need to discover biomarkers for early detection of the disease and to better understand the molecular basis of metabolic transformation and drug resistance in OOC. The ambitious goal set by the 'Commission Communication on Action Against Cancer: European Partnership' is to reduce cancer incidence by 15% by 2020[34]. will contribute to this goal by early diagnosis and improved therapy of OOC. **Therapeutic benefits from the research programme are promising since a number of molecular drug targets and potential biomarkers have already been identified by pilot experiments** (see section 1.1.4).

There will also be more general impacts in terms of training researchers to deliver innovation in basic and applied research and bringing together European academics and industrialists. will contribute to delivering on the commitments of the Europe 2020 Flagship Initiative - Innovation Union,[35] in particular by **promoting excellence in education and skills development** through the proposed doctoral training programme. It will contribute to establishing Europe as a world-class science performer by generating a talent pool of internationally mobile researchers in the field of cancer research, an area of enormous significance to Europe, both societally and economically. The highly-talented cohort of researchers with international and intersectoral experience will greatly enhance the capacity of Europe to address the enormous challenge of cancer diagnosis and therapy. will also contribute to **removing the obstacles to innovation by addressing the skills shortage and the "knowledge gap" between academic researchers and the commercial world.** The project will contribute to a framework to deliver on the commitment to revolutionise how the public and private sectors work together by promoting the flow of researchers and expertise between the sectors.

Through the project, existing links between academia and industry will be strengthened and new links forged. This will not only open up broader career paths for the ESRs, but will also **drive more rapid, more effective translation of research findings into products** that will enhance cancer diagnosis and management, and will **deliver growth in revenue and employment** for European SMEs in the life sciences.

has the capacity to progress innovative multiplex companion diagnostics, with the inclusion of OOC genetic signatures, to the market. For example, partner organisation has developed a microarray-based gene signature test for stage II colon cancer recurrence which was launched on the market by as GeneFX colon and a number of additional tests for breast, ovarian and prostate cancer are in development pipeline.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. The proposed structure of double doctorates in topics of cutting-edge research, with the exposure to varied expertise required to reach a common goal, contributes significantly to the strength of this proposal in terms of its impact in structuring doctoral training at the European level. *2. The proposed programme would contribute to the development of sustainable elements of doctoral programmes at the European level, having a structuring impact on doctoral training (incorporated in individual universities' school programmes) in language variation and change.* *3. The commitment of a large number of non-academic and prestigious academic European organisations provides a substantial effect on the doctoral training and ensures a new generation of specialists. The network may act, consequently, as a model for structuring doctoral training.* *4. The project will have a positive impact not only on the involved ESRs, but also on the local PhD schools as several planned activities will be open also for PhD students not participating in the project.* *5. The doctoral training is very well suited to prepare both academic and professional figures strongly requested by the sector. The involvement of all partners (academic and non-academic) is convincingly described, which boosts the credibility of the proposed contribution in terms of innovative capacity. The non-academic sector contributes considerably to the doctoral/research training and can significantly benefit from the successful results of the project.* *6. The project contributes to the structuring of doctoral training as demonstrated by: defining best practices, easy transferability of credits, curriculum development, setting of reproducible training standards and supervision standards as presented in Double Doctorate Degree Agreements.* *7. The training activities will result in online material (lecture notes, online courses) that will be beneficial to the community in the longer term, both at the scientific level and on the topic of gender and diversity in science through contributions of the social-science partners.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. Though there are a number of potentially valuable research actions planned, the proposal does not adequately address the pathways and mechanisms through which it will contribute to making Europe more innovative. *2. The proposal's focus on industry is limited, with low potential to bridge the gap between academia and well-known companies in the field.* *3. The impact of the non-academic secondments on developing synergies and required sustainable knowledge and skills is not sufficiently justified considering their duration.* *4. The contribution to strengthening European innovation capacity is not adequately described. The proposal does not clearly identify how effective interactions and exchanges with the wider sector, policy makers and other relevant stakeholders are foreseen.* *5. The contribution of the proposal to structuring European doctoral training is insufficiently described. For instance, activities to formally develop training elements and make them available at the European level are not sufficiently foreseen in the proposal.*

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- **Explain the impact of the research and training on the fellows' careers**
- Describe the potential employment sectors that the doctoral candidates might end up working in. Consider both academic and non-academic career opportunities.
- Present an analysis of how the elements of the programme will make them employable in these sectors, e.g.:
  - Research Training
  - Transferable Skills Training
  - Secondments and/ or other opportunities for exposure to other organisations (e.g. networking opportunities)
  - Communication/ Dissemination/ Public Engagement/ Exploitation activities

2.2 CREDIBILITY OF THE MEASURES TO ENHANCE THE CAREER PERSPECTIVES AND EMPLOYABILITY OF RESEARCHERS AND CONTRIBUTION TO THEIR SKILLS DEVELOPMENT

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- Do not repeat how these skills will be delivered, instead focus on the impact of the skills on the doctoral candidate's employability
- Make a strong link between your programme's elements, the EU policies about researcher careers/ employability, and any sectoral policies referring to a skill gap in the relevant sector.

EXAMPLE – Skills needed and obtained

Career	Skills	
	Core set	**Complementary set**
Clinical practice	hearing sciences + impairment; hearing devices; speech and language processing; communication skills; experience of clinical challenges facing practitioners and patients	basic programming; basic signal processing in hearing devices; basic knowledge of speech technology
Engineer in the specialist communication aid industry	strong programming; human-computer interaction; interpersonal skills; experience of clinical challenges facing practitioners and patients	general knowledge of speech synthesis; some knowledge of signal processing
Academic/clinical research (hearing science)	hearing sciences; speech perception; speaking effort and styles; communication skills; research methods; statistics; some experience of clinical challenges facing practitioners and patients	moderate programming; general knowledge of signal processing techniques; basic knowledge of speech technology
Engineer in the specialist hearing aid industry	signal processing; embedded systems; experience of clinical challenges facing practitioners and patients; fundamentals of hearing-device provision and hearing science	communication skills; good programming; basic knowledge of medical product regulations (CE marking); basic knowledge of speech synthesis
Spoken language technology engineer	exceptional programming; signal processing; machine learning; speech synthesis	communication skills; general knowledge of hearing science; awareness of clinical challenges facing practitioners and patients
Academic research (engineering)	strong programming; signal processing and/or machine learning; communication skills	general knowledge of hearing science; awareness of clinical challenges facing practitioners and patients

Figure 3.1a: The initial career profile templates. The core set covers essential skills that are needed to gain employment in that sector, whereas the complementary set describes additional skills that will set ESRs above graduates from other PhD training programmes. All ESRs will also develop their creativity and innovation skills.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. The impact of the research and training on the doctoral candidates' careers is very good and clearly identified. Researchers will be provided with skills in responsible research ethics, practical engineering experience and innovation through industrial partners, and teaching skills. *2. The proposal describes well the impact on the researchers' career. It adds evident and credible values by enhancing their cross-sectoral and interdisciplinary skills in the research field. This will have a great impact on the researchers' future career perspectives and employment.* *3. Actions such as training on CV writing and job interviews and the use of Talent Development Suite created within the EURAXESS project will enhance DCs career perspectives and employability.* *4. The organisation of two job fairs is an original and effective measure contributing significantly to the employability of the doctoral candidates* *5. The proposed measures will evidently enhance the researcher's future employability. A dedicated career workshop scheduled during the final year will help doctoral candidates start their professional careers.* *6. The strategy to enhance the doctoral candidates' career prospects by attending conferences, meetings, and seminars, both local and international, will expose the doctoral candidates to future recruiters from academic, industry, and commercial sectors.* *7. The acquired multidisciplinary skills will allow the DCs to contribute to other fields of innovative precision medicine, in the private sector, in the academic field or in regulatory affairs. Pointing the doctoral candidates to the Marie Curie Alumni Association is a good way to expand even further the horizons of the doctoral candidates, both science-wise and career-wise.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. There is no detailed strategy for improving development and career perspectives. The enhancement of career perspectives of researchers is limited to a list of general skills acquired in the doctoral programme. *2. While recapitulating qualities of the doctoral training, the proposal does not explicitly address how exactly these qualities will translate into better career prospects and employment opportunities.* *3. The description on the impact on the doctoral candidates' careers is generic and it does not make a satisfactory specific case to demonstrate how the proposed research and training will have this impact, thus reducing its credibility.* *4. The added value for the doctoral candidates' career development is not appropriately described. The potential impact of the project on the career perspectives of DCs is explained in general terms, without specific details on scientific competencies and potential researcher profile that will be developed on an individual basis.* *5. Despite the convincing contribution of the project to the improvement of transferable and non-academic skills of the doctoral candidates, very little emphasis is given to improving their methodological skills.*

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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
- Strategy for the management of intellectual property, foreseen protection measures

- **Plan for the dissemination and exploitation activities, including communication activities:**
  - Describe the planned measures to maximise the impact of your project by providing a first version of your '**plan for the dissemination and exploitation including communication activities**'.
  - 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.

THE MAIN DIFFERENCES BETWEEN COMMUNICATION AND DISSEMINATION

Dissemination and exploitation

- About results only
- When results are available and after the end of the project
- Potential professionals that may use the results in their own work
- Enable use and uptake of results
- Publications, conference presentations…

Communication and public engagement

- About the project and results
- Starts at the beginning of the project
- Multiple audiences
- Inform and reach out to society, show the benefits of research
- General media, social media, different type of events, popular science publications

Dissemination and Public Engagement

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Scientific dissemination activities:

- Journal publications
- Conferences/workshops
- Book Chapters
- Publication in Scientific Newsletters
- Patents
- Seminar talks
- Scientific talks

Dissemination tools/materials:

- Website
- Social media
- Newsletters
- Brochure
- Flyers

Public engagement activities:

- Press articles
- Visits to schools/universities
- Radio/TV talks
- Visit to end-users/public
- Video/audio clips
- Café Scientifique
- Open/Info Days
- Science Festivals/weeks

Source: ANSWER ITN project

Protection of the intellectual property (IPR)!

Further internal research	• The results coming out of the project can be applied to further research in the field and beyond
Collaborative research	• The results can be used for building/contributing to collaborative research projects
Product development	• Results can be used for developing or contributing to a product, process, technique, design, etc.
Standardisation activities	• Results could be used to develop new standardization activities or contribute to ongoing work
Spin – offs	• A separate company will could be established as a result of the research results
Engagement with communities/end users/policymakers	• Describe the activities to ensure that relevant societal actors will benefit from your project. For example, results will be used in policy briefings to impact on policy

- **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.
  - Where relevant, remember that the results can and should be widely disseminated AFTER IP protection has taken place. Seek advice from your Technology Transfer Office on these matters.
  - Outline plans to exploit any IP/ commercial potential arising from the programme. Briefly describe the role of any Technology Transfer Office or similar in helping you to commercialize the results.
  - Remember that this is the Impact section.
  - Describe the potential impact of exploiting the commercial potential of the research results.

European IP Helpdesk - a first-line intellectual property service providing free-of-charge support to help European SMEs and beneficiaries of EU-funded research projects manage their IP in the context of transnational business or EU research and innovation programmes.

EXAMPLE – Communication activities

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Quality of the proposed measures to communicate the project activities to different target audiences

Communication and public engagement strategy of the project: This has been developed with a number of key audiences in mind, including cancer patients, future PhD candidates and the general public. Involvement of the ESRs in communication and public engagement is central to the strategy - all ESRs will be involved in a minimum of two outreach activities per year. The aim will be to raise public awareness of cancer research and more generally increase public engagement with and understanding of science, as well as developing ESRs' understanding of public interest and science-related priorities. The impact of the outreach activities for both the public and ESRs will be assessed by a number of methods, including questionnaires and interviews.

Web-based outreach activities: A project website will be created as the central online dissemination tool. ESRs will regularly contribute content to the site, as well as contribute to a six-monthly e-newsletter aimed at informing the general public about OOC and about the project findings in particular. A Wikipedia page will also be created and maintained by the ESRs. Social media accounts (Facebook, Twitter) will be created and maintained by ESRs and each will contribute to regular blog posts giving an update on their research and training activities. The impact of these activities in raising awareness will be measured by numbers of hits to the website, and reach of the social media accounts. To measure the impact on increased engagement metrics will include numbers of retweets, comments and replies.

Media: Networks within the Communications Offices of all partners will be leveraged to establish a project presence in the popular media. For example, a press release will be issued at the project kick-off. Where publications are likely to attract wider public interest, authors will work closely with Communications Offices to maximise coverage in the popular media. Many investigators already have a proven track record in public engagement. For example, ( ) currently has a weekly slot with a national broadcaster. This impact will be measured by numbers of media articles and radio/television spots.

Outreach to OCC patient groups: The research programme is of particular relevance to OCC sufferers, their families and friends. Each year, hosts an information day for members of the Oesophageal Patient Association and the Oesophageal Cancer Fund. ( ) will chair an outreach session at this information day (M18), where all ESRs will present their research to a lay audience. This session will educate the public about the existence of European projects to improve OOC diagnosis and treatment, while also offering ESRs with an opportunity to engage with those who may benefit from their work, potentially inspiring a deeper interest in the field of cancer research. In addition, ESRs based at will have the opportunity to engage with the public through the Forum - ESRs will give lab tours and talks to members of the Forum in order to promote greater public understanding and involvement in cancer research.

Outreach to secondary school students: Inspiring the next-generation of PhD candidates requires early exposure of cutting-edge science. All the host beneficiaries will be involved in outreach programmes to secondary school students. For example, currently the School of Biochemistry & Immunology, , run a 'transition year' programme where secondary school students (15-16 years old) spend a week in laboratories within Each secondary school student spends time participating in scientific activities and group activities with talks, quizzes and visits to other scientifically relevant sites on the campus. Similar schemes will be set up by other beneficiaries. Impact of these outreach activities will be measured through questionnaires distributed to students before and after the events.

***Science Gallery and related global network*:** is fortunate to have direct access to the world-leading based in . Since 2008, the has attracted more than 1.9 million visitors to 34 exhibitions, ranging in theme from contagion to the future of fashion. It has recently partnered with Google to establish a global network of science galleries, modelled on the approach to engaging young people in science. will engage in debates and information events run by the . have considerable experience in measuring impact of science communication activities.

EU Researchers' Nights and other local events: Where possible, ESRs will participate in on-going initiatives run by the beneficiaries. For example, ESRs will participate in EU Researchers' Nights, such as those hosted by and . Live links between , and the other beneficiaries will allow all ESRs to participate in both Nights. led by the , was awarded funding to host an 'EU Researchers' Night' event in 2014 and 2015. The event had over 7,000 attendees each year and features a wide range of interactive and hands-on activities for the general public that aim to challenge perceptions held by the general public about researchers, to promote research as an exciting career option, to demonstrate creativity and innovation in research across all disciplines and to show that researchers are dynamic contributors to society. It is anticipated that the event will continue to be held annually. Marie-Skłodowska Curie Fellows are central to the organisation of this event, and ESRs recruited to at will organise events, present their research and have representation on the Steering Committee for future EU Researchers' Nights. Similarly, is partner in the Researchers' Night , and every year in September, organizes a number of initiatives dedicated to young researchers , in which ESRs based at will participate. Impact assessment through qualitative and quantitative measures is a key deliverable of Researchers' Nights and ESRs will contribute to this.

***Marie Sklodowska-Curie Open Day*:** All ESRs will organise and participate in the Open Day (M36), helping them develop project management and event organisation skills. Attendees will include the general public and other interested lay audiences, such as patient group representatives. The event will include presentations from the ESRs on their research results, as well as open question sessions. The aim of the Open Day is to communicate the project findings and give ESRs an opportunity to develop communication skills. Impact will be measured through numbers of attendees and quality of discussions.

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. Quantitative descriptors to assess the effectiveness of the dissemination and communication activities to maximise their outcomes and impacts are appropriately considered. *2. The dissemination and exploitation plans are very well anticipated and highly efficient. Detailed meaningful measures are in place to maximise impact both in academia and in the industrial sector. DC commitments to these plans are marked and sound. The concept and the role of the Impact Board, which relies on the experience of the senior researchers, are very good ideas.* *3. The strategy for public engagement has high quality. It makes good use of social media and public events and will include the production of videos for a wide non-technical audience, a measure with the potential to significantly increase impact of the project.* *4. The proposed dissemination and exploitation plan is pertinent. It is well structured under four groups of objectives, properly identifying key messages, activities, performance indicators and relevant target groups (including academia, industry, policy makers, civil society organisations, students, and general public).* *5. The proposed exploitation strategy is well addressed. It includes detailed plan for patenting, IP right handling and technology transfer to industrial partners inside and outside the consortium.* *6. Exploitation of the results is very well addressed. The exploitation plan links the outcomes of the project with policymakers, industry, and society, through policy recommendations and advice.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. A communication strategy specifically defined to reach the general public has not been sufficiently addressed. *2. The proposal is unconvincing on how the researchers will be trained to maximise their ability to communicate to a non expert audience.* *3. Although possible exploitation routes are outlined, the proposal lacks details related to the expected resources, coordination mechanisms of individual organisations, and level of involvement of senior staff in the possible exploitation pathways of the project results.* *4. Dissemination measures are not innovative and are limited to standard methods (publications, website with blog, twitter).* *5. A clear strategy of exploitation was not adequately organised for the results which refer to guidelines, recommendation and policy inputs. The market potential is not sufficiently described.* *6. Proposal does not sufficiently elaborate potential for exploitation of the research data obtained, in terms of plans for future protection, concrete collaboration with targeted industry, and possible commercialisation of research findings.* *7. The dissemination plan is overly ambitious regarding the number of papers to be published given the probable IPR constraints.*

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Impact

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

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

2.4 THE MAGNITUDE AND IMPORTANCE OF THE PROJECT'S CONTRIBUTION TO THE EXPECTED SCIENTIFIC, SOCIETAL AND ECONOMIC IMPACTS (PROJECT'S PATHWAYS TOWARDS IMPACT)

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- 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.
- 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 CO_2 emissions, decreasing avoidable mortality, improving policies and decision-making, raising consumer awareness.

2.4 THE MAGNITUDE AND IMPORTANCE OF THE PROJECT'S CONTRIBUTION TO THE EXPECTED SCIENTIFIC, SOCIETAL AND ECONOMIC IMPACTS (PROJECT'S PATHWAYS TOWARDS IMPACT)

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- 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 impact. 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

DN – Award criteria 2.4

Required sub-headings:

- Provide a narrative explaining how the project's results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project. The narrative should include the components below, tailored to your project. Please justify and explain how the stated impacts are credible, relevant, and achievable.

➢ 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 CO_2 emissions, decreasing avoidable mortality, improving policies and decision-making, raising consumer awareness.

DN – Award criteria 2.4

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

Key impact pathways	
Scientific impact	1. Creating high-quality new knowledge 2. Strengthening human capital in research and innovation 3. Fostering diffusion of knowledge and open source
Societal impact	4. Addressing EU policy priorities and global challenges through research and innovation 5. Delivering benefits and impact through research and innovation missions 6. Strengthening the uptake of research and innovation in society
Towards technological/ economic impact	7. Generating innovation-based growth 8. Creating more and better jobs 9. Leveraging investment in research and innovation

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. Economic impacts are reported with great clarity and fully depict the contribution to technological advancements. The project will result in many useful deliverables and policy recommendations for relevant stakeholders. *2. The expected scientific results and their impacts outlined in the proposal are important from local to global scale, and the results have a high potential to have impacts beyond the project.* *3. The proposal has the potential to deeply impact both academic and policy sectors by providing human capital and expert knowledge in the cutting-edge field of informality and precarity that is of interest to governmental, NGO, business and scientific stakeholders.* *4. The interdisciplinary approach, including elements of theory, modeling, software development, and implementation into different applications, has a strong potential to generate significant impact on both science and economy, as discussed by various meaningful examples.* *5.The economic impact will be important because the relationship between the academic sector and the industrial sector will contribute to the development of technological tools.* *6. Economic impacts are reported with great clarity and fully depict the contribution to technological advancements. The project will result in many useful deliverables and policy recommendations for relevant stakeholders.* *7. Societal impacts have been thoroughly explained in accordance to UN SDG targets and measurable, relevant and feasible KPIs have been identified.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. Although the proposal addresses the expected societal and economic impacts in a good way, how the project's results will make a difference in terms of impact beyond the immediate scope and duration of the project is not sufficiently demonstrated. *2. The contribution of the project to the scientific, societal and economic impacts are not sufficiently quantified with KPIs.* *3. The claimed economic and societal impacts are overstated in the proposal and it is unrealistic to expect their achievement within the timeframe of the action. For example, there is a very long way to practical industrial applications from developing computational prediction methodologies in projects of this size and scope.* *4. The importance of the project's contribution to the expected scientific, societal and economic impacts are only generally addressed and insufficiently substantiated. For instance, quantified indicators are not clearly outlined.* *5. The investigated fields are so divergent that the societal and economic impact of the whole proposal is seemingly overestimated.* *6. The project's prospective influence on policy-drafting is unclear, as the proposal is not explicit enough about communication with policymakers.*

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Excellence	Impact	Quality and efficiency of the implementation
Quality and pertinence of the project's research and innovation objectives	Contribution to structuring doctoral training at European level and strengthening European innovation capacity	Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages
Soundness of the proposed methodology	Credibility of the measures to enhance the career perspectives of researchers and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
Quality and credibility of the training programme	Suitability and quality of the measures to maximise expected outcomes and impacts as set out in the dissemination and exploitation plan, including communication activities	
Quality of the supervision	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts	
50%	**30%**	**20%**

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Quality and efficiency of the implementation

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

- Management structures not assessed anymore
- Risk management at consortium level
- Gender aspects (both at the level of recruitment and that of decision-making within the action)
- Environmental aspects in light of the **MSCA Green Charter**

3.1 QUALITY AND EFFECTIVENESS OF THE WORK PLAN, ASSESSMENT OF RISKS AND APPROPRIATENESS OF THE EFFORT ASSIGNED TO WORK PACKAGES

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- ✓Work Packages description (table)
- ✓List of major deliverables (table) including the awarding of doctoral degrees, where applicable (also after the end of the action)
- ✓List of major milestones (table)
- ✓Fellow's individual projects (table) including secondment plan

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

Definition: A work package is defined as a major subdivision of the proposed action

Table 3.1 b Description of Work Packages

WP Number		
WP Title	*(e.g. including Research, Training, Management, Communication and Dissemination…)*	
Objectives		
Description of Work and Role of Specific Beneficiaries / Associated partners *(possibly broken down into tasks), indicating lead participant and role of other participating organisations* *Deliverables linked to each WP are listed in Table 3.1c (no need to repeat the information here).*		

Example

EXAMPLE – Work package

Table 3.1 a Work Package Descriptions

Work Package Number	1	6-42
Work Package Title	Biomarker Discovery (research/training)	
Lead Beneficiary	UVEG (Jose Bagan)	
Objectives (A) To train ESRs in state of the art techniques related to biomarker discovery, (B) To identify novel panels of biomarkers for OOC, (C) To pursue an avenue of translational research utilising identified biomarkers as therapeutic targets, (D) To identify potential molecules for IP protection and patenting		
Description of Work and Role of Beneficiaries/Partners **Task 1.1. (Lead:** UVEG; **Participants:** TCD, NIBRT; **ESR 1). Identify differences in salivary glycan profiles in different disease stages of OSCC.** TCD will provide expertise in inflammatory markers analysis using flow cytometry and other immune assays. NIBRT will provide expertise in glycan analysis, ranging from isolation of salivary protein glycans through to glycan structural identification using liquid chromatography and mass spectrometry technologies. **Task 1.2. (Lead:** QUB; **Participants:** Almac Diagnostics and TCD; **ESR 2). Develop integromic biomarkers capable of predicting response to chemotherapy in early stage OAC.** QUB together with Almac will analyse whole genome sequencing, methylation and microarray data aiding in biomarker discovery. TCD will functionally analyse the underlying biology of predictive classifiers. **Task 1.3. (Lead:** UVEG; **Participants:** IME-SP; **ESR 3). Develop a diagnostic test based on salivary inflammatory markers as a predictor of an OSCC patient's response to radiotherapy.** IME-SP will utilise the Mesoscale discovery platform to determine the inflammatory cytokine profile of patient samples.		
Deliverables 1.1 Report on correlation of salivary inflammatory & glycan markers with stages of OSCC (M24) 1.2 Report on correlation of salivary marker level with tumour control in radiotherapy patients (M24) 1.3 Report on identification of molecular signatures predictive of response to chemotherapy (M24) 1.4 Report on retrospective validation of resultant predictive classifiers (M36) 1.5 Awarding of PhD degree to ESRs 1-3 (M48)		

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Deliverable: a distinct output of the action (e.g. report, document, technical diagram, software, etc.)

numbering convention: <WP number>.<number of deliverable within that WP>

Examples

D1.2: Consortium Agreement (here 2nd deliverable of WP 1)

D2.3: Report on Project Publications

D4.1: Report on Summer School 1

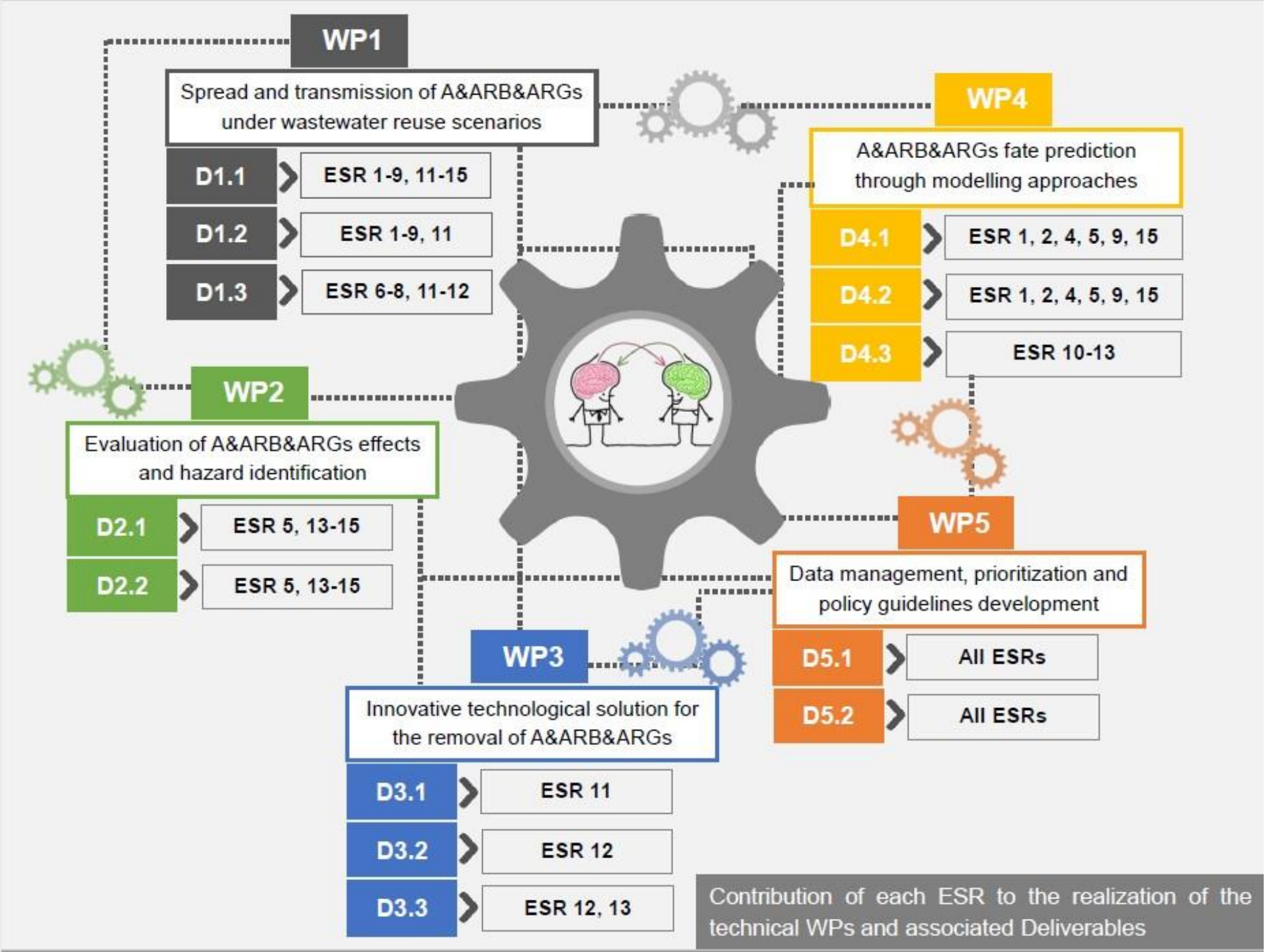
Scientific Deliverables						
Deliverable Number[10]	Deliverable Title	WP No.	Lead Beneficiary Short Name	Type[11]	Dissemination Level[12]	Due Date
Management, Training, Recruitment[13] and Dissemination Deliverables						
Deliverable Number	Deliverable Title	WP No.	Lead Beneficiary Short Name	Type	Dissemination Level	Due Date

Not to comple

***Type: R** = Report; **ADM** = Administrative (website completion, recruitment completion, etc.);*
***PDE** = dissemination/exploitation; **OTHER** = Other including coordination*

Dissemination level: PU = Public, CO = Confidential, CI = Classified

***Recruitment Deliverables:** Including overall recruitment (e.g. advertising vacancies), Researcher Declarations on Conformity, Career development Plan, etc.*



Contribution of each ESR to the realization of the technical WPs and associated Deliverables

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Source: ANSWER ITN project

EXAMPLE – Deliverables list

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List of major deliverables including the awarding of doctoral degrees

Table 3.1 b Deliverables List

Number	Delivery Title	Work Package #	Lead Beneficiary	Type	Dissemination Level	Delivery Month
D6.1	Web site and social media interfaces available	WP6	CERN	ADM	PU	6
D5.1	Initial training event completed and evaluated in order to allow for future RADSAGA generalized training	WP5	KUL	OTHER	PU	12
D5.2	"Personal Training Plans" (PPPs) and updated "Personal Project Plans" (PPPs) agreed and on internal webserver	WP5	KUL	ADM	PU	14
D6.2	Feedback collected from public lecture and discussion tables and included in remaining outreach planning	WP6	CERN	OTHER	PU	16
D5.3	RADECS short-course developed, delivered and evaluated	WP5	KUL	OTHER	PU	24
D7.2	Mid-term review, risk assessment update and status report available	WP7	CERN	ADM	PU	24
D7.3	Technical status review of all ESR projects is provided	WP7	CERN	OTHER	PU	24
D4.1	Evaluation report of 14MeV test methodology	WP4	CERN	R	PU	28
D1.1	Compendium status report on European irradiation facilities	WP1	JYU	R	PU	30
D2.1	Status report on coupled effects and predictions tools	WP2	UM2	R	PU	30
D6.3	RADSAGA support material and presentations made available for High-School teacher training	WP6	CERN	PDE	PU	30
D1.2	Technical summary report on facility dosimetry procedures	WP1	JYU	R	PU	32
D2.2	Status report on coupled effects and predictions tools	WP2	UM2	R	PU	32
D1.3	Design status report and prototype of SRAM radiation monitor	WP1	JYU	R	PU	34
D2.3	Design status report of radiation tolerant CMOS imager	WP2	UM2	R	PU	34
D1.4	Documentation of test setups practical for mixed-facilities	WP1	JYU	R	PU	36

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The following deliverables will have to be submitted for grants awarded under this topic:

- **establishment of a supervisory board** of the network;
- **progress report** submitted within 30 days after one year from the starting date of the action;
- **mid-term meeting** organised between the participants and the granting authority;
- **mobility declaration** submitted within 20 days after the recruitment of each researcher and updated (if needed) via the Funding & Tenders Portal Continuous Reporting tool;

- **career development plan**: a document describing how the individual Career Development Plans have been established (listing also the researchers for whom such plans have been put in place), submitted before the mid-term meeting;
- **evaluation questionnaire** completed by each recruited researcher and submitted at the end of the research training activity; a follow-up questionnaire submitted two years later;
- **data management plan** submitted at mid-term and an update towards the end of the project if needed;
- **plan for the dissemination and exploitation of results**, including communication activities, submitted at mid-term and an update towards the end of the project.

MILESTONES

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Milestone: control point in the action that help to chart progress, e.g. completion of a key deliverable, intermediary points where corrective measures can be taken, a critical decision point for further development etc.

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

Examples

M 1.1: Test phase concluded

M 2.3: Map completed & published

Mandatory (added during GA preparation):

- Mid-Term meeting between REA and the consortium
- Recruitment process completed

Number	Title	Related Work Package(s)	Lead Beneficiary	Due Date	Means of Verification

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

Table 3.1f: Individual Research Projects

MSCA-NET

Fellow *(e.g. researcher1)*	Host institution	PhD enrolment*	Start date *(e.g. Month 6)*	Duration *(e.g. 36 months)*	Deliverables *(refer to numbers in table 3.1b)*
Project Title and Work Package(s) to which it is related:					
Objectives:					
Expected Results:					
Planned secondment(s): *Host, supervisor, timing, length and purpose*					
*** Enrolment in Doctoral degree(s):** **DN-JD specific:** institutions where the researcher will be enrolled to obtain a joint/double or multiple doctoral degree should be included **DN and DN-ID:** institution where the researcher will be enrolled to obtain a doctoral degree should be included					

Not complete

If possible & meaningful, in the other sector

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

- Network organisation, including financial management strategy, strategy for dealing with scientific misconduct
  - Describe the financial management strategy – resource planning and allocation of finances. Ensure it is clear that the financial resources are allocated transparently and efficiently across the consortium so that the money is linked to the delivery of the programme.
  - Strategy for dealing with Scientific Misconduct. What would you do if an doctoral candidate accused another of Falsification, Fabrication or Plagiarism? What processes are in place in the participants to deal with misconduct? State that the consortium will abide by the European Code of Conduct for Research Integrity. Note: do not overstress the likelihood of this risk by including it in the risk table.

MSCA-NET

- **Joint governing structure (including a steering board, mandatory for DN-ID and DN-JD actions)**
  - Explain decision making processes (e.g. majority rules) and conflict resolution strategy.
  - Describe the structures that will be put in place to oversee the doctoral programme and ensure quality control, making sure that the various administrative units across the participants with responsibility for doctoral programmes are working in a coherent and coordinated manner.
  - The Doctoral Studies Committee in the management structure could include a representative from the Graduate Studies Office or equivalent.
  - One issue to specifically address is that of mutual recognition – it is important that research training done at participant A is recognised by participant B for the purposes of earning a doctoral degree.

- **For DN-JD, joint admission, selection, supervision, monitoring and assessment procedures**
  - Admission, Selection, Supervision, Monitoring & Assessment should be coherent across the consortium. As far as possible, the same procedures should be applied to each doctoral candidate.
  - For example, in terms of monitoring, University A requires a yearly report, University B requires a quarterly report. Will the doctoral candidate have to do both?
  - For example, in terms of assessment: University A does a closed viva voce, University B does an open thesis defense. For a joint/ multiple degree, will the doctoral candidates have to do both?

MSCA-NET

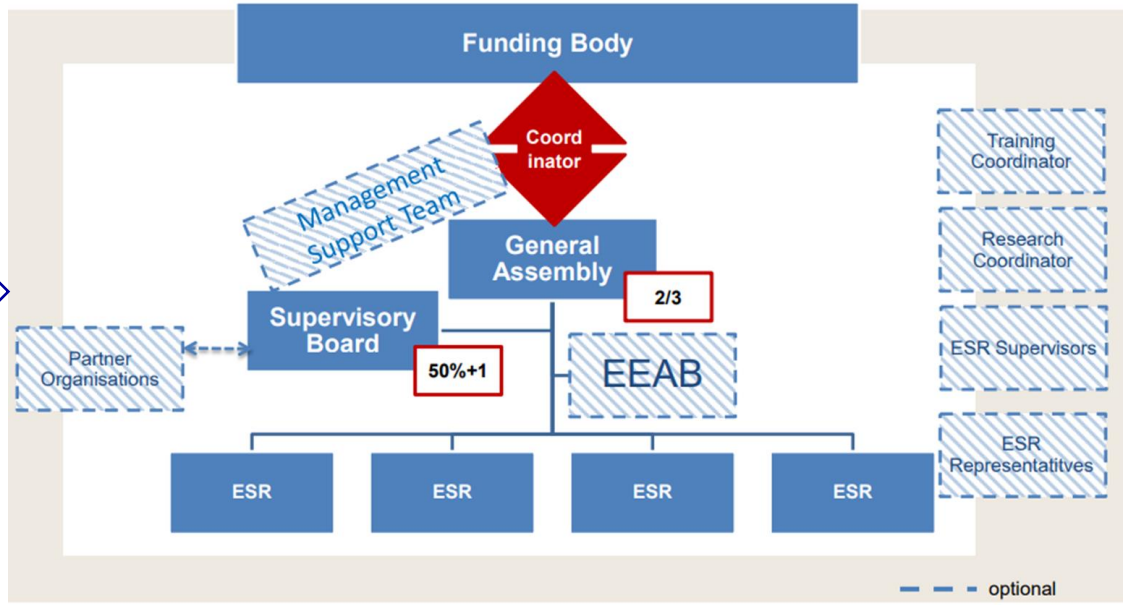
SUPERVISORY BOARD

A Supervisory Board is essential.

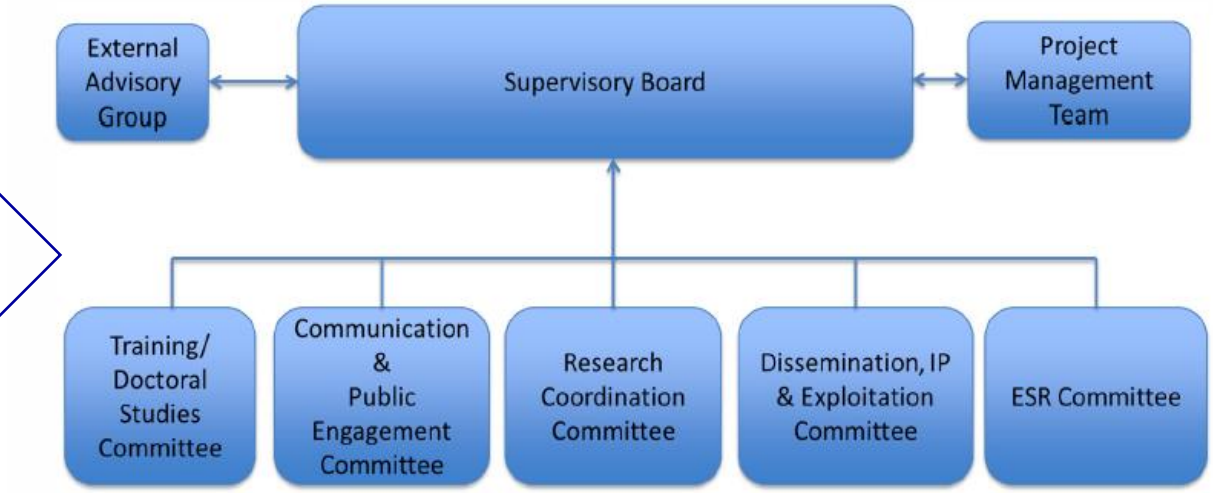
All beneficiaries and POs represented, plus at least one doctoral candidate representative (consider rotating representation among all doctoral candidates).

This is the main decision-making body

LERU Consortium Agreement Template: Governance structure



example



MSCA-NET

- **Recruitment strategy**

Centralised recruitment is best.

Describe the application process, applicant requirements, composition of selection committees, decision making/selection process.

Use EURAXESS Jobs and funding portal to advertise.

Explain employment conditions (employment contracts with full social security benefits are mandatory unless prevented by national legislation).

The following sections of the European Code of Conduct for the recruitment of the researchers refer specifically to recruitment and selection:

Recruitment

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

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

Selection

Selection committees should bring together diverse expertise and competences and should have an adequate gender balance and, where appropriate and feasible, include members from different sectors (academic and non-academic, and disciplines, including from other countries and with relevant experience to assess the candidate. Whenever possible, a wide range of selection practices should be used, such as external expert assessment and face-to-face interviews. Members of selection panels should be adequately trained.

Our Recruitment Strategy

MSCA-NET

Recruitment guidelines were prepared by the **project coordinator** and distributed among the **beneficiaries**

Establishment of three-member Selection/Evaluation Committees for each ESR position (partners from **academic** and **non-academic sector**)

Advertisements of the open positions were prepared and distributed **well in advance**

Skype interviews and **face-to-face interviews** were used during the selection process (in various cases University committees were formed for the selection)

Source: ANSWER ITN project

MSCA-NET

- **Progress monitoring and evaluation of individual projects**
  - Individual Projects: Link back to Supervision, particularly on monitoring of Personal Career Development Plans.
  - Focus on timings and structures here (individual SCs feedback back into oversight committee – Training/ Doctoral Studies Committee in the suggested management structure above).
  - Address the issue of overall quality assurance – will there be external review/monitoring of the DN by an independent panel/ external advisory group?

MSCA-NET

- **Risk management at consortium level**
  - Include a list incorporating research risks and project management risks. Describe practical mitigation and contingency plans for both.

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

A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives.
Level of likelihood to occur: Low/ medium/ high
The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.
Level of severity: Low/medium/high The relative seriousness of the risk and the significance of its effect.

EXAMPLE – Implementation risks

MSCA-NET

N.	Description of Risk	WP	Proposed mitigation measures
1	One participant is not able to full fill the plan of recruitment.	8	The remaining person months will be transferred to some other participants according to work plan needs.
2	One recruited researcher is not integrated in the hosting institution	8	The Training Committee will interact between the researcher and his/her supervisor. If solution is not found the Supervisory Board will offer the researcher the transfer to another host institution from the Network.
3	A partner may leave the consortium due to internal or external factors	8	The Supervisory Board will try to redistribute the pending research and training activities, and funding, between other Network members, and will offer the possibility to the hosted ESR to transfer to another member.
4	A milestone cannot be achieved	8	The Lead Beneficiary and the WP leader concerned have to decide about a prolongation of the task/activity time, as well as, proposing an adequate alternative milestone to the Supervisory Board.
5	Some conflicts appear along the Network, including IPR conflicts.	8	The Coordinator will intermediate between the parties. Should agreement not be reached, the conflict will be resolved by the Supervisory Board, in line with the recommendations of the EC and the Consortium Agreement.
6	Molecular recognition at high speed is not possible	2	Preliminary tests show the feasibility of this integration. Use of two pass-methods with different setting parameters will be essayed.
7	Sub-10 nm spatial resolution in dielectric composition mapping cannot be achieved	2	Preliminary calculations show the possibility to reach this spatial resolution. Use of insulated shielded probes to focus the dielectric signal can provide additional increase in spatial resolution.
8	Chemical modification of probes changes high speed performance.	3	Consortium experts in high speed AFM and probe fabrication develop jointly this task and will introduce other probe chemical functionalisations.
9	Sub-10 nm resolution in 3D doping density profiling cannot be reached.	4	Integration of the latest SMM technology and leading electronic device fabrication. Target shallow 3D tomographic doping reconstruction.
10	3D monitoring of nanoparticle cell uptake in living cells not possible.	5	3D detection in non-living cells have already been partially achieved and demonstrated. Use of partial cell fixation procedures.
11	Metrology development of validation techniques not possible.	6	Consortium experts with exceptional track records in quantitative measurement NPL offer training in uncertainty budget development.

- **Gender aspects** (both at the level of recruitment and that of decision-making within the action)
- **Environmental aspects** in light of the MSCA Green Charter

  - Describe the use of the Consortium Agreement and what that will cover – a good sample specifically for MSCA is available from the LERU website (https://www.leru.org/files/LERU-template-for-MSCA-ITNETN.pdf).
  - Where doctoral degrees in participating organisations require 4 years, if possible, do state where you will find the additional funds for the additional year: evaluators are specifically instructed by REA to reward this proactivity with extra points, and to not penalise proposals that don't.
  - Describe the internal communications strategy to keep the consortium and the doctoral candidates in regular contact e.g. intranet or other document repository, regular face-to-face and/or virtual meetings.

WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. The proposed deliverables are quite generic and limited in number, and their timing is not sufficiently well planned to allow for good progress monitoring. *2. The coherence and efficiency of the work plan is not convincingly demonstrated; the research tasks and their duration are not adequately described and allocation of resources to the activities is not sufficiently clear.* *3. There are some missing data regarding non-academic secondments' tasks, as some of the declared organisations are not contemplated in the work plan.* *4. The proposal does not satisfactorily elaborate on the time that will be dedicated by each supervisor, especially in view that some supervisors already have several PhD candidates.* *5. The scientific risk resulting from the strong interdependency of the work packages, as reflected in the tasks allocated to the doctoral candidates, has not been fully taken into account.* *6. There are some inconsistencies regarding the recruitment month of some doctoral candidates. It is not entirely clear how the latecomers would participate in certain work package activities.* *7. The risk management strategy insufficiently considers specific risks, for example risks related to the organization and coordination of scheduled activities or the risk of doctoral candidates deviating from the specified tasks.* *8. Some doctoral candidates participate in multiple work packages, implying the risk of a high workload, which is not sufficiently considered in the scientific risk assessment.* *9. Some secondment activities are too short, and only few researchers would gain industry experience. In addition, for industry secondments of 1 month their relevance for the researchers is inconclusive.*

https://msca-net.eu/wp-content/uploads/2024/09/MSCANET_DN_handbook_2024.pdf

DN – proposal submission

Quality and efficiency of the 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

- Operational capacity fully assessed under criterion 3.2

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

MSCA-NET

- Appropriateness of the infrastructure and capacity of each participating organisation, as outlined in Section 4 (Participating Organisations), in light of the tasks allocated to them in the action
- Consortium composition and exploitation of participating organisations' complementarities: explain the compatibility and coherence between the tasks attributed to each beneficiary/associated partner in the action, including in light of their experience
  - Show how this includes expertise in social sciences and humanities, open science practices, and gender aspects of R&I, as appropriate

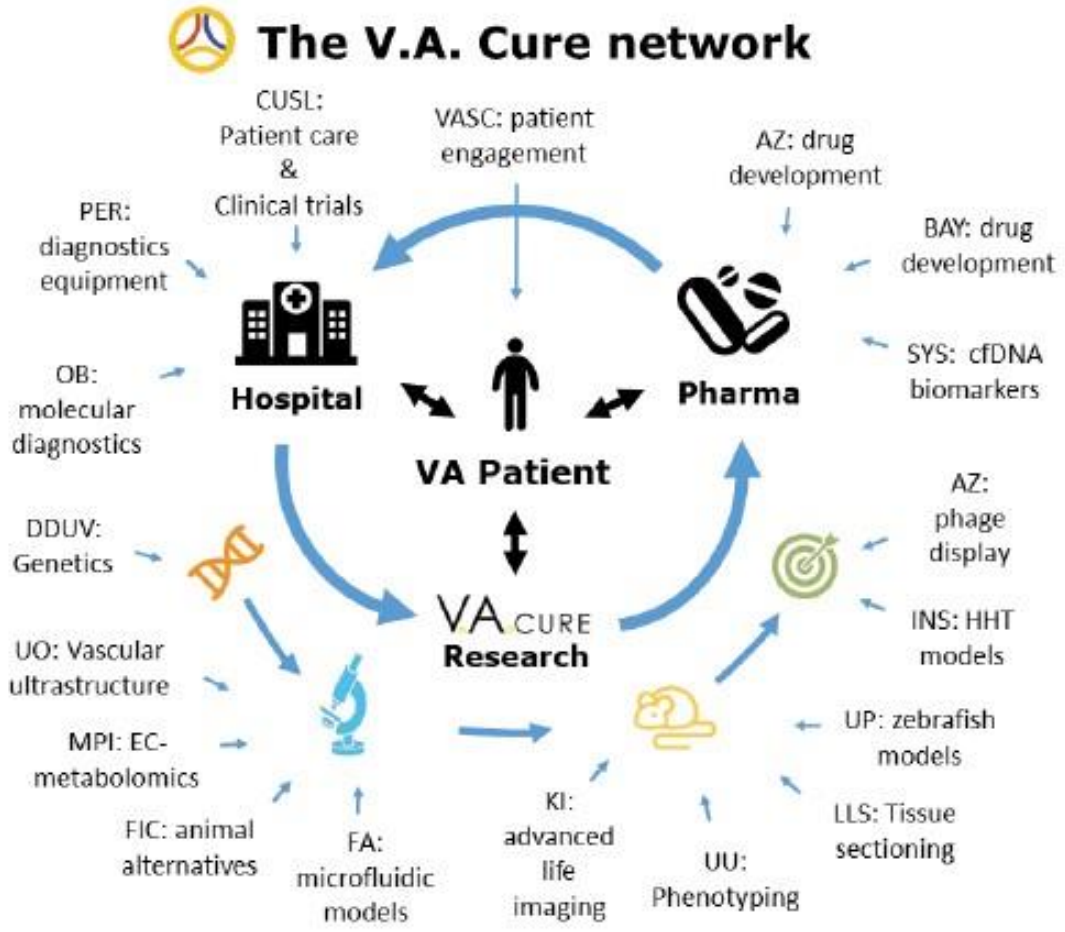
de Duve INSTITUTE

UCLouvain

V.A. Cure Network:

complementary contributions of all partners to the network.

8 universities, 7 companies, a hospital and a patient organisation



Connection to networks to show that the research is not isolated and will bring benefits to many people.

Vikkula © 2018

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

MSCA-NET

- Commitment of beneficiaries and associated partners to the programme
  - The role of associated partners and their active contribution to the research and training activities should be described
  - A letter of commitment shall also be provided in section 5 and must follow the template (included within the PDF file, but outside the page limit)

Funding of non-associated third countries (if applicable): explain in terms of the objectives of the action why such funding would be essential

STRENGTHS FROM THE EVALUATION SUMMARY REPORTS
1. All participating beneficiaries and associated partners have the required capacities to host the doctoral candidates, granting them access to all necessary office space, IT tools, software packages and (online) library access. *2. Parties with previous experiences with MSCA projects and administration of EU projects exist in the consortium that can ensure the smooth progression of this project* *3. Environmental aspects of the proposal, in terms of credible contribution of the research towards a quieter and greener transport system, are well specified in the light of the MSCA Green Charter.* *4. The different academic and non-academic participants convincingly bring together the necessary expertise to successfully pursue the interdisciplinary goals of the project; no redundancies between the participants are detected.* *5. The host institution offers appropriate hosting and administrative assistance which will facilitate the execution of the proposal.* *6. Hosting arrangements meet Euraxess standards and the division of labour involved in hosting is clearly defined.*
WEAKNESSES FROM THE EVALUATION SUMMARY REPORTS
1. Proposal lacks a sufficient description of hosting arrangements for the DCs. *2. The provided description of infrastructure for some of the participants does not sufficiently emphasize the infrastructures that are of relevance to the project.* *3. The large number of associated partners gives rise to possible imbalance and difficulty in managing the project.* *4. Insufficient information is provided on the time that will be committed by key persons from some of non-academic organizations.* *5. The participants' commitment to implement the data management plan is not clearly justified.*

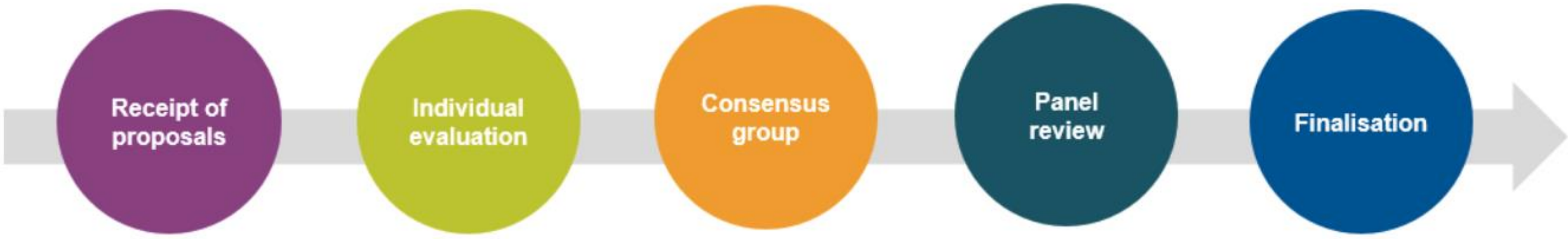
https://msca-net.eu/wp-content/uploads/2024/09/MSCANET_DN_handbook_2024.pdf

Evaluation

MSCA Doctoral Networks

DN – evaluation

Overview of the process



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**.

European Commission

DN – evaluation

Evaluation process

- use of external experts
- SEP platform
- Three evaluation criteria, scored out of 5, using decimals
- Overall threshold of 80% (cf. resubmissions in 2022)

- Establishment of **ranking lists**:
  - All modes assessed and ranked together under each scientific panel no more dedicated budget for Industrial Doctorates /Joint Doctorates

DN – evaluation

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

1. The proposals will be prioritized according to the scores they have been awarded for the criterion ‘Excellence’. When these scores are equal, priority will be based on scores for the criterion ‘Impact’.

2. If necessary, the gender balance among the supervisors named in the proposal will be used as a factor for prioritisation.

3. If a distinction still cannot be made, the panel may decide to further prioritiseby consideri ng other factors such as environmental considerations in line with the MSCA Green Charter, gender and other diversity aspects in the research activities, participation of the non-academic sector (including involvement of SMEs), geographical diversity 134 , international cooperation, favourableemployment and working conditions or relationship to the Horizon Europeobjec tives in general. These factors will be documented in the panel report.

Budget Structure

MSCA Doctoral Networks

MSCA **Doctoral Networks** – budget structure (2024 →)

Contributions for recruited researchers Per person-month					Institutional unit contributions Per person-month	
Living allowance	Mobility allowance	Family allowance (if applicable)	Long-term leave allowance (if applicable)	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect contribution
EUR 4010	EUR 710	EUR 660	EUR 4720 x % covered by the beneficiary	Requested unit[1] x (1/number of months)	EUR 1 600	EUR 1 200

CCC PT
93,7%
3757 euros

* Living allowance is adapted with the country correction coefficient listed in the WP EF= 1 coefficient for the country of the beneficiary (CCC PT= **93,7%**)

DN – budget structure

- **A living allowance** to cover personnel costs for the employment of researchers with full social security coverage.
- A **mobility allowance** to cover additional, private mobility-related costs, e.g. travel and accommodation costs.
- A **family allowance** to contribute to mobility-related costs of researchers with family obligations which **can be granted during the project**.
- **A long-term leave allowance** to cover personnel costs incurred by the beneficiaries in case of the researchers' leave, including maternity, paternity, parental, sick or special leave.
- **A special needs allowance** to contribute to the additional costs for the acquisition of special needs items and services for researchers with disabilities, e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs.

DN – “What is my net salary” ?

•**The values on the table are from the perspective of the MSCA budget**, that is, they corresponds to the costs of hiring from the employer's perspective.

•**A country correction coefficient is applied to the living allowance**, in the case of Portugal is 93,7%, which reduces the living allowance. But this has to cover not only the employee's tax obligations, but also those of the employer.

•**The mobility allowance and family allowance** will be included in the salary and **will also be subject to taxation**. No country correction coefficient here.

•Portuguese labor law foresees **14 salaries during the year**, the 12 months, plus Holiday allowance and Christmas allowance

•Portuguese labor law also foresees **end of contract indemnities**, that might decrease the monthly salary, but on the end of contract, the employee is compensated

•The **employer social security tax** is usually 23.75%

•**The employee social security tax** is usually 11%

•Your **income tax (IRS)** rate will vary depending on your household and other income you have.

Project Implementation

MSCA Doctoral Networks

DN – project implementation

Funding mechanism

- **1 person-month = 1 unit**
- **Reimbursement rate: 100%**
- **Different cost categories**

DN – project implementation

- Each beneficiary must recruit each eligible doctoral candidate under an **employment contract or equivalent direct contract** with full social security coverage.

- When an employment contract cannot be provided (due to national legislation), the beneficiary may exceptionally recruit the doctoral candidate under a **'fixed-amount fellowship'**. In this case, the living allowance will be halved and the beneficiary must ensure that the doctoral candidate enjoys minimum social security coverage .

- Each beneficiary **must pay the family and mobility allowances** to the recruited fellow.

- If a fellow has or acquires, the family allowance must be paid to him/her as well. **family obligations during the action duration** must be paid to him as well.

DN – project implementation

- **The long-term leave allowance** contributes to the personnel costs incurred by the beneficiaries in case of the researchers' leave, including maternity, paternity, parental, sick or special leave, longer than 30 consecutive days.

- **The special needs allowance** contributes to the additional costs for the acquisition of special needs items and services for researchers with disabilities.

► Both long-term leave and special needs allowances should be requested **when the need arises**.

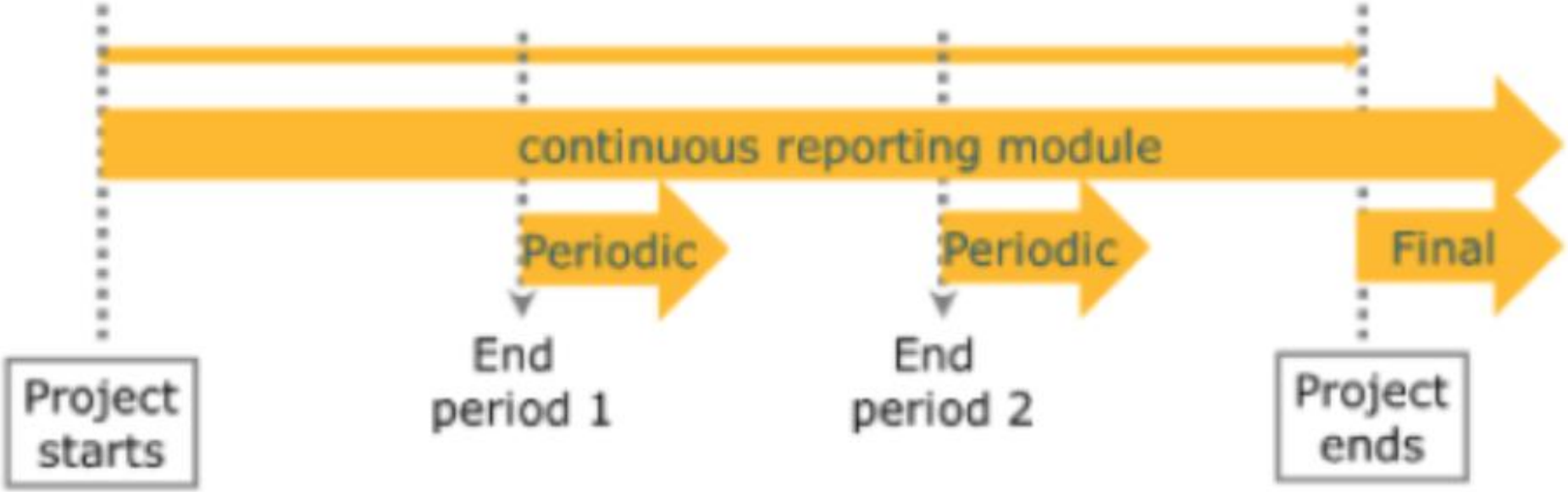
DN – project implementation

- The **research, training and networking contribution** should cover costs for training and networking activities research expenses, visa- related fees and travel expenses, additional costs arising from each secondment of six months or less, which require mobility from the place of residence (e.g. travel and accommodation costs).
- The **management and indirect contribution** should cover the beneficiary's additional costs in connection with the action (e.g. personnel costs for project management/coordination, indirect costs).
- Doctoral candidates should devote them on a **full-time basis** to the project.
- **Part-time** is allowed for personal or family reasons, with a prior agreement of the REA.

PF – project implementation

Reporting

- *Continuous reporting module*
- *Periodic reporting module*



DN – project implementation

Continuous reporting

• At the beginning of the project, the **Continuous Reporting Module** is activated and the coordinator can contribute to it on an ongoing basis. During the project, the coordinator is expected to provide regular updates on the status of the project.

• The continuous reporting includes:

- ✓**progress in achieving milestones**
- ✓**deliverables**
- ✓**updates to the publishable summary**
- ✓**response to critical risks, publications, communications activities,**
- ✓**Intellectual property Rights (IPRs)**
- ✓**programme-specific monitoring information (if required).**

DN – project implementation

Reports & payment requests

- **The Periodic Report/Final Report is the pre-condition for receiving payments**; it must be submitted electronically **within 60 days after the end of the reporting period**.
- The Report is divided into a technical and financial report.
- The **Technical Report consists of 2 parts**:
  - **Part A** contains structured tables with project information. It is automatically generated by the IT system and is based on the information entered into the Portal Continuous and Periodic Reporting modules.
  - **Part B** is a narrative description of the work carried out during the reporting period. Part B needs to be uploaded as PDF.

DN – project implementation

Reports & payment requests

- The **Financial Report** consists of the structured individual and consolidated Financial Statements (retrieved from the Grant Management System).
- **There is an automatic calculation of the costs in the Financial Statement based on the duration (in person months) in the Mobility Declarations** (costs are not editable).
- **Thus Mobility Declarations are the basis for IFS** (Individual financial Statement) and need to be updated in case of change (particularly before submission of periodic reports).

DN – project implementation

Reporting

The following deliverables will have to be submitted for grants awarded under this topic:

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

DN – project implementation

Reporting

The following deliverables will have to be submitted for grants awarded under this topic:

- **Evaluation questionnaire** completed by each recruited researcher and submitted at the end of the research training activity; a **Follow-up questionnaire** submitted two years later;
- **Data management plan** submitted at mid-term and an update towards the end of the project if needed;
- **Plan for the dissemination and exploitation of results, including communication activities**, submitted at mid-term and an update towards the end of the project.

DN – project implementation

Beneficiaries will also be requested to report on:

Project Pathway to impact:

1. **Results** (results, scientific publications, research datasets, IPRs resulting from the project, standards resulting from the project, other research outputs)

2. **Dissemination activities**

3. **Communication activities**

- **Impact** (technology readiness level of the project, impact on Sustainable Development Goals (SDGs), citizen engagement, etc.)

National Delegates / National Contact Points

Pillar 1
Excellent Science

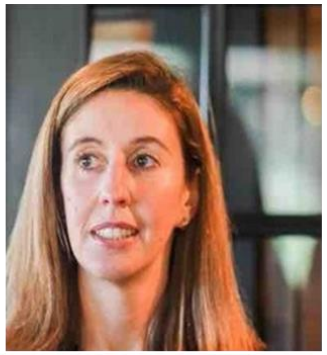
- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Rui Munhá (FCT)
rui.munha@fct.pt
(+351) 213 911 538

ERC & Widening

David Marçal (FCT)
david.marcal@fct.pt
(+351) 213 924 350

MSCA
ERC & Widening



Marta Abrantes (FCT)
marta.abrantes@fct.pt
(+351) 213 911 596

Research Infrastructures

Daniel Carapau (FCT)
daniel.carapau@fct.pt
(+351) 213 911 514

Research Infrastructures

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- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system

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