



The EU Framework Programme  
for Research and Innovation

# HORIZON 2020



## H2020 Programme

### Guide for Applicants

Marie Skłodowska-Curie Actions – Innovative Training Networks (ITN)

Version 3.1 – 2018  
27 October 2017

#### Disclaimer

This guide aims to support potential applicants to the ITN 2018 call. It is provided for information purposes only and is not intended to replace consultation of any applicable legal sources. Neither the European Commission nor the Research Executive Agency (or any person acting on their behalf) can be held responsible for the use made of this guidance document. Note that the guidance provided in the Annotated Model Grant Agreement shall prevail in case of discrepancies.



## History of changes

Version	Date	Change	Page
1.0 2016	15.10.2015	<ul style="list-style-type: none"> <li>Initial version (2016 call)</li> </ul>	
2.0 2017	15.10.2016	<ul style="list-style-type: none"> <li>Addition of the definition "Action"</li> <li>Addition of an example in the description of EJD</li> <li>Re-writing of the section "2.1 Beneficiaries" for clarification and addition of an example</li> <li>Addition of a clarification about refugees in the section "3.4 Conditions of mobility of researchers"</li> <li>Addition of a paragraph about open science in the section "4.1 Research and training activities"</li> <li>Clarifications about open access and open data in the section "4.4 Communication and dissemination"</li> <li>Addition of the "4.6 refugees" section</li> <li>Removal of section "5.7 Research costs at premises other than those of the beneficiary"</li> <li>Other minor corrections</li> <li>hyperlinks have been embedded in the text (where relevant)</li> </ul>	5 10-11 11 17 18 21 22 25
3.0 2018	12.10.2017	<ul style="list-style-type: none"> <li>Addition of the definition of "Entities with a legal or capital link" + clarification of "Non-Academic Sector"</li> <li>Clarification about institutions awarding doctoral degree in ETN that should be either beneficiaries or partner organisations</li> <li>Clarifications about EJD mode in section 1.2</li> <li>Added advice about partner organisations included in the consortium agreement and about the number of partner organisations</li> <li>Clarifications about the Non-Associated Third Countries and International Organisations participating</li> <li>Clarifications about recruitment in EJD mode</li> <li>Clarifications about the secondments</li> <li>Re-writing of the sections 4.4 and 4.5 about Dissemination, Communication and Public Engagement.</li> <li>Update of the key points (for EID)</li> <li>Updated instructions on completing part A</li> <li>Added a note on resubmission in annex 3</li> <li>Added a comment about the file size limit in annex 4</li> <li>Added a template of Institutional Commitment letter for EJD participants awarding a joint/double or multiple degree (annex 6)</li> <li>Updated the list of descriptors</li> <li>Other minor corrections</li> </ul>	6 9 9-10 13 16 17 21-22 23-24 28 36-37 37 40 58 59-76
3.1 2018	27.10.2017	<ul style="list-style-type: none"> <li>Addition of the Work Programme 2018-20 adoption references and links</li> <li>Adjustment of the wording based on the new EID rule (International Inter-sectoral secondments between beneficiaries)</li> </ul>	7, 31 13,18, 23



		<ul style="list-style-type: none"> <li>▪ Updated example for the descriptors selection</li> <li>▪ Other minor corrections</li> </ul>	60
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**Note:**

National Contact Points (**NCPs**) have been set up across Europe by the national governments to provide information and personalised support to H2020 applicants in their native language. The mission of the NCPs is to raise awareness, inform and advise on H2020 funding opportunities as well as to support potential applicants in the *preparation, submission and follow-up* of the grant applications. For details on the NCP in your country please consult the [National Contact Points page](#). Additionally, you may also consult the website of the [EU-funded Network of MSCA NCPs](#).

## **The Marie Skłodowska-Curie Actions in Horizon 2020**

**Call Identifier: H2020-MSCA-ITN-2018**  
**Closing Date: 17 January 2018 at 17:00:00**  
**(Brussels local time)**

The Marie Skłodowska-Curie actions (MSCA) aim to support the career development and training of researchers – with a focus on innovation skills – in all scientific disciplines through international and intersectoral mobility.

The MSCA are expected to finance around 65,000 researchers between 2014 and 2020, including 25,000 doctoral candidates. The actions will address several objectives of the Europe 2020 strategy, including the Innovation Union flagship initiative. This states that the EU will need at least one million new research jobs if it is to reach the target of spending 3% of EU GDP on research and development by 2020.

By funding excellent research and offering attractive working conditions, the MSCA offer high quality professional opportunities open to researchers of any age, nationality or discipline.

### **The 2018 Marie Skłodowska-Curie Actions are:**

- **Innovative Training Networks (ITN)**  
Innovative doctoral-level training providing a range of skills in order to maximise employability
- **Individual Fellowships (IF)**  
Support for experienced researchers undertaking mobility between countries, and also to the non-academic sector
- **Research and Innovation Staff Exchange (RISE)**  
International and intersectoral collaboration through the exchange of research and innovation staff
- **Co-funding of regional, national and international programmes (COFUND)**  
Co-financing high-quality fellowship or doctoral programmes with transnational mobility

The Coordination and Support Action **European Researchers' Night (NIGHT)**, funded under the MSCA, is a Europe-wide public event to stimulate interest in research careers, especially among young people.

Guides for Applicants for all of the MSCA can be found on the Participant Portal at:  
<http://ec.europa.eu/research/participants/portal>

The MSCA website can be found at:  
<http://ec.europa.eu/research/mariecurieactions/>

**This Guide is based on the rules and conditions contained in the legal documents relating to Horizon 2020 (in particular the Horizon 2020 Framework Programme and Specific Programme, the Rules for Participation, and the Work Programmes), all of which can be consulted via the Participant Portal.**

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### **Definitions used throughout this Guide:**

**Action:** under Horizon 2020, "action" refers to the specific project to be implemented by the beneficiaries.

**Early-Stage Researchers (ESRs)** must, at the date of recruitment by the beneficiary, be in the first four years (*full-time equivalent research experience*) of their research careers and have not been awarded a doctoral degree.

**Date of Recruitment** means the first day of the employment of the researcher for the purposes of the action (i.e. the starting date indicated in the employment contract or equivalent direct contract).

**Full-Time Equivalent Research Experience** is measured from the date when the researcher obtained the degree entitling him/her to embark on a doctorate (either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started or envisaged).

**Mobility Rule:** researchers 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 3 years immediately before the recruitment date. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status under the Geneva Convention<sup>1</sup> are not taken into account. For international European interest organisations or international organisations, recruited researchers must not have spent more than 12 months in the 3 years immediately before the recruitment date at the same appointing organisation.

**Academic Sector** means public or private higher education establishments awarding academic degrees, public or private non-profit research institutes whose primary mission is to pursue research, and international European interest organisations as they are defined in Article 2.1(12) of the Horizon 2020 Rules for Participation Regulation No. 1290/2013.

**Non-Academic Sector** means any socio-economic actor not included in the academic sector and fulfilling the requirements of the Horizon 2020 Rules for Participation Regulation No. 1290/2013. This includes all fields of future workplaces of researchers, from industry to business, government, civil society organisations, cultural institutions, etc.

**Member States (MS)** are member states of the European Union (EU), including their overseas departments.

**Associated Country (AC)** means a third country which is party to an international agreement with the Union, as identified in Article 7 of Regulation (EU) No 1291/2013. [http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cpart/h2020-hi-list-ac\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf)

**Non-Associated Third Countries (TC)** are countries which are neither EU Member States (MS) nor associated to Horizon 2020 (AC). Some TC are included in the list of countries eligible for funding, provided in the General Annex A to the Work Programme.

**Coordinator** is the beneficiary which is the central contact point for the Research Executive Agency (REA) and represents the consortium towards REA.

**Beneficiaries** are the legal entities that sign the Grant Agreement and have the responsibility for the proper implementation of the action. They contribute directly to the implementation of the research, transfer of knowledge and training activities by recruiting, supervising, hosting, training and seconding researchers.

**Partner Organisations** contribute to the implementation of the action, but do not sign the Grant Agreement. Partner organisations do not employ the researchers under the action.

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<sup>1</sup> 1951 Refugee Convention and the 1967 Protocol.  
Marie Skłodowska-Curie Actions, Guide for Applicants  
Innovative Training Networks 2018

**Entities with a legal or capital link** are organisations with an established relationship with the beneficiary which is not limited to the action nor specifically created for its implementation. These entities implement certain action tasks described in Annex 1 of the Grant Agreement, i.e. hosting and training of researchers. Such entities may not employ the researcher under the action. The involvement of such entities must be clearly described in the proposal and will be assessed as part of the evaluation. Such entities don't need to supply any letters of commitment but need to be included in the list of participants (part B1) and in the participating organisations table (part B2)

**MSCA Work Programme:** Part 3 of the Horizon 2020 Work Programme 2018-2020 ("Marie Skłodowska-Curie Actions"), European Commission Decision C(2017)7124 of 27 October 2017. Applicants should also refer to the Introduction and General Annexes.

**European Charter and Code for Researchers:** Commission Recommendation of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers, C(2005)576 of 11 March 2005.

**NB:** *Links to documents referred to in this Guide are provided in Annex 1*

# 1. General Aspects

## 1.1. Purpose

The specific objectives of the Marie Skłodowska-Curie Innovative Training Networks (ITN) are:<sup>2</sup>

- to train a new generation of creative, entrepreneurial and innovative early-stage researchers able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit;
- to raise excellence and structure research and doctoral training, extending the traditional academic research training setting, incorporating the elements of Open Science and equipping researchers with the right combination of research-related and transferable competences.
- to provide enhanced career perspectives in both the academic and non-academic sectors through international, interdisciplinary and inter-sectoral mobility combined with an innovation-oriented mind-set.

Institutions which are actively involved in research and (research) training (e.g. universities, public or private non-profit research institutes, large enterprises, SMEs, non-profit or charitable organisations, etc.) can propose a research training network and apply for funding. If selected they will cooperate to recruit researchers and provide them with opportunities to undertake research in the context of **a joint research training or doctoral programme**. These programmes should respond to well-identified multi- and inter-disciplinary needs in defined scientific or technological areas, **expose the researcher to the academic and non-academic sectors**, and offer a comprehensive set of **transferable skills** relevant for innovation and long-term employability (entrepreneurship, commercialisation of results, Intellectual Property Rights (IPR), communications etc.). Proposals should reflect existing or planned research cooperation among the participating organisations in which the researchers will take part through **individual, personalised research projects**.

## 1.2 Structure

ITN proposals may take one of three forms, each with different participation requirements:

- |  |
|--|
| <ol style="list-style-type: none"><li>1. European Training Networks (ETN)</li><li>2. European Industrial Doctorates (EID)</li><li>3. European Joint Doctorates (EJD)</li></ol> |
|--|

### ▪ European Training Networks (ETN)

The largest share of the ITN call budget is made available for ETN. These networks have the objective of training highly-skilled early-stage researchers and stimulating entrepreneurship, creativity and innovation in Europe. An ETN must be composed **of at least three beneficiaries established in at least three different MS or AC**. All three legal entities must be independent of each other.<sup>3</sup> Above this minimum, the

<sup>2</sup> See also *Principles for Innovative Doctoral Training*:

[http://ec.europa.eu/euraxess/pdf/research\\_policies/Principles\\_for\\_Innovative\\_Doctoral\\_Training.pdf](http://ec.europa.eu/euraxess/pdf/research_policies/Principles_for_Innovative_Doctoral_Training.pdf)

<sup>3</sup> As defined in Article 8 of Regulation (EU) No 1290/2013 of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006.

Marie Skłodowska-Curie Actions, Guide for Applicants  
Innovative Training Networks 2018



participation of other legal entities, including international European interest organisations and entities from TC, is possible under the conditions provided by the Horizon 2020 Rules for Participation (see more details below). There is no pre-defined size for these multi-partner networks. However, **it is recommended to keep the size of the consortium between 6 and 10 beneficiaries** since previous experience has shown this to be a manageable size.

Although not a formal requirement, it is expected that beneficiaries will be drawn from different sectors and that ETN proposals will offer inter-sectoral and interdisciplinary research training as well as high-quality supervision arrangements. Joint supervision of the researcher is encouraged. If ETN proposals offer a doctoral training to ESRs, should none of the academic beneficiaries be entitled to award a doctoral degree<sup>4</sup> a university or a consortium/grouping of academic/research institutions entitled to award a doctoral degree must be associated as a partner organisation.

*Example: a consortium composed of universities in Greece, Israel, Malta, the UK and Italy, and a manufacturer of radiocarbon dating equipment based in France, proposes an ETN in the field of archaeology examining trading routes in ancient Europe. Partner organisations in Lebanon, Cyprus and Tunisia will complement the training and offer secondment opportunities. Each fellow will receive training in advanced radiocarbon dating techniques at the industrial beneficiary, and will undertake secondments to the partner organisations for their field work, up to a maximum of 30% of their recruitment period. In addition to local training courses at the fellows' respective hosts, the consortium will offer network-wide training modules, including transferable skills training. Two Summer Schools will provide in-depth training and networking opportunities, while a final conference will offer dissemination and outreach opportunities.*

ETN proposals will be ranked in eight scientific panels with a total budget of €375 million.

#### ▪ **European Industrial Doctorates (EID)**

EID aims to meet the objectives of ITN in particular by involving the non-academic sector in doctoral training so that skills better match public and private sector needs. **An EID must be composed of at least two independent beneficiaries established in two different MS or AC. At least one beneficiary must come from the academic sector and at least one beneficiary from the non-academic sector, primarily enterprises (including SMEs).** Additional beneficiaries and partner organisations can come from any sector. However, should none of the academic beneficiaries be entitled to award a doctoral degree<sup>4</sup> a university or a consortium/grouping of academic/research institutions entitled to award a doctoral degree must be associated as a partner organisation.

Each recruited researcher must:

- Spend at least 50% of their time in the non-academic sector. Any inter-sectoral mobility between academic and non-academic beneficiaries must be international (i.e. between beneficiaries established in different countries). The

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<sup>4</sup> References in this document to "doctoral degrees" mean degrees recognised as such by the relevant authorities of the country or countries concerned.

total secondment duration to partner organisations (irrespective of the sector) is limited to a maximum of 30% of the fellowship duration. The specific percentage of time that each researcher will spend at each institution should therefore be indicated in the proposal.

- Be enrolled in a doctoral programme at one of the academic beneficiaries or partner organisations;
- be jointly supervised by at least two supervisors, one from each sector (academic and non-academic);

The creation of a joint governance structure for the EID - with joint selection, supervision, monitoring and assessment procedures - is mandatory.

The research conducted in each participating entity must be within the framework of the doctoral programme and should aim to support long-term, industry-oriented research (fundamental or applied).

Example: *an academic research institution in Austria, a university in Sweden and a research-performing enterprise in Cyprus propose an EID in the field of medical devices based on nanotechnology. The academic research institution in Austria cannot award doctoral degrees therefore the ESRs will be enrolled at the university in Sweden. The researchers will spend 50% of their time at the enterprise in Cyprus with their remaining time split between the research institution in Austria and the university in Sweden. Training will be offered by all three beneficiaries, with short-term secondment opportunities and transferable skills training offered by a number of other partner organisations.*

Example: *A researcher is recruited by a university in Italy (beneficiary 1) and spends 40% of the doctoral training there. In addition, he/she spends 40% of the fellowship at a company in France (beneficiary 2) and 20% at a company in Italy (partner organisation). The mobility between beneficiary 1 and beneficiary 2 is international (from Italy to France) and therefore eligible. The secondment to the partner organisation takes place within the same country as the academic beneficiary (Italy), but it is also eligible as it is shorter than the 30% limit for secondments to partner organisations.*

EID proposals will be ranked in a separate multidisciplinary panel with a dedicated budget of €32 million.

#### ▪ **European Joint Doctorates (EJD)**

EJD has the objective of promoting international, inter-sectoral and multi/inter-disciplinary collaboration in doctoral-level training in Europe through the creation of joint doctoral programmes, leading to the **delivery of joint, double or multiple doctoral degrees**. An EJD must be composed of **at least three independent beneficiaries<sup>5</sup> entitled to award doctoral degrees from three different MS or AC**. EJD result in joint, double or multiple doctoral degrees awarded by institutions from at least two different countries, primarily within Europe. At least two-thirds of

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<sup>5</sup> As defined in Article 8 of Regulation (EU) No 1290/2013 of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006.  
Marie Skłodowska-Curie Actions, Guide for Applicants  
Innovative Training Networks 2018

the supported early-stage researchers within an EJD must be enrolled in a joint, double or multiple degree within Europe, i.e. between two or more beneficiaries/partner organisations established in an MS or AC. The remaining supported researchers must also be enrolled in a programme that results in a degree awarded by at least one European participating organisation (MS/AC). Applicants must indicate at the proposal level from which institutions a researcher is supposed to receive the degree(s).

A beneficiary from the academic sector which has transferred the right to award a doctoral degree to a consortium/grouping of academic/research institutions to which it belongs may also participate as a beneficiary (and would still count as a beneficiary entitled to award a doctoral degree):

*Example: Through a reform of the French Higher Education and Research system in 2013, new legal structures were created. These COMUEs (Communautés d'universités et établissements) are entities that deliver diplomas on behalf of their members. However, the recruitment, hosting and training of researchers continues to take place at the individual participants of the COMUE, with only the awarding of the degree being outsourced. In this case, the individual members of the COMUE from the academic sector may apply for an EJD as beneficiaries, even though a different legal entity formally awards the degree.*

A **joint degree** refers to a single diploma issued by at least two higher education institutions offering an integrated programme and recognised officially in the countries where the degree-awarding institutions are located. A **double or multiple degree** refers to two or more separate national diplomas issued by two or more higher education institutions and recognised officially in the countries where the degree-awarding institutions are located. The final degree must be awarded by institutions from at least two different countries.

**The joint supervision of fellows is mandatory**, as is the creation of a **joint governance structure** with joint admission, selection, supervision, monitoring and assessment procedures.

Each recruited researcher must:

- be selected, supervised, monitored and assessed through a joint governance structure;
- be enrolled on a joint doctoral programme.

The consortium should propose a joint doctoral programme aiming at overcoming national, sectoral and inter-disciplinary boundaries in doctoral research, promoting the mobility of doctoral candidates, and leading to lasting doctoral-level cooperation between the beneficiaries. The joint doctoral programme should also contribute to reinforcing links between universities/research organisations and the non-academic sector in order to strengthen the transfer and exploitation of knowledge and to enhance the innovation process. Beneficiaries and/or partner organisations from the non-academic sector may therefore also participate in an EJD. Proposals should provide for a coherent doctoral programme, clearly indicating those elements common for all researchers and those which will be tailored to the individual fellows. Proposals should also demonstrate how the joint programme will be embedded within existing

doctoral and research training programmes, and should also include a tentative list of the individual research projects to be completed in the framework of the action.

The participating organisations must demonstrate clearly that the joint scheme will become a reference at European level, thus contributing to improving the overall quality of doctoral education and research in Europe, and will lead to the award of a joint, double or multiple degree recognised or accredited by the respective national authorities. As such, **letters of institutional commitment signed by an authorised legal representative must be included in Part B.7 of the proposal from each of the beneficiaries/partner organisations that would award the (joint, double or multiple) doctoral degrees** stating their agreement to ensure the provision of such degrees should the proposal receive funding. Applicants must follow the **template letter** included in this guide in Annex 6. **If the proposal is successful, a copy of the final agreement between the institutions will be requested as a deliverable** after the start of the action.

*Example: a consortium composed of academic institutions entitled to deliver doctoral degrees based in Italy, Luxembourg, Ireland, Poland and Hungary proposes an EJD in political science examining the rise of regional parties in Europe. Partner organisations in three other countries offer additional secondment opportunities and transferable skills training. Each recruited fellow will be supervised by experts from at least two different beneficiaries and/or partner organisations and will participate both in common, programme-wide training courses as well as specialised, tailored courses specific to their needs. Secondments will be targeted according to the expertise available at each of the beneficiaries and will be used to gather data and conduct expert interviews as well as to attend courses and training modules not available at other institutions. Skills training will include modules on qualitative and quantitative research methods, presentation skills, and consulting methodologies. The fellows' research will be recognised by two of the academic beneficiaries and will lead to the award of a joint doctoral degree.*

EJD proposals will be ranked in a separate multidisciplinary panel with a dedicated budget of €35 million.

**The overall EU contribution per Grant Agreement is limited to a maximum of:**

- **540 person-months per network for ETN and EJD, as well as for an EID with more than 2 beneficiaries;**
- **180 person-months per network for an EID with 2 beneficiaries.**

**Failure to respect these limits will result in the proposal being declared ineligible.**

**Note that the expert evaluators will carefully consider the requested number of person-months with respect to the coherence of the proposal and the capacities of the hosts.**

## 2. Participating Organisations

### 2.1 Beneficiaries

Beneficiaries are legal entities that contribute directly to the implementation of the research training programme of the network **by recruiting, supervising, hosting and training researchers**. They may also provide secondment opportunities. **Beneficiaries are signatories to the Grant Agreement**, receive funding, claim costs, and take complete responsibility for the proper implementation of the proposed research training programme.

Regardless of their size, all beneficiaries must be able to **physically host at their premises**, provide all necessary infrastructure and equipment, and offer appropriate supervision to the recruited researchers. The expert evaluators will therefore be asked to give an opinion on whether each beneficiary is able to offer a hosting environment commensurate with its role and involvement in the action (see Annex 2.3 below).

Where necessary, entities with a capital or legal link to the beneficiaries<sup>6</sup> may implement the tasks of hosting and training of researchers as described in Annex 1 of the Grant Agreement. The involvement of such entities must be clearly described and justified in the proposal and will be assessed as part of the evaluation. Note, however, that only beneficiaries can recruit researchers and the recruiting beneficiary remains fully responsible for the correct implementation of the action, for ensuring the eligibility of the recruited fellow, etc.

*Example: A university clinic depends on the regional health system and does not have legal personality of its own. The hospital has a foundation under its control and this foundation contracts researchers working at the university clinic. In this case, the foundation should apply as a beneficiary, describing the set-up and the competence of the university clinical hospital (entity with a legal link to the beneficiary) where the research training activities described in the proposal will be implemented.*

**Attention:** Research training performed at entities with a capital or legal link to the beneficiary is not considered as a secondment. A secondment is research training which takes place at a different beneficiary or partner organisation which does not have a capital or legal link with the beneficiary. The duration of a **secondment is limited to a maximum of 30%** of the research training (except for EJD where time spent at other participating organisations, in line with the proposal description, is not affected by this limitation). The **work performed at an entity with a capital or legal link can be up to 100%** of the planned research training.

Please note that the involvement of entities with a capital or legal link to the beneficiaries must not be used to circumvent the eligibility conditions stated in the MSCA Work Programme.

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<sup>6</sup> And where this capital or legal link is neither limited to the action nor established for the sole purpose of its implementation. Examples of such entities include joint research units (JRU), "Unités mixtes de recherche" (UMRs), linked foundations, university hospitals and subsidiaries.

## 2.2 Partner Organisations

Partner organisations complement the research training programme but **do not recruit any researchers**. They provide additional research and transferable skills training and/or secondment opportunities. They can also deliver the doctoral degree (EID, ETN and EJD<sup>7</sup> modes). Partner organisations can be academic or non-academic organisations, located in any country. **They are not signatories to the Grant Agreement**. When partner organisations are involved, beneficiaries are encouraged to include them in the consortium/partnership agreement (for the internal relationship between participating organisations).

Partner organisations **cannot directly claim any costs**. Instead, the costs they incur for activities in the research training programme are to be covered by the unit costs paid to the beneficiaries.

Each partner organisation must **include an up-to-date letter of commitment in Part B.7 of the proposal** to ensure their real and active participation in the proposed network. The expert evaluators will disregard the contribution of any partner organisation for which no letter of commitment is submitted. The precise role of each partner organisation should also be clearly described in the proposal. There is no pre-defined number of partner organisations; however, this number should be sound and related to the real needs of the project. There is no specific template for these letters.

Both academic and non-academic organisations can take part in an ITN either as a beneficiary or as a partner organisation.

Minimum Number of Participating Organisations			
Network Status	ETN	EID	EJD
<b>Beneficiary</b>	3	2 1 academic; 1 non-academic <sup>8</sup>	3 doctoral degree-awarding
<b>Partner Organisation<sup>9</sup></b>	No minimum	No minimum	No minimum

Summary of Tasks				
Network Status	Recruitment of Researchers	Training and/or Hosting of Seconded Researchers	Participation in Supervisory Board	Directly Claims Costs
<b>Beneficiary</b>	✓	✓	✓	✓

<sup>7</sup> For EJD mode, partner organisations can deliver the doctoral degree if the minimum requirements are fulfilled (e.g. minimum three doctoral degree-awarding beneficiaries from different MS/AC)

<sup>8</sup> Should none of the academic beneficiaries be entitled to award a doctoral degree, a university entitled to award a doctoral degree must be associated to the action as a partner organisation.

<sup>9</sup> It is recommended that the number of partner organisations is reasonable and commensurate with the size of the network.

Partner organisation	x	✓	✓	x
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## 2.3 Eligible Applicants

Before applying, each entity has to register on the Horizon 2020 Participant Portal and is automatically classified in one of the two sectors (academic or non-academic) on the basis of the information provided during the application stage. If the proposal is selected for funding, the newly registered entity will have to undergo a legal validation process<sup>10</sup>, which will also confirm the sector type. In the Rules for Participation some categories of organisations are defined (i.e. SME, international European interest organisation (IEIO), non-profit legal entity).

For the purposes of ITN, participating organisations can be divided into two sectors: academic and non-academic (see below).

## 2.4 Academic Sector

For the definition of the academic sector see [Definitions](#).

## 2.5 Non-Academic Sector

For the definition of the non-academic sector see [Definitions](#).

ITN aims to improve the employability of researchers through exposure to organisations in the academic and non-academic sectors, thereby broadening the traditional academic research training setting and eliminating cultural and other barriers to mobility. **An essential part of any ITN is therefore the involvement of organisations from different sectors.** For EID, note that the participation of the non-academic sector as a beneficiary is an [eligibility criterion](#).

In all cases, **the involvement of the non-academic sector must be meaningful and appropriate to the implementation mode and research field**. The quality and degree of involvement of organisations from the non-academic sector will be assessed by the expert evaluators according to the evaluation criteria.

The **non-academic sector** includes all non-academic workplaces of researchers, from industry to business (including SMEs), government, civil society organisations (NGOs, trusts, foundations, etc.), some cultural institutions, museums, hospitals, international organisations (like the UN or WHO), etc. Please note that the status of an organisation is ultimately determined by the legal validation of the entity (PIC number).

*Example: If an organisation has a "non-profit research organisation" status, it may be classified in the academic sector depending on its statute (e.g. in the case of some museums, hospitals, cultural institutions, etc.).*

<sup>10</sup> Legal entities having a valid PIC number under FP7 maintain their PIC in H2020. The details of all validated organisations are stored in the Unique Registration Facility (URF). For the confirmation and, **if necessary, revision** of the data stored in the URF, the Commission asks each organisation to nominate a Legal Entity Appointed Representative (LEAR). The LEARs can view their organisations' legal and financial data online and ask for corrections and changes through the Participant Portal. Please note that under H2020, each participating organisation must provide documents nominating the LEAR before a Grant Agreement can be signed. More information can be found on the Participant Portal.

## 2.6 Eligible Countries and their Role in an ITN

For the purposes of ITN, three main categories of countries can be distinguished:

- EU Member States (MS)
- Associated Countries (AC)<sup>11</sup>
- Non-Associated Third Countries (TC)

Please note that entities from Overseas Countries and Territories (OCT) linked to the Member States are eligible for funding under the same conditions as entities from the Member States to which the OCT in question is linked.

TCs are neither EU Member States nor countries associated to Horizon 2020 (Associated Countries), see [Definitions](#) above.

### Minimum Country Participation in an ITN

Implementation Mode	Country of beneficiaries
European Training Networks (ETN)	<b>Minimum: 3 different countries:</b> MS or AC
European Industrial Doctorates (EID)	<b>Minimum: 2 different countries:</b> MS or AC
European Joint Doctorates (EJD)	<b>Minimum: 3 different countries:</b> MS or AC
<p>Additional beneficiaries can be established in MS, AC or TC included in the list of countries eligible for funding provided in General Annex A to the Work Programme (see TC exceptional cases below). Partner organisations can be established anywhere in the world.</p> <p><b>EID &gt;2 beneficiaries:</b> Please note that beneficiaries of an EID with more than 2 beneficiaries, must be established <b>in more than 2 MS or AC</b> in order to respect the <b>40.0% rule (see below)</b>.</p>	

#### • International European Interest Organisations (IEIO)

An "international European interest organisation" is defined in Article 2.1(12) of the Horizon 2020 Rules for Participation as "an international organisation, the majority of whose members are Member States or Associated countries, and whose principal objective is to promote scientific and technological cooperation in Europe". For the purposes of ITN, IEIO are considered as legal entities established in a MS or AC other than those in which the other beneficiaries in the network are established. The same applies to the European Commission's Joint Research Centre (JRC) or an 'entity created under Union law' (see Article 9(2) of the Horizon 2020 Rules for Participation Regulation). Examples of IEIO include CERN and EMBL. All members of *EIROForum* are considered international European interest organisations.

<sup>11</sup> For a list of countries associated to Horizon 2020, see:  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cp/h2020-hi-list-ac\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cp/h2020-hi-list-ac_en.pdf)  
Marie Skłodowska-Curie Actions, Guide for Applicants  
Innovative Training Networks 2018



Example: The European Southern Observatory (ESO) is an international European interest organisation providing state-of-the-art research facilities to astronomers. The ESO's Headquarters are situated in Garching, Germany, and will be eligible to participate in an ETN together with two other beneficiaries from Portugal and Germany. Although it is physically located in Germany, it will not count as a German beneficiary and thus the minimum requirement for the participation of 3 institutions coming from 3 different MS/AC is fulfilled.

### • **Non-Associated Third Countries and International Organisations**

Above the minimum number of MS and AC, legal entities established in TC included in the list of countries eligible for funding, provided in General Annex A to the Work Programme, are eligible to receive funding in an ITN as beneficiaries. For these TC funding may be granted on the same terms as for MS and AC, providing that the minimum participation requirements have been met.

In **exceptional cases**, an international organisation or an entity established in a TC *not* listed in General Annex A to the Work Programme may be entitled to participate as a beneficiary. **Expert evaluators** must endorse that at least one of the following conditions is fulfilled:

- the participation is deemed essential for carrying out the action by the Commission or the relevant funding body on the grounds that participation by the applicant has clear benefits for the consortium, such as:
  - outstanding competence/expertise
  - access to research infrastructure
  - access to particular geographical environments
  - access to data
- such funding is provided for under a bilateral scientific and technological agreement or any other arrangement between the Union and the international organisation or, for entities established in third countries, the country in which the legal entity is established.<sup>12</sup>

Where institutions based in a TC *not* listed in General Annex A to the Work Programme wish to participate in an ITN, and where this does not fulfil the conditions outlined above, it is suggested that such institutions participate as partner organisations (there are no limits on the participation of legal entities established in TC as partner organisations).

Note that a list of institutions based in third countries that are willing to cooperate with European partners in ITN and other MSCA is available on the MSCA website.<sup>13</sup>

**Note:** In the context of the consortium's composition, applicants should take into account that for **all ITN** (except for EID with only two beneficiaries), **no more than 40.0% of the total EU financial contribution** may be allocated to beneficiaries in the same country or to any one international European interest organisation or international organisation. This concerns the total amount of the budget allocated to a

<sup>12</sup> A list of such agreements is available at: <http://ec.europa.eu/research/iscp/index.cfm?pg=countries>.

<sup>13</sup> [http://ec.europa.eu/research/mariecurieactions/apply-now/find-partners\\_en.htm](http://ec.europa.eu/research/mariecurieactions/apply-now/find-partners_en.htm)

country and not the number of person-months. Proposals not complying with this condition will be considered ineligible.<sup>14</sup> The 40,0% is determined on the basis of the maximum grant amount (beneficiaries will not be penalised for the non-execution of person-months by other beneficiaries during the project implementation).

### 3. Implementation of an ITN

#### 3.1 *The Topic of the Action*

All Marie Skłodowska-Curie actions have a **bottom-up approach**, i.e. proposals in all domains of research and technological development are eligible for funding, except for areas of research covered by the EURATOM Treaty. Applicants will be required to define in the proposal the scientific and technological area within which the individualised research projects of the recruited researchers will be developed.

All research activities supported by Horizon 2020 should respect fundamental ethics principles (see below).

#### 3.2 *Recruitment*

##### **European Training Networks (ETN)**

- Every beneficiary must recruit, host at their premises and supervise at least 1 researcher;<sup>15</sup>

##### **European Industrial Doctorates (EID) and European Joint Doctorates (EJD)**

Two possibilities exist:

- i. a researcher is employed 100% by a beneficiary and sent to other beneficiaries or partner organisations for the share of time foreseen under the implementation mode in question, or
- ii. a researcher is recruited separately by each beneficiary for the period of time they spend there.

For EID, however, recruited researchers must spend at least 50% of their time in the non-academic sector. This inter-sectoral mobility must be international between beneficiaries.

For EJD, at least two-thirds of the supported early-stage researchers within an EJD must be enrolled in a joint, double or multiple degree within Europe, i.e. between two or more beneficiaries/partner organisations established in a MS or AC. The remaining supported researchers must also be enrolled in a programme that results in a degree awarded by at least one European participating organisation (MS/AC).

Note that the mobility rule (see point 3.4 below) applies to the beneficiary where the researcher is recruited. If the researcher has a recruitment contract with more than one beneficiary, however, the mobility rule will apply to the beneficiary where the researcher is recruited for the first time in the action.

The choice of recruitment option and location of the premises of the recruiting beneficiary will have an influence on the fellow's salary in view of the different country

<sup>14</sup> Note that an EID proposal with 3 beneficiaries from 2 different MS/AC would therefore also be considered ineligible.

<sup>15</sup> With the exception of entities with a capital or legal link to a beneficiary, as outlined in point 2.1 above, where researchers can be hosted. Note, however, that only beneficiaries can recruit researchers.

correction coefficients (see Table 2 of the MSCA Work Programme 2018-2020). It may also affect the eligibility of the proposal (see 40.0% rule above).

The beneficiaries will be responsible for the selection and recruitment of the eligible researchers. An important aspect of the Commission's policy towards researchers is to improve their working and living conditions and to promote mobility in order to open up new perspectives for research careers within Europe. The Marie Skłodowska-Curie actions aim to act as a catalyst in this respect. The beneficiaries will therefore be required to meet certain conditions relating to the publishing of vacancies, recruitment and length of appointment of researchers and which should be in line with the principles set out in **the European Charter and Code for Researchers** (see [Definitions](#)). Note that a beneficiary may not recruit a researcher via an employment agency.

### **3.3 Eligible Researchers**

All researchers recruited in an ITN must be **Early-Stage Researchers** (ESRs) and undertake transnational mobility (see point 3.4 below). For all recruitments, the eligibility of the researcher will be determined at the date of their **first recruitment** in the action. The status of the researcher will not evolve over the life-time of the action, even if they are re-recruited at another beneficiary.

### **3.4 Conditions of Mobility of Researchers**

Researchers can be of **any nationality**. They are required to undertake physical, transnational mobility (i.e. move from one country to another) when taking up their appointment (see mobility rule in [Definitions](#)).

Nationality is therefore not a criterion. Rather the location of the researcher's residence or main activity during the 3 years prior to their recruitment is determining.

*Example: French nationals can be eligible for recruitment at a beneficiary located in France if they have resided or carried out their main activity outside of France for more than 24 months in the 3 years immediately prior to their recruitment.*

Note that the mobility rule applies to the (first) beneficiary **where the researcher is recruited**, and not to beneficiaries to which the researcher is sent or seconded. It is also **only determined at one point in time**: that of the fellow's first recruitment in the action (see also points 3.2 and 3.3 above).

#### **Refugees**

Researchers with refugee status, as defined by the Geneva Convention, benefit from a less restrictive mobility rule: the refugee procedure (i.e. before refugee status is conferred) will not be counted as a period of residence/activity in the country of the beneficiary.

### **3.5 Duration of the Action and of the Recruitments**

The duration of the action is limited to **48 months from the start date of the action set out in the Grant Agreement**. The recruitment of each individual **ESR**

**will be supported for a minimum of 3 months and up to a maximum of 36 months.** However, researchers enrolled in a doctoral programme are expected to be appointed for the maximum 36 months. Given the time required at the beginning of the action to advertise the vacancies and to recruit researchers, the 48 month duration offers a sufficient margin to ensure that the researchers can remain in place for the full 36 month period.

### **3.6 The Supervisory Board**

Each action must have a clearly identified **Supervisory Board** co-ordinating the network-wide training activities.

#### Composition

The Supervisory Board will be composed of representatives of all beneficiaries and partner organisations and may also include any other stakeholders of relevance to the research training programme, including those from the non-academic sector. An appropriate gender balance should be respected in the board's composition. It is also considered best practice to include a representative from among the recruited ESRs.

#### Tasks

The board will oversee the quality of the programme and ensure an adequate balance between scientific/technological and transferable skills training. This shall be achieved through personalised research projects and training, appropriate to the needs of each recruited researcher. Involvement of the non-academic sector in the supervisory board aims to ensure that the skills acquired by researchers fulfil the needs of both academia and the non-academic sector and enhance the inter-sectoral employability of the researchers. The Supervisory Board will also establish an active and continuous communication and exchange of best practice among the participating organisations to maximise the benefits of the partnership. Finally, it will also oversee the quality and quantity of supervision of the ESRs.

### **3.7 Management and Consortium Agreement**

Beneficiaries in all ITNs are **required to conclude a consortium agreement outlining their cooperation in the action**, in principle prior to the signature of the Grant Agreement. This agreement should, *inter alia*, cover the selection and recruitment procedures and principles, IPR, and the supervision arrangements, including qualifications of supervisors, etc. It should also outline any redistribution of institutional unit costs between the beneficiaries. The final consortium agreement must be provided to the REA as a management deliverable, normally within 2 months from the start date of the project.

The cooperation and communication within the action shall be as open and efficient as possible, with the appropriate involvement of recruited researchers (for the organisation of meetings and identification of training needs, for example).

## **4. Typical Activities of an Innovative Training Network**

### **4.1 Research and Training Activities**

Applicants must primarily propose a dedicated and high-level joint research training programme that focuses on promoting scientific excellence and exploiting the specific research expertise and infrastructure of the beneficiaries and of the collective

expertise of the network as a whole. These training programmes will address in particular the development and broadening of the research competences of the ESRs. Such training activities might include:

- **Training through research** by means of individual, personalised projects, including meaningful exposure to different sectors;
- **Development of network-wide training activities** (e.g. workshops, summer schools) that exploit the inter/multi-disciplinary and inter-sectoral aspects of the action and expose the researchers to different schools of thought. Such events could also be open to external researchers. For doctoral programmes (i.e. EID and EJD), the broad structure of the curriculum should be outlined and preferably quantifiable by ECTS<sup>16</sup> points;
- **Provision of structured training courses** (e.g. tutorials, lectures) that are available either locally or at another participating organisation. Training programmes between the participating organisations are expected to be coordinated to maximise added value (e.g. joint syllabus development, opening up of local training to other network teams, joint PhD programmes, etc.);
- **Exchanging knowledge with the members of the network** through undertaking inter-sectoral visits and secondments. A strong networking component is expected in each proposal;
- **Invitation of visiting researchers** originating from the academic or non-academic sector. This would be aimed at improving the skills and know-how of the recruited researchers and should be clearly described in the proposal and **duly justified** in the context of the training programme. The network can cover costs of visiting researchers under the Research, Training and Networking cost category.

Further training activities with a particular view to widening the career prospects of the researchers would include **transferable skills training** both within and outside the network. Topics of interest could include:

- Training related to research and innovation: management of IPR, take up and exploitation of research results, communication, standardisation, ethics, scientific writing, personal development, team skills, multicultural awareness, gender issues, research integrity, etc.
- Training related to management or grant searching: involvement in the organisation of network activities, entrepreneurship, management, proposal writing, enterprise start-up, task co-ordination, etc.

As part of the implementation, each recruited researcher will establish, together with her/his personal supervisor(s) in the host organisation/s, **a personal Career Development Plan**. In addition to research objectives, this plan should include the researcher's training and career needs, as well as planning for publications and participation in conferences. Attention should be paid to the quality of the joint research training programme, with provision for supervision and mentoring arrangements and career guidance. Furthermore, the **meaningful exposure of each researcher to other disciplines and sectors** represented in the network through visits, secondments and other training events shall also be ensured.

Although mutual recognition is mandatory only for EJD joint degrees, it is expected that both beneficiaries and partner organisations will **mutually recognise the**

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<sup>16</sup> ECTS: European Credit Transfer and Accumulation System.  
[http://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide\\_en.pdf](http://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf)  
Marie Skłodowska-Curie Actions, Guide for Applicants  
Innovative Training Networks 2018

**quality of the research and training** and, if possible, of diplomas and other certificates awarded. The size of the joint research training programme and of the network will depend on the nature and scope of the training activities to be undertaken by the network, as well as on considerations regarding management and effective interaction among the participating organisations.

#### **Open Science under Horizon 2020**

Applicants and beneficiaries should respect the Horizon 2020 strategic priority of Open Science. Open Science describes the on-going evolution in the *modus operandi* of doing research and organising science. These changes in the dynamics of science and research are enabled by digital technologies and driven by the globalisation of the scientific community. They have an impact on the way research is produced, accessed and utilised.

Open Science is an inclusive process aimed at promoting diversity in science across the European Union and opening it to the general public, in order to better address the H2020 societal challenges and ensure that science becomes more responsive both to socio-economic demands and to those of European citizens. Open Science also provides significant new opportunities for researchers to disseminate, share, explore and collaborate with other researchers.

Thus, the emergence of Open Science and its future growth should be taken into account in the training of doctoral candidates.

## **4.2 Secondments**

**In ETN**, each recruited researcher can be seconded to other beneficiaries and/or to partner organisations for **a duration of up to 30% of his/her recruitment period**. Secondments of the researcher to other beneficiaries and partner organisations are encouraged, but should be relevant, feasible, beneficial for the researchers and in line with the project objectives.

Normal practice during secondments is for the recruited researchers to keep their contract with the sending institution, which also pays their travel and subsistence expenses (e.g. accommodation, visa, residency card) from the institutional unit costs. During their secondment, researchers receive supervision and training at the premises of the receiving beneficiary or partner organisation. Secondments should be differentiated from short visits, i.e. of a few days. Secondments in ITN of six months or less which require mobility from the place of residence must be financed using the Research, Training and Networking costs in order to prevent an unreasonable financial burden for the early-stage researchers. This includes at least the travel and accommodation costs.

*Example: an ESR recruited in an ETN for a period of 36 months by an astrophysics institute in Spain will spend two periods of secondment each of 5 months at two partner organisations from the private sector in order to profit from specific training facilities, one located in South America and another one in Italy. The institute in Spain will continue paying the researcher's allowances during the entire recruitment period, including the secondments and will also pay for travel and accommodation during the 5 month-secondments.*

**In EID**, all recruited ESRs must spend at least 50% of their time in the non-academic sector. Therefore if a researcher is recruited by an academic beneficiary, they must be sent to beneficiaries and/or partner organisations in the non-academic sector, primarily

enterprise, for at least 50% of their recruitment period within the action. This inter-sectoral mobility must be international between beneficiaries (i.e. between beneficiaries established in different countries). The total secondment duration to partner organisations (irrespective of the sector) is limited to a maximum of 30% of the fellowship duration. The specific percentage of time that each researcher will spend at each institution should therefore be indicated in the proposal. It is expected that the recruited researchers will benefit from the strong research collaboration of the beneficiaries (academic and non-academic). The provision of additional training/secondment by partner organisations is encouraged, where relevant.

*Example: an EID in the field of quantum computing is composed of a university in Finland and a high-tech SME in Lithuania. It is proposed that each ESR will be recruited in Finland but will spend 18 months at the SME in Lithuania and 6 month stays at a non-academic partner organisation in Norway and at a partner organisation in Switzerland. The remaining 6 months of their 36 month recruitment period will be spent at the university in Finland, fulfilling the requirements of their enrolment as doctoral candidates.*

*If the fellow spends 18 months in a row at the SME in Lithuania (non-academic sector), and then spends the remaining 18 months at the university in Finland, it is then expected for the recruiting Beneficiary (Finnish University) to pay only for the travel costs. If the stays at the non-academic sector are split/shorter than 6 months, and in different locations, then besides travel costs, also at least the accommodation costs are to be paid from the Research, Training and Networking costs.*

**In EJD** it is expected that the researchers will need to spend at least the minimum period of time at the corresponding academic beneficiary(ies) required to be eligible to submit a doctoral degree there. This will vary according to the institution and country in question. The limitation of secondments to 30% of the recruitment period does not apply to EJD insofar as time spent at other participating organisations occurs in line with the proposal.

*Example: an EJD taking a multi-disciplinary approach to the modelling of climate change is comprised of three universities located in Luxembourg, France and Iceland. The joint PhD programme requires each ESR to spend 12 months at each of the two universities awarding the joint degree. It is proposed that the remaining 12 month period of their respective 36 month recruitments will be spent at an environmental NGO in Spain which is a non-academic partner organisation in the action.*

*As for EID, if the stays at participating organisations are split/shorter than 6 months, and in different locations, then besides travel costs, also at least the accommodation costs are to be paid from the Research, Training and Networking costs.*

### **4.3 Networking Activities**

Networks will establish or strengthen the collaboration between the research teams, as well as between themselves and the wider scientific community, including through the use of the internet and social media.

Each network will be expected to organise workshops, seminars, summer schools, etc. which should be directly related to the research training programme of the network.

The content and quality of such events should be **detailed and fully justified** in the proposal. Networking activities could further include:

- Organisation of scientific network meetings;
- Visits and secondments between participating organisations in order to exchange knowledge;
- Invitation of external experts for specialist input;
- Attendance of the recruited researchers at international conferences and workshops;
- Collaboration with other ITNs or research groups;
- Organisation of a final network conference.

Training events offered within the network may also be opened to external researchers. Note, however, that costs for external researchers cannot be funded under the action.

#### **4.4 Dissemination and Exploitation**

Dissemination and Exploitation strategy is about the results of the action and it is targeted at peers (scientific or the action's own community, industry and other commercial actors, professional organisations, policymakers) and to the wider research and innovation community - to achieve and expand the potential impact of the action.

The proposal should describe the foreseen dissemination and exploitation activities and their expected impact.

#### **Open Access and Open Data under Horizon 2020– by default all proposals are in the Pilot**

**Open Access:** beneficiaries must ensure that peer-reviewed scientific publications resulting from ITN funding are deposited in open access repositories, i.e. free of charge online access for any user (see guidance on Article 29.2 in the Annotated Model Grant Agreement). A repository number for each publication must be provided in the action reports.

**Open Data:** beneficiaries will engage in research data sharing by default, as stipulated under Article 29.3 of the Horizon 2020 Model Grant Agreement (including the creation of a Data Management Plan). Participants may, however, opt out of these arrangements, both before and after the signature of the Grant Agreement. Note that information related to Open Research Data provided in the proposal will not be subject to evaluation. In other words, proposals will not be evaluated negatively because they opt-out of the data sharing.

Further information on the Data Management Plan can be found in the documents section of the Participant Portal.

#### **4.5 Communication and Public Engagement**



Communication of the action aims to demonstrate the ways in which the research, training and mobility contribute to a European "Innovation Union"<sup>17</sup> and account for public spending. It should provide tangible proof that the funded action adds value by:

- showing how **European and international collaboration** has achieved more than would have otherwise been possible, notably in achieving scientific excellence, contributing to competitiveness and, where relevant, solving societal challenges;
- showing how the outcomes are **relevant to our everyday lives**, by creating jobs, training skilled researchers, introducing novel technologies, bringing ideas from research to market or making our lives more comfortable in other ways;
- **promoting results**, which may possibly influence policy-making, and ensure follow-up by industry, civil society and by the scientific community.

In the Marie Skłodowska-Curie Actions (MSCA), public engagement is an important part of communication. The primary goal of public engagement activities is to **create awareness among the general public of the research work performed under these projects and its implications for citizens and society**. The type of outreach activities could range from press articles and participating in European Researchers' Night events to presenting science, research and innovation activities to students from primary and secondary schools or universities in order to develop their interest in research careers. **The frequency and nature of such activities should be outlined in the proposal**. Concrete plans for the above must be included as a deliverable.

#### 4.6 Refugees

The integration of refugees is a key priority for the EU, and the Marie Skłodowska-Curie actions are fully committed to ensuring that equal opportunities are provided to researchers whose scientific careers have been interrupted. Therefore if appropriate to the objectives of the proposal applicants are encouraged to include activities that could foster the successful integration of researchers who are refugees. This could take form of providing such refugees and their colleagues with particular services and training in the social and professional integration of refugee researchers within host countries. In addition, skills in building collaborations with countries in post-war recovery could prove valuable in the career of any researcher.

### 5. Financial Aspects

The financial support for an ITN is calculated on the basis of eligible person-months and takes the form of a grant covering up to 100% of the eligible costs. Funding is exclusively in the form of **unit costs**.

Unit costs are fixed amounts and apply to all categories of eligible costs. They are measured by the number of months which are implemented by the eligible researchers in the action. The unit costs are determined ex-ante in the MSCA Work Programme and cannot be modified. The grant reimburses up to 100% of the action's eligible costs.

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<sup>17</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm](http://ec.europa.eu/research/innovation-union/index_en.cfm)

The details of the European Union contribution and rates under this action are set out in MSCA Work Programme. There are two types of unit costs:

- Researcher unit costs;
- Institutional unit costs.

One unit is defined as the work of one researcher in the action for a period of one month.

## **Researcher Unit Costs**

### **5.1 Living Allowance**

This refers to the **basic, gross amount** for the benefit of the researcher to be paid to the researcher in monthly instalments. For MSCA calls launched in 2018-2020, the amount for an ESR is **€3,270 per month (€39,240/year)**.

This amount is then adjusted through the application of a **country correction coefficient** to the living allowance of the country in which the researcher will be recruited. The final amount will not change in case of secondments to another beneficiary or partner organisation. The country correction coefficients are indicated in Table 2 of the MSCA Work Programme.

The beneficiaries must recruit each eligible researcher under an **employment contract** or other direct contract with equivalent benefits, including social security coverage. Fixed amount fellowship agreements are only permitted where national law prohibits the possibility of an employment contract/ equivalent direct contract, and only with the prior approval of the Research Executive Agency. The living allowance rates applicable in these cases will be 50% of the rates for researchers under an employment contract/ equivalent direct contract.

In all cases, the beneficiaries must ensure that the researcher is covered under the **social security scheme** which is applied to employed workers within the country of the beneficiary, or under a social security scheme providing at least sickness and parental benefits, invalidity and accidents at work and occupational diseases, and covering the researcher in every place of implementation of the ITN activities.

In the case of **secondments** to other beneficiaries or partner organisations, the social security provision should also cover the researchers during these periods.

#### ***Important notice: Living allowance***

*The living allowance is a **gross EU contribution** to the salary costs of the researcher. Consequently, the net salary results from deducting all compulsory (employer /employee) social security contributions as well as direct taxes (e.g. income tax) from the gross amounts. **A top-up may be paid** to the eligible researchers from another budget source in order to complement this contribution.*

*The rate indicated above is for researchers devoting themselves to the action on a full-time basis.*

*Part-time employment for personal or family reasons can be accepted (the minimum MSCA working time must always be at least 50%). In this case costs will be reported as pro-rata of the fulltime (30 days/month) unit cost.*

## 5.2 Mobility Allowance

All eligible researchers recruited within an ITN are entitled to receive this allowance. It contributes to the mobility related expenses of the researcher. The amount of the mobility allowance is specified in Table 1 of the MSCA Work Programme and for the calls 2018-2020, it amounts to **€600 per month**.

## 5.3 Family Allowance

A family allowance of **€500 per month** will be paid should the researcher have family, regardless of whether the family will move with the researcher or not. In this context, family is defined as persons linked to the researcher by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the national or relevant regional legislation of the country where this relationship was formalised; or (iii) dependent children who are actually being maintained by the researcher.

The family status of a researcher will be determined at the date of their (first) recruitment in the action and will not evolve during the action lifetime.

**The mobility and family allowances are fixed amounts**, regardless of the country of recruitment, and may be excluded from taxation, where this is in line with national legislation. The full amount of these allowances, minus compulsory deductions, should be paid to the researcher for their own use. Therefore no flights or accommodation related to the activities in the action (e.g. conferences, secondments) can be charged under this category.

## Institutional Unit Costs

### 5.4 Research, Training and Networking Costs

Research, Training and Networking Costs are a unit cost of **€1,800 per person-month** managed by the host beneficiaries to contribute to expenses related to, for example:

- the participation of researchers in training activities;
- expenses related to research costs;
- costs for visiting researchers (see conditions in section 4.1);
- tuition fees (where applicable).
- Visa, residency card for the recruited researcher and their family (where applicable)
- secondment costs (at least travel and accommodation costs for each secondment of 6 months or less)

### 5.5 Management and Indirect Costs

Management and Indirect Costs refer to a unit cost of **€1,200 per person-month** that is to be used towards the management of the action. As with Research, Training and Networking costs, these amounts may later on be re-distributed among the consortium. For example, the consortium may agree in the Consortium Agreement that all beneficiaries will contribute to the costs that the coordinator incurs for the management of the whole action and consequently allocate a higher percentage to the coordinator. However, the modalities of this are left to the consortium to decide.

## **5.6 Budget Calculations**

**Applicants are not required to indicate the amount of the estimated EU contribution in their proposal.** This will be automatically calculated based on the number of person-months indicated in Part A of the proposal using the rates, allowances and coefficients given in Tables 1 and 2 of the MSCA Work Programme.

**It is crucial that the information given in Part A is identical to the information given in proposal Part B. In case of discrepancy, values from the Part A will prevail.** Please enter the data for the budget carefully! Any error may result in the proposal being declared ineligible (see 40.0% rule and maximum person-months requirement above (pages 15 (section 2.6) and 10 (section 1.2) respectively).

By definition, the costs related to the recruitment of researchers cannot be accurately calculated in advance. This is because the family allowance will depend upon the personal circumstances of the recruited researcher (i.e. family status). Therefore **an average calculation** will be used by the REA to determine the maximum level of funding.

## **5.7 Contractual Obligations**

Complete details regarding contractual obligations that bind all beneficiaries can be found in the model Grant Agreement available on the Participant Portal.

## **Key Points**

### **General remarks:**

- ITN actions fund exclusively Early-Stage Researchers (ESR).
- ESR recruitment is for a minimum period of 3 months and a maximum of 36 months
- Transnational mobility requirement applies to all actions
- All actions have a maximum duration of 48 months
- Maximum of 40.0% of the total EU financial contribution may be allocated to beneficiaries within one country (except for an EID with two beneficiaries)

### **Applicants can apply to any of the three implementation modes:**

#### **1. European Training Networks (ETN)**

##### **Composition of the Network**

- Minimum participation of 3 beneficiaries from 3 EU MS or AC. Additional beneficiaries from MS, AC or TC listed in General Annex A to the Work Programme (see TC exceptional cases above). Partner organisations from any country. Typical size of 6-10 beneficiaries
- Participation of the non-academic sector is expected

##### **Recruitments and Secondments**

- Maximum of 540 person-months per network
- Each beneficiary must recruit, host and supervise at least one researcher
- Secondments of an individual researcher to other beneficiaries and/or partner organisations up to a maximum of 30% of their recruitment period

##### **Remark**

- Researchers will typically be enrolled in a doctoral programme

#### **2. European Industrial Doctorates (EID)**

##### **Composition of the Network**

- At least 2 beneficiaries, 1 academic and 1 non-academic (primarily enterprise), located in different MS or AC. Additional beneficiaries from MS, AC or TC listed in General Annex A to the Work Programme (see TC exceptional cases above). Partner organisations from any country. Typical size of 2-3 beneficiaries

##### **Recruitments and Secondments**

- Maximum 540 person-months per network, except for an EID with 2 beneficiaries (max. of 180 person-months)  
Researchers must spend at least 50% of their time at in the non-academic sector. Any inter-sectoral mobility between academic and non-academic beneficiaries must be international (i.e. between beneficiaries established in different countries). The total secondment duration to partner organisations (irrespective of the sector) is limited to a maximum of 30% of the fellowship duration

##### **Requirements**

- Mandatory enrolment of researchers in a doctoral programme provided either by a beneficiary or by a university associated to the action as a partner organisation

##### **Remark**

- Ranked in a separate multidisciplinary panel with an earmarked budget of €32 million

#### **3. European Joint Doctorates (EJD)**

##### **Composition of the Network**

- Minimum of 3 beneficiaries, located in different MS or AC, which are entitled to award doctoral degrees. Additional beneficiaries from MS, AC or TC listed in General Annex A to the Work Programme (see TC exceptional cases above). Partner organisations from any country. Typical size of 4-8 beneficiaries

##### **Recruitments and Secondments**

- Maximum of 540 person-months per network

##### **Requirements**

- Mandatory enrolment of researchers in the joint doctoral programme with the final degree awarded by institutions from at least two different countries, primarily within Europe (MS/AC).
- At least two-thirds of the supported early-stage researchers enrolled in a joint, double or multiple degree within Europe, i.e. between two or more beneficiaries/partner organisations established in an MS or AC.
- The remaining supported researchers enrolled in a programme that results in a degree awarded by at least one European participating organisation (MS/AC).

##### **Remark**

- Ranked in a separate multidisciplinary panel with an earmarked budget of €35 million

## Overview Table

		ETN	EID		EJD
			2 Beneficiaries	≥ 3 Beneficiaries	
BENEFICIARY (IES)	Minimum No. of beneficiaries	3	2	3	3
	Minimum MS or AC	3	2	2 <sup>18</sup>	3
	Academic sector	No restrictions	Minimum 1		Minimum 3 entitled to award doctoral degrees
	Non-academic sector	No restrictions	Minimum 1		No restrictions
	Max no. of person months	540	180	540	540
	Max 40.0% budget for 1 country	Mandatory	N/A	Mandatory	Mandatory
Beneficiary (or partner organisation) awarding PhD		Optional	Mandatory (1 beneficiary or partner organisation)		Mandatory for minimum 3 beneficiaries
Joint award of PhD		Optional	Optional		Mandatory
Joint degree – letter of institutional commitment		N/A	N/A		Mandatory
Joint supervision for ESRs		Encouraged	Mandatory (from the 2 sectors)		Mandatory
ESRs enrolment in the PhD		Optional	Mandatory		Mandatory
Inter-sectoral mobility must be international		Optional	Mandatory		Optional
Secondments: international, inter-sectoral, interdisciplinary		≤ 30%	Min 50% stay in the non-academic sector, ≤ 30% in partner organisations		N/A
Partner Organisation: Letter of Commitment		Mandatory			
Ranking lists		8 (Scientific) panels	1 Multidisciplinary		1 Multidisciplinary
Budget		€375 mn	€32 mn		€35 mn

<sup>18</sup> Please note that beneficiaries of an EID with more than 2 beneficiaries, must be established **in more than 2 MS or AC** in order to respect the **40.0% rule**.

## Annex 1 – Timetable and Specific Information for this Call

**The MSCA Work Programme** provides the legal details and conditions to be considered when submitting a proposal to this call. It describes the content of the topics to be addressed and details on how the call will be implemented. The Work Programme is available on the Participant Portal call page. Basic data on the call implementation (deadline, budget, additional conditions etc.) is also posted on the Participant Portal. Please consult these documents.

### Indicative timetable for this call

Publication of call	<i>12 October 2017</i>
Deadline for submission of proposals	<i>17 January 2018 at 17:00:00, Brussels local time</i>
Evaluation of proposals	<i>March 2018</i>
Information on the outcome of the evaluation	<i>June 2018</i>
Indicative date for the signing of Grant Agreements	<i>September 2018</i>

- **2018 indicative call budget:** € 442.00 million.

Of this amount, €32 million is allocated to EID and €35 million to EJD.

- **Further information and help**

The Participant Portal call page contains links to other sources that applicants may find useful in preparing and submitting a proposal. Direct links are also given where applicable.

### Call Information

- *Participant Portal call page*  
<https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/msca-itn-2018.html>
- *MSCA Work Programme 2018-2020*  
[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-msca\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-msca_en.pdf)

### General Sources of Help

- *Marie Skłodowska-Curie website:* <http://ec.europa.eu/research/mariecurieactions/>
- *EURAXESS:* <http://ec.europa.eu/euraxess/>
- *The European Commission's Horizon 2020 Enquiry Service*  
<http://ec.europa.eu/research/index.cfm?pg=enquiries>
- *National Contact Points*  
[http://ec.europa.eu/research/participants/portal/desktop/en/support/national\\_contact\\_points.html](http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html)
- *Net4Mobility*  
<http://www.net4mobility.eu/>

## Specialised and Technical Assistance

- *Submission Service Help Desk*  
<http://ec.europa.eu/research/participants/api/contact/index.html>
- *IPR help desk:* <http://www.ipr-helpdesk.org>

## Other Useful Reference Documents

- *Horizon 2020 Work Programme 2018-2020: General Introduction*  
[http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-intro\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-intro_en.pdf)
- *Horizon 2020 Work Programme: General Annexes*  
[http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga_en.pdf)
- *Horizon 2020: Rules for Participation*  
[http://ec.europa.eu/research/participants/data/ref/h2020/legal\\_basis/rules\\_participation/h2020-rules-participation\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/legal_basis/rules_participation/h2020-rules-participation_en.pdf)
- *Horizon 2020: How to Complete Your Ethics Self-Assessment*  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/ethics/h2020-hi-ethics-self-assess\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020-hi-ethics-self-assess_en.pdf)
- *Horizon 2020: Guidelines on Data Management in Horizon 2020*  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hi-oa-data-mgt\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf)
- *European Charter and Code for Researchers*  
<http://ec.europa.eu/euraxess/index.cfm/rights/europeanCharter>
- *List of Countries Associated to Horizon 2020*  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/3cp/h2020-hi-list-ac\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cp/h2020-hi-list-ac_en.pdf)
- *Gender Equality in Horizon 2020*  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/gender/h2020-hi-guide-gender\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/gender/h2020-hi-guide-gender_en.pdf)
- *Horizon 2020 Online Manual*  
<https://ec.europa.eu/research/participants/portal/desktop/en/funding/guide.html>
- *Horizon 2020 Annotated Model Grant Agreement – section on MSCA-ITN*  
[https://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/amga/h2020-amga\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf)



## Annex 2 – Evaluation Criteria and Procedure

### 1. *General*

The evaluation of proposals is carried out by the Research Executive Agency (REA) with the assistance of independent experts.

REA staff ensure that the process is fair and in line with the principles contained in the Commission's rules<sup>19</sup> and the relevant sections of the MSCA Work Programme.

Experts perform evaluations on a personal basis, not as representatives of their employer, their country or any other entity. They are required to be independent, impartial and objective, and to behave throughout in a professional manner. They sign an expert contract, including a declaration of confidentiality and absence of conflict of interest, before beginning their work. Confidentiality rules must be adhered to at all times before, during and after the evaluation.

In addition, an independent expert will be appointed by the REA to observe and report on the evaluation process. The observer gives independent advice to the REA on the conduct and fairness of the evaluation sessions, on the way in which the experts apply the evaluation criteria, and on ways in which the procedures could be improved. The observer will not express views on the proposals under examination or on the experts' opinions on the proposals.

Proposals are submitted in a single stage and evaluated in one step by the experts against all evaluation criteria.

Conflicts of interest: under the terms of the expert contract, all experts must declare beforehand any known conflicts of interest, and must immediately inform the responsible REA staff member should one become apparent during the course of the evaluation. The REA will take whatever action is necessary to remove any conflict of interest.

Confidentiality: the expert contract also requires experts to maintain strict confidentiality with respect to the whole evaluation process. They must follow any instruction given by the REA to ensure this. Under no circumstance may an expert attempt to contact an applicant on his/her own account, either during the evaluation or afterwards.

### 2. *Before the Evaluation*

Once received in the Participant Portal's electronic submission system, proposals are registered and their status can be checked. Admissibility and eligibility criteria for each proposal are checked by REA staff before the evaluation begins. Proposals which do not fulfil these criteria will not be included in the evaluation.

To be considered **admissible**, a proposal must be:

- (a) submitted in the electronic submission system **before the call deadline**;
- (b) readable, accessible and printable.

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<sup>19</sup> Horizon 2020 Grants Manual on Proposal Submission and Evaluation.  
[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/pse/h2020-guide-pse\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/pse/h2020-guide-pse_en.pdf)

**Incomplete** proposals may be considered inadmissible. The proposal must therefore include the duly completed administrative forms in Part A and the proposal description in both documents comprising Part B (see below).

For this call a proposal will only be considered **eligible** if it meets all of the following conditions:

- It complies with all eligibility conditions indicated in the Work Programme, including the **minimum number, country** and, where applicable, **sector of beneficiaries** or **doctoral degree-awarding beneficiaries**, according to the implementation mode (i.e. ETN, EID or EJD);
- The content of the proposal **relates to the funding scheme**, including any special conditions set out in the relevant parts of the MSCA Work Programme.

**NB: Part B must be submitted as two separate documents:**

**Document 1** must comprise of the Start Page, Table of Contents, List of Participating Organisations data (including non-academic sector beneficiaries and declarations tables), and sections 1-3. The maximum total length for this document is 34 pages (1 page for the Start Page, 1 page for the Table of Contents, 2 pages (max) for List of Participating Organisations data, and 30 pages for sections 1 to 3: **section 1 must start on page 5**). The page limits will be strictly applied. Expert evaluators will disregard any excess pages since all pages in excess will automatically appear watermarked once the application is submitted.

**Document 2** must consist of sections 4-7 of Part B. No overall page limit is applicable to this document, but applicants should respect the instructions given per section (e.g. in section 5, a maximum of one page should be used per beneficiary and half a page per partner organisation).

(see also Annex 4 below)

### 3. Evaluation of Proposals

Proposals will be evaluated on the basis of the following **award criteria**:

<b>ITN - Marie Skłodowska-Curie Innovative Training Networks</b>		
<b>Excellence</b>	<b>Impact</b>	<b>Quality and Efficiency of the Implementation</b>
<b>Quality, innovative aspects and credibility of the research programme</b> (including inter/multidisciplinary, inter-sectoral and, where appropriate, gender aspects)	Enhancing the <b>career perspectives</b> and <b>employability</b> of researchers and contribution to their <b>skills</b> development	<b>Coherence and effectiveness of the work plan</b> , including appropriateness of the allocation of <b>tasks and resources</b> (including awarding of the doctoral degrees for <i>EID</i> and <i>EJD</i> projects)

<b>Quality and innovative aspects of the training programme</b> (including transferable skills, inter/multidisciplinary, inter-sectoral and, where appropriate, gender aspects)	Contribution to <b>structuring doctoral / early-stage research training at the European level</b> and to strengthening <b>European innovation capacity</b> , including the potential for: <b>a)</b> meaningful contribution of the non-academic sector to the doctoral/research training, as appropriate to the implementation mode and research field <b>b)</b> developing sustainable joint doctoral degree structures (for <i>EJD</i> projects only)	<b>Appropriateness of the management structures and procedures</b> , including quality management and risk management (with a mandatory joint governing structure for <i>EID</i> and <i>EJD</i> projects)
<b>Quality of the supervision</b> (including mandatory joint supervision for <i>EID</i> and <i>EJD</i> projects)	Quality of the proposed measures to exploit and <b>disseminate</b> the project results	Appropriateness of the <b>infrastructure</b> of the participating organisations
<b>Quality of the proposed interaction</b> between the participating organisations	Quality of the proposed measures to <b>communicate</b> the project activities to different target audiences	<b>Competences, experience and complementarity of the participating organisations and their commitment to the programme</b>
<b>50%</b>	<b>30%</b>	<b>20%</b>
<b>Weighting</b>		
<b>1</b>	<b>2</b>	<b>3</b>
<b>Priority in case of <i>ex aequo</i></b>		
<b>Please note that an overall threshold of 70% will be applied to the total weighted score.</b>		

Each proposal will be assessed independently by at least three experts chosen by the REA from the pool of experts taking part in this evaluation. An expert will be designated as the proposal "rapporteur" and will assume additional responsibilities at the end of this phase and in the following phases of the evaluation session.

The proposal will be evaluated against the pre-determined award criteria, applying weighting factors and thresholds.

Evaluation scores will be awarded for each of the three criteria. All of the separate elements of each criterion will be considered by the experts in their assessment.

Each criterion will be scored out of 5. Decimal points may be given.

The scores indicate the following with respect to the criterion under examination:

- 0 - *Proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.*
- 1 - **Poor.** *The criterion is inadequately addressed, or there are serious inherent weaknesses.*
- 2 - **Fair.** *Proposal broadly addresses the criterion, but there are significant weaknesses.*
- 3 - **Good.** *Proposal addresses the criterion well, but a number of shortcomings are present.*
- 4 - **Very Good.** *Proposal addresses the criterion very well, but a small number of shortcomings are present.*
- 5 - **Excellent.** *Proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.*

An example of the evaluation forms that will be used by the experts in this call will be made available on the Participant Portal.

Compliance with the **selection criteria** will also be verified:

#### Operational Capacity

The operational capacity of the proposed beneficiaries is assessed at the proposal stage and also verified during the grant preparation phase for successful proposals. Operational capacity determines whether an applicant has the basic operational resources and capacity to implement the action, and, in particular, their planned role and responsibilities within the proposal (including recruiting, hosting and supervising the research of an Early Stage Researcher). This assessment is based on the information to be provided in the proposal section 5 of the part B (Participating Organisations tables, please see page 53).

Should the experts evaluating the proposal reach a consensus that one or more applicants lack sufficient operational capacity to carry out the tasks assigned to them, the experts will continue to evaluate the proposal as if the applicant(s) in question were not included, i.e. disregarding their activities and their estimated budget.

## Annex 3 – Instructions for Completing Part A of the Proposal

Proposals in this call must be submitted electronically, using the **Electronic Submission Service** of the Commission. It is accessible from the call page on the Participant Portal.

In Part A applicants will be asked for certain administrative details that will be used in the evaluation and further processing of their proposal. Part A constitutes an integral part of the proposal. Details of the work intended to be carried out will be described in Part B (see [Annex 4](#) and [Annex 5](#) of this guide).

The Electronic Submission Service provides guidance on how to complete the Part A, which includes the following steps:

Step 1: Login using the coordinator's ECAS account

Step 2: Selection of the funding scheme

Step 3: Creation of a draft proposal (selection of the Coordinator's PIC, insertion of the Acronym, the Abstract and selection of the scientific panel)

Step 4: Parties: creation of the consortium; Addition of the beneficiaries' PICs first, and then addition of the partner organisations' PICs.



Due to technical limitations of the system, the eligibility of the consortium cannot be automatically checked in case the consortium includes partner organisations. Therefore, the applicants might **not receive any warnings** even if the consortium does not comply with the minimum eligibility criteria. **It is the responsibility of the applicants to ensure that all eligibility criteria are fulfilled.**

Step 5: Upload of Part B1 and B2, and Editing of the form (part A), including the following sections:

- Section 1: General information about the proposal and list of participants, including partner organisations;
- Section 2: Data on participating organisations; all partner organisations must be flagged in the participants table;
- Section 3: Budget (request for funding in terms of person-months);
- Section 4: Ethics table;

Applicants must **validate the form** in order to check if there is no missing information or blocking issue. Applicants save and close the form.

The proposal is at the "Edit proposal" stage.

**Applicants validate the proposal (step 5) for a final check before submission.**

### 1. The Concept of Panels

All eligible proposals will be evaluated under one of the eight major areas of research (known as scientific evaluation "**panels**"): Chemistry (CHE); Social

Sciences and Humanities (SOC); Economic Sciences (ECO), Information Science and Engineering (ENG); Environment and Geo-Sciences (ENV); Life Sciences (LIF); Mathematics (MAT), and Physics (PHY). Experts will evaluate proposals under a given panel regardless of the implementation mode (i.e. ETN, EID or EJD). EID and EJD proposals will then be ranked in separate, multidisciplinary panels, each with its own earmarked budget (€32 million for EID and €35 million for EJD). Each panel will establish a ranked list of proposals for funding.

In the Electronic Submission Service, the applicant chooses the panel to which the proposal will be associated at the proposal stage (using the field "Scientific Panel" in section 1 of the proposal submission forms) and this should be considered as the core discipline. Additional descriptors are used to define the other disciplines that may be involved.

**Applicants should carefully choose the panel and descriptors since this will guide the REA in the selection of experts for proposal evaluation.**

Except for EID and EJD, as noted above, there is no predefined budget allocation among the panels: as a general rule the call budget will be distributed between the panels based on the proportion of eligible proposals received in each panel.

To help applicants select the most relevant panel for their proposal a document providing a **breakdown of each research area into a number of descriptors** is included in this document as Annex 7.

## **2. How to Complete the Part A Forms**

### **• Coordinator**

The coordinator fills in the steps 1 to 4, upload part B1 and B2 in step5 and fills in the sections 1 (general information), 3 (budget), 4 (ethics) of the form. **Numbers and information listed in section 3 (budget) should be the same as those reported in Part B of the proposal. In case of discrepancy, values from the Part A will be deemed to prevail.**

### **• Beneficiaries**

All beneficiaries (including the coordinator) complete section 2 of the form corresponding to their respective organisation.

### **• Partner Organisations**

All partner organisations complete section 2 of the form corresponding to their respective organisation. Providing a Participant Identification Code (PIC) for partner organisations is now mandatory. A flag needs to be added in the participants table (section 2).

### **NOTE on Resubmissions:**

Please note that each evaluation is an independent exercise, and also depends on the level of competition amongst ITN submitted proposals. Over the years proposals are assessed by different evaluators who may express different judgements and opinions.

If you have submitted your proposal (or a very similar one<sup>20</sup>) to the ITN Calls for Proposals MSCA-ITN-2016 or MSCA-ITN-2017, the evaluators will receive a copy of the previous Evaluation Summary Report<sup>21</sup>. In case the evaluation markedly differs from the previous evaluation(s), the evaluators will be instructed to verify that their comments and scores for the current proposal are duly justified. There will be no comparison between proposals.

No reference to the outcome of previous evaluations of a similar proposal should be included in the text. Experts will be strictly instructed to disregard any such references.

### **3. Budget**

When applicants enter the number of recruited researchers and the length of their recruitment, **the system will automatically calculate an indicative budget**. It should be reminded that the budget in part A corresponds to the **budget requested for EU funding** by the applicant.

**Please enter the data for the budget carefully!** The expert evaluators will not comment on the budget but will evaluate the task distribution (e.g. appropriateness of the recruitment plan) under the *Quality and Efficiency of the Implementation* criterion. No further adjustment of this amount will be possible.

NOTE 1: In cases where partner organisations propose to **fund their own participation** in the action, or beneficiaries propose to **fund additional person-months** (over the 540 person-months limit) from another budget source, these person-months should not be requested in Part A of the proposal, but instead be indicated clearly in Part B of the proposal. A clear explanation of this set-up and of the use of own resources should therefore be provided in Part B.

NOTE 2: Family allowances are indicated in the budget as an average of 250 EUR, based on the assumption that half of the ESRs will be eligible to receive this allowance.

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<sup>20</sup> If it differs from the current one in minor ways from the consortium composition and scientific point of view.

<sup>21</sup> See section 4.2 of the "[Grants Manual - Section on: Proposal submission and evaluation](#)"

## Annex 4 – Instructions for Drafting Part B of the Proposal

### 1. General Information

Part B of the proposal contains the details of the proposed research and training programmes along with the practical arrangements planned to implement them. They will be used by the independent experts to undertake their assessment. We would therefore advise applicants to address each of the award criteria as outlined in the relevant sections, using both descriptive text and the tables provided. Please note that the explanatory notes below serve to explain the award criteria without being exhaustive. To draft a proposal, applicants should also consult the current version of the MSCA Work Programme.

Applicants must structure their proposal according to the headings indicated in the Part B proposal template.

Please note that this call will be a single-stage proposal submission and evaluation procedure. **An RTF (rich text format) version** of the submission template can be downloaded from the Electronic Submission Service. Applicants must ensure that their proposals conform to this layout and to the instructions given in this Guide for Applicants.

**NB: For the 2018 call, applicants must submit Part B of their proposal as two separate documents:**

**Document 1 (part B1):** must comprise the Start Page, Table of Contents, List of Participating Organisations data (including non-academic sector and declarations tables), and then Part B sections 1-3. **The maximum total length for this document is 34 pages.** The Start Page must consist of **1 whole page**. The Table of Contents must consist of **1 whole page**. The list of Participating Organisations data, including the non-academic beneficiaries and declarations tables, **must consist of a maximum of 2 whole pages**. If two whole pages are not used for this section, the remaining space must be left blank: **section 1 must start on page 5 of the document**. Of the **maximum 30 pages applied to sections 1, 2 and 3**, applicants are free to decide on the allocation of pages between the sections. However, the overall page limit will be strictly applied and applicants must keep the proposal within the limits. **The Expert evaluators will be strictly instructed to disregard any excess pages above the 34 page limit.**

**Document 2 (part B2):** must consist of Part B sections 4-7. No overall page limit will be applied to this document, but applicants should respect the instructions given per section (e.g. in section 5, a maximum of one page should be used per beneficiary and half a page per partner organisation).

**Note that applicants will not be able to submit their proposals in the submission system unless both documents 1 and 2 are provided.**



**Size limit of the documents:** Please note that the **maximum size for each document is 10 MB**. The upload of any documents above this size limit will fail in the submission system. Applicants are reminded to test the system in advance, and avoid submitting their proposal at the last minute.

The **minimum font size** allowed for the main text is **11** points. The page size is A4, and all **margins** (top, bottom, left, right) should be at least **15 mm** (not including any footers or headers). Ensure that the font chosen is **clearly readable** (e.g. Arial or Times New Roman). As an indication, such a layout should lead to a maximum of between 5,000 and 6,000 possible characters per page (including spaces).

For the Gantt chart and tables, the font size chosen must be clearly legible by the expert evaluators. The minimum font size is therefore 8 points. **Literature references should be listed in footnotes**, font size 8. All footnotes will count towards the page limit.

Please note that the experts will be instructed to **ignore hyperlinks to information** that is specifically designed to expand the proposal, thus circumventing the page limit.

Please make sure that both documents comprising Part B of the proposal carry as a **header to each page** the proposal acronym and the implementation mode applied to (i.e. ETN, EID or EJD). All **pages should also be numbered** in a single series on the footer of the page to prevent errors during handling. It is recommended to apply the following numbering format: "**Part B - Page X of Y**".

For both documents comprising Part B of the proposal, applicants must use exclusively PDF ("Portable Document Format", compatible with Adobe version 3 or higher, with embedded fonts). Other file formats will not be accepted by the Electronic Submission Services of the Commission.

Applicants are instructed to **name their part B1 and B2** as follows:

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

## **2. Letters of Commitment**

**Partner organisations must include a letter of commitment** in Part B (document 2) of the proposal to ensure their real and active participation in the proposed network. Such letters should be signed by an authorized person, scanned and included in section B.7. The expert evaluators will be instructed to disregard the contribution of any partner organisations for which no such evidence of commitment is submitted. Please note however that the content of these letters is not assessed by the expert evaluators.

**Applicants to EJD** must also include in Part B (document 2) of the proposal scanned **letters of institutional commitment** from the beneficiaries awarding doctoral degrees indicating their commitment **to award joint, double or multiple doctoral degrees** within the context of the proposed action. These letters should be signed by the beneficiary's **authorised legal representative**. They should also indicate agreement with the principle that the awarding of such

degrees is a precondition for funding. **A template** for these letters is provided in Annex 6 and **must be followed by all EJD applicants**.

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

### **3. Gender Issues<sup>22</sup>**

Marie Skłodowska-Curie actions pay particular attention to gender equality. In line with the European Charter and Code for Researchers, all MSCA proposals are encouraged to take appropriate measures to facilitate mobility and counter-act gender-related barriers to it. Equal opportunities are to be ensured, both at the **level of supported researchers** and that of **decision-making/supervision**. In research activities where human beings are involved as subjects or end-users, gender differences may exist. In these cases the **gender dimension in the research content has to be addressed as an integral part of the proposal** to ensure the highest level of scientific quality.

As training researchers on gender issues serves the policy objectives of Horizon 2020 and is necessary for the implementation of research and innovation actions, applicants are encouraged to include such activity in their proposals, as appropriate.

### **4. Scientific Misconduct and Research Integrity**

Please note that **the issues of scientific misconduct and research integrity are taken very seriously**. In line with the Horizon 2020 Rules for Participation, appropriate action will be taken against any applicants found to have misrepresented, fabricated or plagiarised any part of their proposal. Coordinators will also be required to make a "declaration on honour" in Part A of the proposal.

It is also expected that procedures for promoting research integrity and managing scientific misconduct will be addressed in the proposal. For example, applicants are encouraged to describe clear procedures for dealing with cases of misconduct (e.g. data fabrication, falsification, plagiarism, misuse of funds, double-funding, etc.) should they arise during implementation.

Principles of research integrity – as set out, for instance, in the [European Code of Conduct for Research Integrity](#)<sup>23</sup> – will apply throughout all Marie Skłodowska-Curie actions.

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<sup>22</sup> See European Commission (2014), *Gender Equality in Horizon 2020*. Available online at: [http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/gender/h2020-hi-guide-gender\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/gender/h2020-hi-guide-gender_en.pdf)

<sup>23</sup> [http://www.esf.org/fileadmin/Public\\_documents/Publications/Code\\_Conduct\\_ResearchIntegrity.pdf](http://www.esf.org/fileadmin/Public_documents/Publications/Code_Conduct_ResearchIntegrity.pdf)

## Annex 5 – Part B Template

In drafting PART B of the proposal, applicants must follow the structure outlined below.

### **DOCUMENT 1 (Proposal Number-Acronym-Part B1)**

**START PAGE (1 page)**

**TABLE OF CONTENTS (1 page)**

**LIST OF PARTICIPATING ORGANISATIONS (max 2 pages)**

---

**START PAGE COUNT (MAX 30 PAGES SECTIONS 1-3)**

- 1. EXCELLENCE (*starting page 5*)**
- 2. IMPACT**
- 3. QUALITY AND EFFICIENCY OF THE IMPLEMENTATION**

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

### **DOCUMENT 2 (Proposal Number-Acronym-Part B2)**

**NO OVERALL PAGE LIMIT APPLIED**

- 4. GANTT CHART**
- 5. CAPACITIES OF THE PARTICIPATING ORGANISATIONS**
- 6. ETHICAL ISSUES**
- 7. LETTERS OF COMMITMENT**

#### **Please note that:**

- *Applicants must ensure that document 1 does not exceed the total page limit of 34 pages. The Start Page must comprise 1 full page; The Table of Contents a maximum of 1 page, the List of Participating Organisations, data for non-academic beneficiaries and declarations table a maximum of 2 pages (if two whole pages are not required, the remaining space must be left blank – section 1 must start on page 5). Sections 1 to 3 must not exceed 30 pages. The expert evaluators will be strictly instructed to disregard any content above these pages limits.*
- *No reference to the outcome of previous evaluations of this or any similar proposal should be included in the text. The expert evaluators will be strictly instructed to disregard any such references.*

## **START PAGE**

MARIE SKŁODOWSKA-CURIE ACTIONS

**Innovative Training Networks (ITN)  
Call: H2020-MSCA-ITN-2018**

PART B

“PROPOSAL ACRONYM”

**This proposal is to be evaluated as:**

**[ETN] [EID] [EJD]  
[delete as appropriate]**

Part B - Page X of Y

## TABLE OF CONTENTS (*max. 1 page*)

## LIST OF PARTICIPATING ORGANISATIONS (*max. 2 pages*)

Please provide a list of the consortium's members (both beneficiaries and partner organisations) indicating the legal entity, the department carrying out the work and the scientist-in-charge of the action.

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

Consortium Member	Legal Entity Short Name	Academic (tick)	Non-academic (tick)	Awards Doctoral Degrees (tick)	Country	Dept. / Division / Laboratory	Scientist-in-Charge	Role of Partner Organisation <sup>24</sup>
<u>Beneficiaries</u>								
- NAME								
<u>Partner Organisations</u>								
- NAME								

### Data for non-academic beneficiaries:

Name	Location of research premises (city / country)	Type of R&D activities	No. of full-time employees	No. of employees in R&D	Web site	Annual turnover <sup>25</sup> (in Euro)	Enterprise status (Yes/No)	SME status <sup>26</sup> (Yes/No)

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

### Declarations

Name (institution / individual)	Nature of inter-relationship

- Applicants **must** use the table above to **declare any inter-relationship between different participating institutions or individuals** (e.g. family ties, shared premises or facilities, joint or part ownership, financial interest, overlapping staff or directors, etc.)

<sup>24</sup> For example, delivering specialised training courses, hosting secondments, etc.

<sup>25</sup> Defined as the total value of sales of goods and services during the last accounting period.

<sup>26</sup> As defined in [Commission Recommendation 2003/361/EC](#)

**START PAGE COUNT – MAX 30 PAGES**

## **1. Excellence (*starting on p.5*)**

### **1.1 *Quality, innovative aspects and credibility of the research programme*** (including inter/multidisciplinary, inter-sectoral and, where appropriate, gender aspects)

Required sub-headings:

- Introduction, objectives and overview of the research programme. For ETN, it should be explained how the individual projects of the recruited researchers will be integrated into – and contribute to – the overall research programme. EJD and EID proposals should describe the research projects in the context of a doctoral training programme
- Research methodology and approach
- Originality and innovative aspects of the research programme (in light of the current state of the art and existing programmes / networks / doctoral research trainings)

The action should be divided in **Work Packages** and described in the table below. The Work Packages should reflect the research objectives. Only brief headings and overviews of the Work Packages should be presented in Table 1.1. More details in terms of actual implementation should be provided in the tables under section 3.1.

**Table 1.1: Work Package<sup>27</sup> (WP) List**

<b>WP No.</b>	<b>WP Title</b>	<b>Lead Beneficiary No.</b>	<b>Start Month</b>	<b>End month</b>	<b>Activity Type<sup>28</sup></b>	<b>Lead Beneficiary Short Name</b>	<b>ESR involvement<sup>29</sup></b>

### **1.2 *Quality and innovative aspects of the training programme*** (including transferable skills, inter/multi-disciplinary, inter-sectoral and, where appropriate, gender aspects)

Required sub-headings:

- Overview and content structure of the training (ETN) or doctoral programme (EID/EJD), including network-wide training events and

<sup>27</sup> A work package is defined as a major subdivision of the proposed action.

<sup>28</sup> For example, research, management, dissemination, etc.

<sup>29</sup> Indicate which ESR(s) will participate in the Work Package in question

complementarity with those programmes offered locally at the participating organisations (please include table 1.2a and table 1.2b)

- Role of non-academic sector in the training programme

**Table 1.2 a Recruitment Deliverables per Beneficiary**

Researcher No.	Recruiting Participant (short name)	Planned Start Month 0-45	Duration (months) 3-36
1.			
2.			
3.			
...			
<b>Total</b>			

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

	Main Training Events & Conferences	ECTS <sup>30</sup> (if any)	Lead Institution	Action Month (estimated)
1				
2				
3				
4				

### **1.3 Quality of the supervision (including mandatory joint supervision for EID and EJD)**

Required sub-headings:

- Qualifications and supervision experience of supervisors
- Quality of the joint supervision arrangements (mandatory for EID and EJD).

To avoid duplication, the role and scientific profile of the supervisors should only be listed in the "Participating Organisations" tables (see section 5 below).

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

#### **Supervision**

Employers and/or funders should ensure that a person is clearly identified to whom Early-Stage 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,

<sup>30</sup> ECTS: European Credit Transfer and Accumulation System.  
[http://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide\\_en.pdf](http://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf)

experience, expertise and commitment to be able to offer the research trainee appropriate support and provide for the necessary progress and review procedures, as well as the necessary feedback mechanisms.

#### **1.4 *Quality of the proposed interaction between the participating organisations***

Required sub-headings:

- Contribution of all participating organisations to the research and training programme
- Synergies between participating organisations
- Exposure of recruited researchers to different (research) environments, and the complementarity thereof

## **2. Impact**

#### **2.1 *Enhancing the career perspectives and employability of researchers and contribution to their skills development***

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

#### **2.2 *Contribution to structuring doctoral/early-stage research training at the European level and to strengthening European innovation capacity, including the potential for:***

- a) Meaningful contribution of the non-academic sector to the doctoral / research training (as appropriate to the implementation mode and research field)
- b) Developing sustainable joint doctoral degree structures (for EJD only)

#### **2.3 *Quality of the proposed measures to exploit and disseminate the results***

Required sub-headings:

- Dissemination of the research results
- Exploitation of results and intellectual property

#### **2.4 *Quality of the proposed measures to communicate the activities to different target audiences***

Required sub-heading:

- Communication and public engagement strategy

Concrete plans for sections 2.3 and 2.4 must be included in the corresponding implementation tables.



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

### **Dissemination, Exploitation of Results**

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

### **Public Engagement**

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

You can also refer to the [Communicating EU research and innovation guidance for project participants](#) as well as to [the "communication" section of the H2020 Online Manual](#).

## **3. Quality and Efficiency of the Implementation**

### **3.1 Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources (including awarding of the doctoral degrees for EID and EJD)**

Required **sub-headings**:

- Work Packages description (please include table 3.1a);
- List of major deliverables (please include table 3.1b), including the awarding of doctoral degrees, where applicable<sup>31</sup>;
- List of major milestones (please include table 3.1c)
- Fellow's individual projects (please include table 3.1d);
- Gantt Chart, including secondment plan (please use template [below](#))<sup>32</sup>.

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

**Table 3.1 a Description of Work Packages**

WP Number	Start Month – End Month
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<sup>31</sup> This could also be after the end of the action

<sup>32</sup> Note that although the Gantt Chart will be assessed under section 3, the chart itself does not count towards the page limit and should be included under section 4.

<b>WP Title</b>	<i>(e.g. including Research, Training, Management, Communication and Dissemination...)</i>
<b>Lead Beneficiary</b>	
<b>Objectives</b>	
<b>Description of Work and Role of Specific Beneficiaries / Partner Organisations</b> <i>(possibly broken down into tasks), indicating lead participant and role of other participating organisations</i>	
<b>Description of Deliverables</b> <i>(brief description and month of delivery)</i>	

**Table 3.1 b Deliverables List**

A **deliverable** is a distinct output of the action, meaningful in terms of the action's overall objectives and constituted by a report, a document, a technical diagram, a software, training, conference, etc. These should be divided into scientific deliverables and management, training, recruitment and dissemination deliverables. Scientific deliverables have technical/scientific content specific to the action. The number of deliverables in a given Work Package must be reasonable and commensurate with the Work Package content. Note that during implementation, the submission of these deliverables to the REA will be a contractual obligation.

<b>Scientific Deliverables</b>						
<b>Deliverable Number<sup>33</sup></b>	<b>Deliverable Title</b>	<b>WP No.</b>	<b>Lead Beneficiary Short Name</b>	<b>Type<sup>34</sup></b>	<b>Dissemination Level<sup>35</sup></b>	<b>Due Date</b>
<b>Management, Training, Recruitment<sup>36</sup> and Dissemination Deliverables</b>						
<b>Deliverable Number</b>	<b>Deliverable Title</b>	<b>WP No.</b>	<b>Lead Beneficiary Short Name</b>	<b>Type</b>	<b>Dissemination Level</b>	<b>Due Date</b>

**Table 3.1 c Milestones List**

**Milestones** are control points in the action that help to chart progress. Milestones may correspond to the completion of a key deliverable, allowing the

<sup>33</sup> Deliverable numbers in order of delivery dates. Please use the numbering convention <WP number>.<number of deliverable within that WP>. For example, deliverable 4.2 would be the second deliverable from Work Package 4.

<sup>34</sup> Please indicate the nature of the deliverable using one of the following codes:  
**R** = Report; **ADM** = Administrative (website completion, recruitment completion, etc.);  
**PDE** = dissemination and/or exploitation of results; **OTHER** = Other, including coordination

<sup>35</sup> Please indicate the dissemination level using one of the following codes:  
**PU** = **Public**: fully open, e.g. web; **CO** = **Confidential**: restricted to consortium, other designated entities (as appropriate) and Commission services; Please consider that deliverables marked as "PU" will automatically be published on CORDIS once approved: the applicants should therefore consider the relevance of marking a deliverable as "PU";  
**CI** = **Classified**: classified information as intended in Commission Decision 2001/844/EC.

<sup>36</sup> Including overall recruitment (e.g. advertising vacancies), Researcher Declarations on Conformity, Career development Plan, training deliverable x, etc. The individual recruitments should only be listed in Table 1.2a

next phase of the work to begin. They may also be needed at intermediary points so that, if problems have arisen, corrective measures can be taken. A milestone may be a critical decision point in the action where, for example, the consortium must decide which of several technologies to adopt for further development.

Number	Title	Related Work Package(s)	Lead Beneficiary	Due Date <sup>37</sup>	Means of Verification <sup>38</sup>

### Table 3.1 d Individual Research Projects

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

Fellow (e.g. ESR1)	Host institution	PhD enrolment (Y/N)	Start date (e.g. Month 6)	Duration (e.g. 36 months)	Deliverables (refer to numbers in table 3.1b)
<b>Project Title and Work Package(s) to which it is related:</b>					
<b>Objectives:</b>					
<b>Expected Results:</b>					
<b>Planned secondment(s):</b> <i>Host, supervisor, timing, length and purpose</i>					
<b>Enrolment in Doctoral degree(s):</b> <b>EJD specific:</b> <i>institutions where the ESR will be enrolled to obtain a joint/double or multiple doctoral degree should be included</i> <b>EID specific:</b> <i>institution where the ESR will be enrolled to obtain a doctoral degree should be included</i> <b>ETN if applicable:</b> <i>institution where the ESR will be enrolled to obtain a doctoral degree should be included</i>					

### 3.2 Appropriateness of the management structures and procedures, including quality management and risk management (with a mandatory joint governing structure for EID and EJD)

Required sub-headings:

- Network organisation and management structure, including financial management strategy, strategy for dealing with scientific misconduct
- Joint governing structure (mandatory for EID and EJD actions)
- For EJD, joint admission, selection, supervision, monitoring and assessment procedures

<sup>37</sup> Measured in months from the action start date (month 1).

<sup>38</sup> 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.

- Supervisory board
- Recruitment strategy
- Progress monitoring and evaluation of individual projects
- Risk management at consortium level (including table 3.2a)
- Intellectual Property Rights (IPR)
- Gender aspects (both at the level of recruitment and that of decision-making within the action)
- Data management plan (see page 21 above regarding the Open Access and Open Data under Horizon 2020)

**Table 3.2a Implementation Risks**

Risk No.	Description of Risk	WP Number	Proposed mitigation measures
R1	e.g. Delay in recruitment	WP x	

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

#### **Recruitment**

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

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

#### **Selection**

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

### **3.3 Appropriateness of the infrastructure of the participating organisations**

Explain the appropriateness of the infrastructure of each participating organisation, as outlined in Section 5 (Participating Organisations), in light of the tasks allocated to them in the action.

### **3.4 Competences, experience and complementarity of the participating organisations and their commitment to the programme**

Required sub-headings:

- Consortium composition and exploitation of participating organisations' complementarities: explain the compatibility and coherence between the tasks attributed to each beneficiary/partner organisation in the action, including in light of their experience;
- Commitment of beneficiaries and partner organisations to the programme (for partner organisations, please see also sections 5 and 7).

**i) Funding of non-associated third countries (if applicable):** Only entities from EU Member States, from Horizon 2020 Associated Countries or from countries listed in General Annex A to the Work Programme are automatically eligible for EU funding. If one or more of the beneficiaries requesting EU funding is based in a country that is not automatically eligible for such funding, the application shall explain in terms of the objectives of the action why such funding would be essential. Only in exceptional cases will these organisations receive EU funding.<sup>39</sup> The same applies for **international organisations** other than IEIO.

**ii) Partner organisations:** The role of partner organisations and their active contribution to the research and training activities should be described. A letter of commitment shall also be provided in section 7 (included within the PDF file, but outside the page limit).

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

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<sup>39</sup> Article 10.2 of the Rules for participation and dissemination in "Horizon 2020" (Regulation (EU) No. 1290/2013 of the European Parliament and of the Council of 11 December 2013).

## **DOCUMENT 2 (no overall page limit applied)**

### **4. Gantt Chart**

***Reflecting ESR recruitments, secondments, training events, management and dissemination / public engagement activities***

	Months	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
Researcher Recruitment	ESR 1													S	S	S	S	S	S																															
	ESR 2																																																	
	ESR 3									S	S	S												S										S	S	S	S													
	ESR 4																																																	
	ESR 5															S	S	S	S												S	S	S																	
	ESR 6																									S	S	S	S	S		S	S	S				S												
Training	Etc.																																																	
	Workshop																																																	
	Conference																																																	
	Visiting Scientist																																																	
	Other																																																	
Management																																																		
	Meetings																																																	
Dissem. / Public engagement	Dissem.																																																	
	Public Engagement																																																	

**S = Secondment<sup>40</sup>**  
**K = Kick-off meeting**  
**E = End of action**

<sup>40</sup> **30% secondment rule:** Under ETN, each recruited researcher can be seconded to other beneficiaries and /or to partner organisations for a duration of up to 30% of his/her recruitment period (this limitation does not apply to EID and EJD, insofar as time spent at other participating organisations occurs in line with the proposal).

## 5. Participating Organisations

All organisations (whether beneficiaries or partner organisations) must complete the appropriate table below. Complete one table of maximum one page per beneficiary and half a page per partner organisation (**minimum font size: 9**).

For **beneficiaries**:

<b>Beneficiary Legal Name:</b>	
<b>General Description</b>	<i>Short description of the activities relevant to the action</i>
<b>Role and Commitment of key persons (including supervisors)</b>	<i>Including names, title and the intended extent of involvement in the action - in <u>percentage of full-time employment</u> - of the key scientific staff who will be involved in the research, training and supervision</i>
<b>Key Research Facilities, Infrastructure and Equipment</b>	<i>Outline the key facilities and infrastructure available and demonstrate that each team has sufficient capacity to host and/or offer a suitable environment for supervising the research and training of the recruited Early-Stage Researchers</i>
<b>Status of Research Premises</b>	<i>Please explain the status of the beneficiary's research facilities – i.e. are they owned by the beneficiary or rented by it? Are its research premises wholly independent from other beneficiaries and/or partner organisations in the consortium?</i>
<b>Previous Involvement in Research and Training Programmes</b>	<i>Detail any relevant EU, national or international research and training actions/projects in which the beneficiary has previously participated</i>
<b>Current Involvement in Research and Training Programmes</b>	<i>Detail any relevant EU, national or international research and training actions/projects in which the beneficiary is currently participating</i>
<b>Relevant Publications and/or Research / Innovation Product</b>	<i>Max. 5</i>

For **partner organisations**:

<b>Partner Organisation Legal Name:</b>	
<b>General description</b>	
<b>Key Persons and Expertise</b>	
<b>Key Research Facilities, Infrastructure and Equipment</b>	
<b>Previous and Current Involvement in Research and Training Programmes</b>	
<b>Relevant Publications and/or Research / Innovation Product</b>	<i>Max. 3</i>

## 6. Ethics Issues

All research activities in Horizon 2020 must respect fundamental ethics principles, including those reflected in the Charter of Fundamental Rights of the European Union.<sup>41</sup> These principles include the need to ensure the freedom of research and the need to protect the physical and moral integrity of individuals and the welfare of animals.

Ethics is an integral part of research from beginning to end, and ethical compliance is seen as pivotal to achieve real research excellence. There is a clear need to make a thorough ethical evaluation from the conceptual stage of the proposal not only to respect the legal framework but also to enhance the quality of the research. Ethical research conduct implies the application of fundamental ethical principles and legislation to scientific research in all possible domains of research.

All proposals considered for funding will be submitted to an Ethics Review procedure. The Ethics Review is the core of the H2020 Ethics Appraisal procedure, which concerns all proposals and actions, and also includes the Ethics Checks and Ethics Audit that can be initiated during the action implementation.

In this context, please be aware that it is the applicants' responsibility to identify any potential ethics issues, to handle the ethical aspects of their proposal, and to detail how they plan to address them.

Should the applicant identify any ethics issues in the Ethics Issues table in Part A of the proposal, then an ethics self-assessment must be included in part B2 Section 6 (Ethics Issues) of the proposal.

The self-assessment in part B2 Section 6 must:

**1) Describe how the proposal meets the national legal and ethics requirements of the country or countries where the tasks raising ethics issues are to be carried out.**

**2) Explain in detail how the consortium intends to address the ethics issues raised in the Ethics Issues table from part A, in particular as regards:**

- Research **objectives** (e.g. study of vulnerable populations, dual use, etc.)
- Research **methodology** (e.g. clinical trials, involvement of children and related consent procedures, protection of any data collected, etc.)
- The potential **impact** of the research (e.g. dual use issues, environmental damage, stigmatisation of particular social groups, political or financial retaliation, benefit-sharing, malevolent use, etc.).

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<sup>41</sup> Charter of Fundamental Rights of the European Union, 2000/C 364/01. See also: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT>



Should the proposal be selected for funding, before the beginning of an activity raising an ethics issue, each beneficiary must have obtained:

- any ethics committee opinion required under national law and
- any notification or authorisation for activities raising ethics issues required under national and/or European law

needed for implementing the action tasks in question.

The documents must be kept on file and be submitted upon request by the coordinator to the Agency.

*If these documents are not in English, they must be submitted together with an English summary, which shows that the action tasks in question are covered and includes the conclusions of the committee or authority concerned (if available).*

For more details, please refer to the "H2020 How to complete your Ethics Self-Assessment" guide.<sup>42</sup>

## 7. Letters of Commitment

Please use this section to insert scanned copies of the required **letters of commitment from partner organisations**. These should be on headed paper and signed in order to demonstrate the credibility of the organisation's commitment to the ITN. There is no specific template for these letters.

**For EJD, letters of institutional commitment** must also be included from those academic beneficiaries that will award the doctoral degrees. These letters should be signed by an **authorised legal representative** of the organisation in question so as to offer reasonable assurance regarding the commitment to award the joint, double or multiple doctoral degree(s). **A template** for these letters is provided and **must be followed by all academic EJD applicants awarding the doctoral degree(s)** (please see Annex 6).

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<sup>42</sup>[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/ethics/h2020\\_hi\\_ethics-self-assess\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020_hi_ethics-self-assess_en.pdf)

## **END PAGE**

MARIE SKŁODOWSKA-CURIE ACTIONS

### **Innovative Training Networks (ITN) Call: H2020-MSCA-ITN-2018**

#### **PART B**

"PROPOSAL ACRONYM"

**This proposal is to be evaluated as:**

**[ETN] [EID] [EJD]  
[delete as appropriate]**

Part B - Page X of Y

## **Annex 6 – Template of Institutional Commitment letter for EJD participants awarding a joint/double or multiple degree**

*- On headed paper of the Institution or of the Doctoral School*

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

I undersigned<sup>43</sup> ....., in my quality of Legal Authorized Representative of<sup>44</sup> ....., commit to set up all necessary provisions to award a joint/double/multiple<sup>45</sup> research doctoral degree in the frame of the EJD proposal<sup>46</sup> ..... submitted within the call H2020-MSCA-ITN-20... should the proposal be funded.

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

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

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

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

*Name, date, signature*

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<sup>43</sup> First name and surname

<sup>44</sup> Name of the Institution/Doctoral School

<sup>45</sup> Choose the relevant one(s)

<sup>46</sup> Title of the proposal

## Annex 7 – Guidance for Descriptors Selection and List of Descriptors

### Guidance for Descriptors Selection

The European Training Networks (ETN) will have a ranking list for each of the eight (8) areas of research described in Annex 3.1. For the European Industrial Doctorate (EID) and European Joint Doctorate (EJD) panels, one multidisciplinary ranking list for each will be created.

**In the electronic submission system (SEP) the applicants should choose the scientific area and descriptors (keywords) carefully since this will guide the REA in the selection of the most appropriate experts for the proposal evaluation. The number of descriptors will range from three (3) to five (5) as explained below. Applicants must:**

- 1) Select the **area of research** (e.g.: CHE) in which the proposal best fits, in **section 1** of the proposal submission forms (or earlier at step 3). This should be considered as the core discipline of the proposal.
- 2) Within the most relevant **sub-area of research** (e.g.: C1-Inorganic Chemistry), select **the first descriptor** that best characterises the subject of the proposal (e.g. Catalytic materials).
- 3) **The second descriptor** that best characterises the subject of the proposal must be selected within the area of research (e.g.: CHE) that has been selected in step 3 or in section 1.
- 4) **Third descriptor:** it is mandatory to select at least one (1) additional descriptor which can be chosen from any of the eight (8) areas of research.
- 5) If needed you may **add further two (2) additional descriptors** chosen freely.

Please note that you should select the descriptors **in order of importance**, the first being the most important.

To help you select the most relevant area for your proposal, the **following list provides a breakdown of each scientific area into a number of descriptors**.

**List of Descriptors**

Chemistry (CHE)	Area of research
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C1 – Inorganic Chemistry

Bioinorganic chemistry  
 Catalytic materials  
 Coordination chemistry  
 Chemistry of non-metals  
 Inorganic chemistry  
 Organometallic chemistry  
 Radiation and nuclear chemistry  
 Solid state materials

C2 – Organic, Polymer and Molecular Chemistry

Carbohydrates  
 Chirality  
 Click chemistry  
 Combinatorial chemistry  
 Heterocyclic chemistry  
 Macromolecular chemistry  
 Molecular architecture and structure  
 Molecular chemistry  
 Natural product synthesis  
 Nucleic acid chemistry  
 Organic chemistry  
 Organic reaction mechanisms  
 Peptide chemistry  
 Polymer chemistry  
 Stereochemistry  
 Supramolecular chemistry  
 Synthetic organic chemistry

C3 – Physical and Analytical Chemistry

Analytical chemistry  
 Chemical instrumentation and instrumental techniques  
 Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions  
 Chemistry of condensed matter  
 Crystallography and X-ray diffraction  
 Chromatography  
 Colloid chemistry  
 Corrosion  
 Crystallisation  
 Electrochemistry, electro dialysis, microfluidics, sensors  
 Forensic chemistry  
 Homogeneous catalysis  
 Heterogeneous catalysis

Ionic liquids  
Magnetic resonance  
Mass spectrometry  
Method development in chemistry  
Microscopy  
Molecular dynamics  
Molecular electronics  
Photocatalysis  
Photochemistry  
Physical chemistry  
Physical chemistry of biological systems  
Quantum chemistry  
Separation techniques/extraction  
Spectroscopic and spectrometric techniques  
Surface chemistry  
Theoretical and computational chemistry  
Trace analysis

#### C4 – Applied and Industrial Chemistry

Batteries  
Biological chemistry, biochemistry  
Biomaterials, biomaterial synthesis  
Ceramics  
Coating  
Enzymology  
Food chemistry  
Fuel cells  
Graphene, carbon nanotubes  
Green chemistry  
Hydrogen production/storage  
Intelligent materials, self-assembled materials  
Materials for sensors  
Medicinal chemistry  
Nanochemistry  
Nano-materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles  
Pharmaceutical processes and production, Regulatory aspects, quality assurance, good manufacturing practice  
Plastics  
Porous materials, metal organic framework (MOFs)  
Solar cells  
Structural properties of materials  
Surface modification  
Targeted drug delivery/discovery  
Thin films  
Toxicology  
Water splitting  
Water treatment/purification

<b>Economic Sciences (ECO)</b>	<b>Area of research</b>
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E1 - Economics

Applied research econometrics  
 Behavioural and experimental economics  
 Economic geography  
 Economic growth  
 Economic history  
 Economics of education  
 Environment economics  
 Financial econometrics  
 Game theory  
 Global macroeconomic challenges  
 Health economics  
 Industrial economics  
 International trade  
 Labour economics  
 Macroeconomics theory  
 Monetary economics, international finance  
 Political economy  
 Public economics  
 Social economics, welfare economics  
 Statistics and big data  
 Urban and regional economics

E2 – Economic Development

Circular economy  
 Cluster development  
 Environment issues in development economics  
 Key enabling technologies for development  
 Natural resources management  
 Public administration  
 Research & Open innovation, competitiveness

E3 – Management

Corporate governance and management  
 Human resources management  
 Industrial organisation  
 Research and innovation management  
 Start-up's, new business models in entrepreneurship, social entrepreneurship  
 Strategy, marketing  
 Value chain and optimisation

E4 – Finance

Accounting, international accounting standards, reporting, tax issues related to accounting  
 Banks, insurance companies, financial intermediaries & fund, credit rating agencies  
 Corporate finance, fundamentals analysis, capital budgeting, venture capital, risk assessment  
 Financial markets, stock markets, fixed income markets, other markets  
 Investments, asset pricing, bonds, derivatives, commodities

<b>Information Science and Engineering (ENG)</b>	<b>Area of research</b>
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### G1 - Computer science and informatics

Algorithms, distributed, parallel and network algorithms, algorithmic game theory  
 Artificial intelligence, intelligent systems, multi agent systems  
 Bioinformatics, e-Health, medical informatics  
 Cognitive modelling, cognitive engineering, cognitive sciences  
 Complexity and cryptography, electronic security, privacy, biometrics  
 Theorem proving, symbolic, algebraic computations  
 Pervasive computing, ubiquitous computing, ambient intelligence, internet of things  
 Computer games, computer geometry, multi-media, augmented and virtual reality  
 Computer graphics, computer vision, multi media, computer games  
 Parallel/distributed systems, GPGPU, grid, cloud processing systems  
 E-commerce, e-business, computational finance  
 E-learning, user modelling, collaborative systems  
 Intelligent robotics, cybernetics  
 Internet and semantic web, ontologies, database systems and libraries  
 Machine learning, data mining, statistical data processing and applications  
 Modelling engineering, human computer interaction, natural language processing  
 Numerical analysis, simulation, optimisation, modelling tools,  
 Scientific computing and data processing  
 Sensor networks, embedded systems, hardware platforms  
 Software engineering, operating systems, computer languages  
 Neural networks, connectionist systems, fuzzy logic  
 Evolutionary computing, biologically-inspired computing  
 Theoretical computer science, formal methods  
 Quantum computing, DNA computing, photonic computing

### G2 - Systems and Communication Engineering: Electrical, electronic, communication, optical and systems engineering

Control Engineering  
 Diagnostic and implantable devices, environmental monitoring  
 Electrical and electronic engineering: semiconductors, components, systems  
 Electronics, photonics



Human-computer-interfaces  
 Nano engineering  
 Networks (communication networks, sensor networks, networks of robots, etc.)  
 Optical engineering, photonics, lasers  
 Signal processing  
 Simulation engineering and modelling  
 Systems engineering, sensorics, actrics, automation  
 Wireless communications, communication, high frequency, mobile technology

G3 - Products and Processes Engineering: Product design, process design and control, construction methods, civil engineering, energy processes, material engineering

Aerospace engineering  
 Architecture, smart buildings, smart cities, urban engineering  
 Chemical engineering, technical chemistry  
 Civil engineering  
 Computational engineering and computer aided design  
 Energy collection, conversion and storage, renewable energy  
 Energy systems, smart energy, smart grids, wireless energy transfer  
 Environmental engineering and geotechnics  
 Fluid mechanics, hydraulic-, turbo-, and piston engines  
 Industrial bioengineering  
 Industrial design (product design, ergonomics, man-machine interfaces, etc.)  
 Lightweight construction, textile technology  
 Maritime engineering  
 Materials engineering  
 Mechanical and manufacturing engineering (shaping, mounting, joining, separation)  
 Production technology, process engineering  
 Sustainable design (for recycling, for environment, eco-design)  
 Transport engineering, intelligent transport systems  
 Waste treatment

Environmental and Geosciences (ENV)	Area of research
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V1 - Environment and society

Clean technologies, circular economy, life cycle assessment  
 Environmental determinants of health  
 Environmental regulations, climate negotiations and citizen science  
 Environmental risk assessment, monitoring  
 Mobility and transportation  
 Social and industrial ecology, sustainable development  
 Spatial and regional planning (including landscape and land management), GIS  
 Urbanization and urban planning, cities  
 Waste, by-products and residue management (including from agriculture)

V2 - Earth system science

Atmospheric chemistry, atmospheric composition, air pollution, indoor air quality  
Biogeochemistry, biogeochemical cycles  
Clean exploration and exploitation of natural resources  
Climatology and climate change  
Cryosphere, dynamics of snow and ice cover, sea ice, permafrost and ice sheets  
Earth observations from space/remote sensing  
Environmental chemistry, environmental forensics  
Geochemistry, crystal chemistry, isotope geochemistry  
Geology, tectonics, volcanology, physics of earth's interior, seismology  
Hydrology, water management  
Meteorology, atmospheric physics and dynamics  
Mineralogy, petrology, igneous petrology, metamorphic petrology  
Natural hazards  
Noise pollution  
Oceanography, marine science, coastal engineering  
Paleoclimatology, paleoecology  
Physical geography  
Pollution (water, soil, sediment), rehabilitation and reconstruction of polluted areas, clean technologies  
Sedimentology, soil science, palaeontology  
Terrestrial ecology, land cover change

### V3 - Evolutionary, population and environmental biology

Animal behaviour  
Biogeography, macro-ecology  
Biodiversity, conservation biology  
Comparative biology  
Ecology  
Ecotoxicology  
Environmental, marine and freshwater biology  
Population biology, population dynamics, population genetics  
Species interactions (e.g. food-webs, symbiosis, parasitism, mutualism, bio-invasion)  
Systems evolution, biological adaptation, phylogenetics, systematics

### V4 - Food Science, Agriculture, Forestry and Non-Medical Biotechnology

Agriculture production systems (animals)  
Agriculture production systems (crops), including fertilisation and nutrient management  
Applied plant biology  
Applied biotechnology (non-medical), bioreactors, applied microbiology  
Aquaculture, fisheries  
Biohazards, biological containment, biosafety, biosecurity  
Biomass and biofuels production  
Biomimetics

Crop protection, pest and disease control  
 Environmental biotechnology, bioremediation, biodegradation  
 Food sciences, safety, traceability, authenticity, agroindustry  
 Forestry and forest management, agroforestry  
 Soil biology, soil functionality, soil management

Life Sciences (LIF)	Area of research
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### L1 - Molecular and Structural Biology

Biophysics (e.g. transport mechanisms, bioenergetics, fluorescence)  
 DNA synthesis and degradation  
 DNA repair and recombination  
 Molecular metabolism  
 Molecular interactions  
 Protein synthesis, folding, modification and turnover  
 Lipid synthesis, modification and turnover  
 Carbohydrate synthesis, modification and turnover  
 RNA synthesis, processing, modification and degradation  
 Structural biology (e.g. crystallography, EM, NMR, PET)

### L2 - Genetics, Genomics, Bioinformatics and Systems Biology

Applied genetic engineering, transgenic organisms, recombinant proteins, biosensors  
 Bioinformatics  
 Biological systems analysis, modelling and simulation  
 Biostatistics  
 Computational biology  
 Epigenetics and gene regulation  
 Genetic epidemiology  
 Genomics and functional genomics  
 Genetic and genomic variation and related disorders  
 Comparative, evolutionary and population genomics  
 Chromosome structure organisation and dynamics  
 Metabolomics (including glycomics)  
 Molecular genetics, reverse genetics and RNAi  
 Proteomics  
 Quantitative genetics  
 Systems biology  
 Transcriptomics  
 Plant genetics  
 Genome editing  
 Genetic pharmacology

### L3 - Cellular and Developmental Biology

Developmental biology and technology

Pattern formation and embryology in animal organisms  
Molecular transport mechanisms  
Mechanisms of growth control and cell proliferation  
Cell differentiation, physiology and dynamics  
Morphology and functional imaging of cells  
Organelle biology  
Plant development pattern formation and embryology in plants  
Molecular mechanisms of signal transduction  
Stem cells and cellular programming  
Mechanisms and dynamics of cell migration

#### L4 - Physiology, Pathophysiology and Endocrinology

Ageing  
Cancer and its biological basis  
Cardiovascular diseases  
Comparative physiology  
Endocrinology  
Metabolism, biological basis of metabolism related disorders  
Organ physiology and pathophysiology  
Environmental physiology  
Rare/orphan Diseases  
Reproductive biomedicine (reproductive physiology and endocrinology, infertility and pregnancy research)

#### L5 - Neurosciences and neural disorders

Behavioural neuroscience (e.g. sleep, rhythms, speech, handedness)  
Cognitive neuroscience (e.g. learning, memory, emotions, consciousness)  
Neural development and neuroplasticity  
Mechanisms of pain  
Molecular and cellular neuroscience  
Neuroanatomy and excitability  
Physiology of nerves and motor systems  
Medicines, psychoactive drugs and pharmacology, poison.  
Neuroimaging and computational neuroscience  
Neurological disorders (e.g. Alzheimer's disease, Huntington's disease, Parkinson's disease)  
Psychiatric disorders and clinical psychology (e.g. schizophrenia, autism, Tourette's syndrome, obsessive compulsive disorder, depression, bipolar disorder, attention deficit hyperactivity disorder, addiction)  
Sensory perception (nose and smell, tongue and taste, eyes and vision, ears and hearing, skin, pain, touch and movements)

#### L6 - Immunity and infection

Bacteriology  
Biological basis of cancer immunity  
Biological basis of auto-immunity/tolerance  
Biological basis of immunity related inflammatory disorders

Biological basis of other immunity related disorders  
 Cellular and adaptive immunity  
 Immunogenetics  
 Immunological memory and tolerance  
 Immunosignalling  
 Microbiology  
 Parasitology  
 Phagocytosis and innate immunity  
 Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide)  
 Veterinary medicine and infectious diseases in animals  
 Virology

#### L7 - Diagnostic tools, therapies and public health

Diagnostic tools (e.g. genetic, molecular diagnostic)  
 Drug discovery and design (formulation and delivery)  
 Drug therapy and clinical studies  
 In vivo bio and medical imaging  
 In vitro cell and tissue imaging  
 Environment and health risks, occupational medicine  
 Gene therapy, cell therapy, regenerative medicine  
 Tissue regeneration and engineering  
 Immunotherapy (vaccine discovery, genetic vaccines)  
 Health services, health care research  
 Medical engineering and technology  
 Personalised medicine (diagnostic/prognostic biomarker, patient-orientated management solutions)  
 Pharmacology, pharmacogenomics  
 Public health and epidemiology  
 Radiation therapy  
 Surgery

Mathematics (MAT)	Area of research
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#### M1 - Mathematics

Algebraic geometry  
 Algebraic number theory  
 Algebraic topology  
 Algorithms and complexity  
 Analytic number theory  
 Category theory and algebraic structures  
 Combinatorics  
 Complex analysis  
 Complex geometry  
 Differential Geometry  
 Functional analysis  
 Game Theory  
 General topology

Graph Theory  
 Group Theory  
 Harmonic analysis  
 Homological algebra  
 Low dimensional topology  
 Mathematical logic and set theory  
 Non commutative Geometry  
 Ordinary Differential Equations and Dynamical Systems  
 Partial Differential Equations  
 Probability  
 Ring theory  
 Set theory

## M2 – Applied Mathematics

Control Theory  
 Data Analysis  
 Mathematical aspects of Biology  
 Mathematical aspects of Computer Science  
 Mathematical aspects of Economy and Finance  
 Mathematical aspects of Physics  
 Mathematics in Engineering and other Applied Sciences  
 Numerical analysis and scientific computing  
 Operational Research  
 Optimization  
 Scientific Computing  
 Statistics

Physics (PHY)	Area of research
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### P1 – Particle and Nuclear Physics

Fundamental interactions and fields  
 Neutrino oscillations  
 Nuclear physics, heavy ions  
 Nuclear physics, nuclear structure  
 Particle accelerators and detectors  
 Particle physics, experiment  
 Particle physics, theory/phenomenology  
 Supersymmetric particles  
 Quantum chromodynamics  
 Quantum field theory

### P2 – Atomic and molecular physics, optics

Atomic physics  
 Chemical Physics  
 Cold/Ultra-cold atoms and molecules  
 Laser physics

Metrology and measurement  
 Molecular physics  
 Nano-optics  
 Non linear optics  
 Interferometry  
 Optical physics  
 Photonics  
 Statistical physics (gases)  
 Quantum optics  
 Quantum electrodynamics

### P3 - Condensed matter physics

- Condensed matter, thermal properties
- Condensed matter, transport properties
- Condensed matter, mechanical and acoustical properties, lattice dynamics
- Electronic properties of materials, surfaces, interfaces...
- Films and Interfaces
- Fluid dynamics
- Gas and plasma physics
- High pressure physics
- Low-temperature physics
- Magnetism and strongly correlated systems
- Mesoscopic physics
- Nanophysics: nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics, etc.
- Phase transitions, phase equilibria
- Polymer physics
- Semiconductors and insulators
- Soft condensed matter
- Spintronics
- Statistical mechanics (condensed matter)
- Structure of solids and liquids
- Superconductivity
- Superfluids
- Surface Physics

#### P4 – Astrophysics, Cosmology, Space science

- Active Galactic Nucleus (AGN) , QSO
- Astrobiology, astrochemistry
- Astrometry
- Astronomical instrumentation: telescopes, detectors, techniques
- Astrophysical jets, accretion phenomena
- Big bang nucleosynthesis
- Clusters of galaxies and large scale structures
- Cosmic Microwave Background (CMB)
- Cosmology
- Dark matter, dark energy
- Formation and evolution of galaxies

Formation, structure and evolution of stars  
 Extrasolar planets and exoplanets  
 Gravitational lensing  
 Gravitational waves  
 High energy astrophysics  
 Interstellar medium  
 Nuclear astrophysics  
 Radio astronomy  
 Relativistic astrophysics  
 Solar physics  
 Solar system and planetary science  
 Space weather

**P5 – Applied physics**

Acoustics  
 Agrophysics  
 Biophysics and biophysical techniques  
 Communication Physics  
 Complex systems, Networks  
 Computational Physics  
 Geophysics  
 Laser applications  
 Medical Physics  
 Nanotechnology: nanomaterials, tools and techniques, applications of nanotechnology  
 Optical engineering  
 Optoelectronics  
 Photodetectors  
 Photonics applications  
 Photovoltaics and solar cells  
 Plasmonics  
 Quantum electronics  
 Quantum Technology and Quantum Devices  
 Solid-state devices

<b>Social Sciences and Humanities (SOC)</b>	<b>Area of research</b>
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**S1 - Sociology, social anthropology**

Ageing, health social policies  
 Attitudes and values  
 Demography, population issues and policies  
 Fertility, family dynamics, policies  
 Gender studies  
 Globalization, glocalization, antiglobalism  
 Inequalities, discrimination, prejudice, aggression and violence, antisocial behaviour  
 Kinship, cultural dimensions of classification and cognition, identity



Migration, refugees, asylum, interethnic relations, conflicts and integration of migrants  
Myth, ritual, symbolic representations, religious studies  
Qualitative methods, ethnography, case studies  
Rural population, agriculture, innovation, depopulation  
Social economy, social entrepreneurship  
Social influence, power and group behaviour, classroom management  
Social integration, exclusion, inequalities, participation and prosocial behaviour  
Social structure, social mobility  
Social theory  
Social welfare and neoliberalism  
Sociology of education  
Sociology of knowledge  
Transformation of societies, democratization, social movements  
Urban sociology, urban theory, urban studies, global cities, territorialisation  
Work, employment, precariousness  
Youth studies

## S2 - Political science

Comparative politics  
Development studies  
Electoral politics, Political parties, Citizenship and public engagement  
EU and European politics  
Foreign policy  
Game theory, Logic of collective choice  
Human, economic and social geography  
International relations, Global governance, International politics and history; Geopolitics  
Migration policy  
Political economy  
Political systems and institutions, governance  
Political theory, Political thought, Political philosophy; Ideologies  
Politics of gender, Race, Discrimination and inequalities; Identity politics  
Public administration, Public policies  
Regional and territorial politics  
Relations with public interest groups  
Theories of conflict, violence and security; Negotiation and mediation

## S3 - Law

Business, corporate and securities law  
Comparative law  
Criminal law  
Education law  
Employment and labour law, social law  
European law  
Family and juvenile law

Health law  
Intellectual property and innovation law; Data protection law, IT law  
International law, human and civil rights; Violence, conflict and peacebuilding  
Legal systems, constitutions, foundations of law  
Private law, consumer protection law  
Public law, immigration law, environmental law  
Sports and entertainment law

#### S4 - Communication

Communication networks, media, including social media, information society  
Crisis communication theory and procedures  
Digital social research, audiovisual social services  
Information & communication technology and the world of work  
Information society and education  
Institutional communication  
Lobbying  
Political communication and strategy  
Social communication, verbal and non verbal communication  
Social studies of science and technology

#### S5 - Cognition, psychology, linguistics

Biological psychology: mind-body connection, health, stress and disease  
Cognitive psychology: learning, cognition  
Development across the life-span and developmental psychopathology  
Ergonomics, human factors, user modelling, and neuroergonomics  
Evolution of mind and cognitive functions, animal communication  
Formal, cognitive, functional and computational linguistics  
Neuropsychology and neurolinguistics  
Psycholinguistics: acquisition, comprehension, production  
Socio-cultural psychology and social cognition  
Typological, historical and comparative linguistics  
Use of language: pragmatics, sociolinguistics, discourse analysis, second language teaching and learning, lexicography, terminology

#### S6 - Philosophy

Aesthetics and philosophy of culture and anthropology  
Analytic philosophy  
Epistemology, logic, philosophy of science  
Ethics and morality, bioethics  
History of philosophy  
Metaphysics  
Phenomenology  
Philosophy of religion  
Social and political philosophy

#### S7 - Education

Education systems, institutions and policies, sociology of education  
Educational assessment, feedback  
Learning technologies, e-learning, tutoring systems, learning analytics  
Lifelong learning, workplace learning and training, heutagogy  
Philosophy of education, human development  
Teaching and learning methodologies, pedagogy, andragogy, psychology of education

S8 - Literature, arts, music, cultural and comparative studies

African literature  
Classics, ancient Greek and Latin literature and art  
Comparative literature  
Computational modelling and digitisation in the cultural Sphere  
Contemporary literature  
Cultural memory, intangible cultural heritage  
Cultural studies, cultural diversity  
History of art and architecture, arts-based research  
History of art criticism  
History of books, codicology  
History of collections  
History of fashion design  
History of literature  
Latin American literature  
Library and archival science; Librarianship  
Literary theory and comparative literature, literary styles  
Medieval literature  
Modern literature  
Museums and exhibitions, conservation and restoration  
Music and musicology, history of music  
Oriental and East Asian literature  
Textual philology, palaeography and epigraphy  
Visual arts, performing arts, film, design

S9 - Archaeology, history and memory

American archaeology, art and culture  
Ancient history  
Asian archaeology, art and culture  
Classical archaeology and art, history of archaeology  
Collective memories, identities, lieux de mémoire, oral history  
Colonial and post-colonial history, global and transnational history, entangled histories  
Cultural heritage, cultural memory  
Cultural history; History of collective identities and memories  
Diplomatics  
Early and modern archaeology  
Egyptology and ancient near eastern archaeology, art and culture  
Gender history  
General archaeology, archaeometry, landscape archaeology

Historiography, theory and methods in history, including the analysis of digital data  
History of ideas, intellectual history, history of science, techniques and technologies  
Industrial archaeology  
Medieval history  
Military history  
Modern and contemporary archaeology  
Modern and contemporary history  
Numismatics, epigraphy  
Prehistory, palaeoanthropology, palaeodemography, protohistory  
Social, economic, cultural and political history