

### HORIZON EUROPE (2021-27)

#### Marie Skłodowska-Curie Actions (MSCA)

#### **Project Writing Camp**

#### Leading an MSCA Staff Exchange (SE) Proposal

ANKARA

Thursday, 23d of November 2023

Friday, 24<sup>th</sup> of November 2023

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#### PART A

### Intelligence behind MSCA Staff Exchange Calls



Eligibility and admissibility criteria



**Evaluation process and criteria: what counts to be funded!** 



### Staff Exchange (SE) Eligibility

## Staff Exchange' grants are open to international consortia of universities, research institutions, businesses, SMEs and other non-academic organisations

<u>Minimal conditions</u> for setting up MSCA SE Staff Exchanges consortiums are:

1) Organisations: Composed of at least 3 legal entities independent of each other

2) **Countries**: Organisations established in **3 different countries**, of which at least 2 must be in different EU Member States (MS) and/or Horizon Europe Associated Countries (AC).

above this minimum, the participation of organisations from any country is possible, including Third Countries (TC)

3) Sectors: For consortia composed of organisations established in Member States/Associated Countries only, at least one organisation should belong to a different sector (academic or non-academic). If all participating organisations are from the same sector, there must be at least one organisation from a non-associated third country



#### EU Member States (MS) and their overseas Countries and Territories

#### Horizon Europe Associated Countries (AC) (17 in total + Marocco and UK)

#### Horizon Europe Third Countries (TC), as listed in the Annex of the Work Programme 2023-24

# **Only <u>middle-income third countries</u> included in the List of Participating Countries in Horizon Europe are eligible for funding:** Afghanistan, Algeria, Angola, Argentina, Azerbaijan – Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Botswana, Burkina Faso, Burundi – Cabo Verde, Cambodia, Cameroon, Central African Republic, Chad, Colombia, Comoros, Congo (Democratic Republic), Congo (Republic), Costa Rica, Côte d'Ivoire, Cuba – Djibouti, Dominica, Dominican Republic, Ecuador, Egypt (Arab Republic), El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia – Fiji – Gabon, Gambia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana – Haiti, Honduras – Indonesia, Iran (Islamic Republic), Iraq – Jamaica, Jordan – Kazakhstan, Kenya, Kiribati, Korea (Democratic People's Republic), Kyrgyz Republic – Lao (People's Democratic Republic), Lebanon, Lesotho, Liberia, Libya – Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Micronesia (Federated States), Mongolia, Morocco, Mozambique, Myanmar – Namibia, Nepal, Nicaragua, Niger, Nigeria – Pakistan, Palestine7, Papua New Guinea, Paraguay, Peru, Philippines – Rwanda – Samoa, São Tomé and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Syrian Arab Republic – Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Tunisia, Turkmenistan, Tuvalu – Uganda, Ukraine, Uzbekistan – Vanuatu, Venezuela (Bolivarian Republic), Vietnam – Yemen Republic – Zambia, Zimbabwe

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation\_horizon-euratom\_en.pdf

#### **Eligible organisations**

#### **Academic Sector**

Higher Education Establishments (public or private universities) awarding academic degrees

Non-profit research organisations (public or private research centres) whose primary mission is to pursue research

International European Interest organisations (IERO)



#### **Non-Academic Sector**

Any socio-economic actor not included in the academic sector fulfilling the requirements of the Horizon 2020 Rules for participation (industry, SMEs, business, government, civil society organisations, cultural institutions, hospitals)





Applications must be submitted **before the call deadline**, **electronically** 

Must be complete, readable, accessible and printable

Must include a **plan for the exploitation and dissemination of results** 

Participating organization (i.e. Public bodies, HE establishments and Research organisations) must have a <u>GeP (Gender Equality Plan)</u>



### **Evaluation process**

Individual evaluation

### Experts assess proposals (max 7) individually and remotely

Minimum of three experts per proposal. Normally it is 4 evaluators, one of which acting also as **rapporteur**  Consensus group

All individual experts agree on a **common position**, including comments and scores for each proposal (and define **final ESR**)

Meetings (*Vice chair, evaluators and rapporteur*) managed remotely!



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

Rank the proposals per scientific panel (there are 8 panels)

Development of Final/unique ranking list by REA, and ESRs sent to all applicants

**Finalisation** 



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#### **EVALUATION CRITERIA**

Excellence	Impact	Quality and efficiency of the implementation									
Quality and pertinence of the research/innovation project (and the extent to which they are ambitious, and go beyond the state of the art)	Developing new and lasting research collaborations, achieving transfer of knowledge between participating organisations and contribution to improving research and innovation potential at the European and global level	Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages									
Soundness of the proposed methodology (including international, interdisciplinary and inter-sectoral approaches, consideration of the gender dimension and other diversity aspects if relevant for the research project, and the quality and appropriateness of open science practices)	Credibility of the measures to enhance the career perspectives of staff members and contribution to their skills development	Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise									
Quality of the proposed interaction between the participating organisations and of the foreseen deliverables in light of the research and innovation objectives.	Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities										
	The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts.										
50%	30%	20%									

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Each criterion will be scored out of 5

### MSCA Staff Exchange (SE)

### **PART B** Intelligence behind MSCA SE winning proposals



Call 2023 objectives and expected impact Documents and policies to consider Key points to consider for the Call 2023 Setting of secondments and eligible staff Consortium synthesis

What is financially covered?



### MSCA Staff Exchanges Call What is for?

To promote international and intersectoral collaborations across the globe, through R&I staff exchanges

The SE action funds short-term exchanges of research staff based in Europe, and beyond

To foster the sharing of knowledge and ideas for the advancement of science and the development of innovation

**Staff** benefits include new knowledge, skills and career development.

To **strengthen the interaction** between organisations in the academic and non-academic sectors, and between Europe and Third Countries

Provides funding for international, inter-sectoral and interdisciplinary staff mobility based on collaborative projects



### **Programme/Call/projects Expected Impact**

#### For staff members

- Increased set of research and transferable skills and competences, leading to improved employability and career prospects within and outside academia
- 2. More knowledge and innovative ideas converted into products, processes and services;
- 3. More entrepreneurial mind-sets, testing new and innovative ideas
- 4. Increased international exposure leading to extended networks and opportunities

#### For participating organisations:

- 1. Innovative ways of cooperation and transfer
  - of knowledge between sectors and disciplines
- Strengthened and broader international, interdisciplinary and inter-sectoral collaborative networks
- 3. Boosted R&I capacity



#### Underlying principles to be recalled in each project proposal

*European Charter for Researchers and the Code of Conduct* for the Recruitment of Researchers. To be recalled for training, institutional and working environment <a href="https://euraxess.ec.europa.eu/jobs/charter">https://euraxess.ec.europa.eu/jobs/charter</a>

*Innovative Doctoral Training Principles.* A total of **7 principles** (i.e. attractive environment, open science, quality check, international and intersectoral training opportunities, excellent supervision arrangements, others) **To be recalled in the Training supervision part** 

**Open Science (**example publishing platform and open peer review: <u>https://open-research-europe.ec.europa.eu/</u>) Must be inserted in section 1.2 Methodology. Must include FAIR data handling. In section 2.2 Open Science in terms of dissemination and exploitation plan A Data Management Plan (DMP) due at the beginning of each project (deliverable by M6)

FAIR = Findable, Accessible, Interoperable, Reusable

**MSCA Green Charter** (<u>https://marie-sklodowska-curie-actions.ec.europa.eu/about-msca/msca-green-charter</u>)



A) Bottom-up approach: all fields of research and innovation are covered

B) All **types of organisations** and **countries** can participate (MS, AC and TC)- but not all TC are eligible for funding

C) Support is provided for **international, inter-sectoral and interdisciplinary mobility** of R&I staff leading to knowledge transfer between participating organisations (e.g. joint research and innovation projects and collaborations)- **secondments** 

D) Open to research, technical and managerial staff supporting R&I activities

4 years for project implementation MAX number of fellow-months in project: **360** 



#### MSCA SE Call is **open to all domains** of research and innovation

### The research fields are freely chosen by applicants and researchers: in Part A selection of main scientific panel and key words

Projects might complement *top-down collaborative research activities*, notably contributing to the Horizon Europe Missions



**At least** 3 legal entities in 3 different countries, 2 of which in a different EU Member State or HE Associated Country

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If organisations are from the **same sector** (academic or non-academic), there must be at least 1 organisation from a non-associated Third Country



### **B)** Level of project participation

#### **Beneficiaries**: signatory to the grant agreement

- Full partners
- They contribute directly to the implementation of the transfer of knowledge and training activities
- Must second staff
- Must provide training /host staff
- Claim costs directly

Organisations from EU Member State or Horizon Europe Associated Country not requesting EU funding can participate as associated partners. **Associated partners**: non-signatory of the grant agreement

- Entities which participate in the action but without the right to charge costs or claim contributions
- Must second staff
  - Must provide training and/or host staff
- Can not claim costs directly
- A **letter of commitment** in the proposal (*basic template provided in the project templates*)

Only secondments from associated partners located in low to middle-income third countries included in the List of Participating Countries in Horizon Europe are eligible for funding



The organisations constituting the **partnership** contribute directly to the implementation of a joint research and innovation project by **seconding and/or hosting eligible staff members** 

Secondments must be **international** (between EU Member States/Associated Countries and nonassociated third countries) and/or **intersectoral** (secondments between different Member States/Associated Countries and <u>between different sectors</u>)

Secondments between institutions established in non-associated Third Countries or within the same EU Member State or Horizon Europe Associated Country are not eligible.

What's new? Same sector secondments in Europe is possible if Interdisciplinary (max 1/3 of project's person-months) Interdisciplinarity means the integration of information, data, techniques, tools, perspectives, concepts or theories from two or more scientific disciplines



- MSCA Staff Exchanges secondments are the core of the R&I project
- Each staff member is seconded for a period of **1 to 12 months** (may be split into several stays)
- The duration of the secondment is counted from the day of departure to the day of return
- Staff needs to be devoted full-time to the action during the secondment
- No mobility rule is applied



## d) Eligible Staff

## Must be considered staff of the sending organisation

Must be linked to the organizations and their R&I activities

Must be directly involved in the R&I activities of the project

Return to the sending institution

**Type of relationship** (employment contract, fellowship or other) between the staff member and the sending organisation must comply with the applicable national law and internal practices (e.g. *PhD candidate is sufficient to be considered staff member at the organisation where they are registered*)

from at least 1 month (full-time equivalent) prior to his/her first secondment

In the case of former part-time work, the duration must be calculated on a pro-rata basis (e.g., if working on a 50% schedule, the staff member 8 sending institution must have worked for at least two months before the secondment)

Staff members shall have appropriate **competence** to implement the project and R&I work packages and deliverables

In-built mechanism



No mobility rule is applied

## d) Type of Staff

Research and Innovation personnel (professors, researchers at all levels of their career staring from PhD level, innovators, others)

Managerial staff (CEO, BD, Project Managers, others)

Technical staff (Developers, Engineers, others)

Any secondments planned to do purely management activities (e.g. project coordination meetings, report drafting, etc.) as well as communication, dissemination and training not related to the R&I activities, will not be supported.

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### The exchanged **staff members** should be guaranteed full reintegration into the sending institution thus **maximising the impact of the action for knowledge sharing** and **long-term collaborations**





## **General Principles**

## in nutshell

Associated partners	No minimum. Mandatory Letter of Commitment
Minimum number of participating organisations	3 from 3 different countries
Minimum number of beneficiaries from EU Member States or Horizon Europe Associated Countries	2
Academic/non academic sector	No restrictions If all participating organisations are from the same sector (i.e. either academic or non-academic), there must be at least one organisation from a non-associated third country (regardless of the sector)
Max number of person months	360
Secondment duration	1-12 months each



### **Budget model**

#### The EU contribution for MSCA Staff Exchanges will take the form of unit contributions

	ns for seconded staff er person-month	Institutional contribution € / person-month					
Top-up allowance	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect Costs contribution				
EUR 2 300	requested unit x (1/number of months)	EUR 1 300	EUR 1 000				

Special needs allowance. The *pre-defined categories are as follows*: EUR 3 000, EUR 4 500, EUR 6 000, EUR 9 500, EUR 13 000, EUR 18 500, EUR 27 500, EUR 35 500, EUR 47 500 and EUR 60 000.



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	The Partner Organisation does not sign the Grant Agreement and does not directly claim costs from the action. The entire EU contribution is transferred to the Host organisation located in a Member State or Associated Country.													•	还							
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The **top-up allowance** for the seconded staff member contributes to travel, accommodation and subsistence costs related to their secondment. MUST BE A TOP UP OF THE SALARY!!!

The **research, training and networking** contribution covers costs for training, transfer of knowledge and networking activities, as well as research expenses (*equipment, consumables*)

The **management and indirect** contribution covers the beneficiary's additional costs in connection with the action (e.g. personnel costs for project management/coordination, indirect costs)

The **special needs allowance** contributes to the additional costs for the acquisition of <u>special needs items</u> and services for staff members with disabilities, whose long-term physical, mental, intellectual or sensory impairments are certified by a competent national authority, and of such nature that their participation in the action may not be possible without them (e.g. assistance by third persons, adaptation of work environment, additional travel/transportation costs)



## Typical funded activities

Implementation of a joint R&I project by seconding and/or hosting eligible staff members

#### Knowledge exchange

Three dimensions of mobility: inter-sectoral, international and interdisciplinary

Networking activities, organisation of workshops and conferences

New skills acquisition and career development perspectives

DISSEMINATE AND COMMUNICATE TO PUBLIC AT LARGE



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### MSCA Staff Exchange (SE)

### PART C Intelligence in writing MSCA SE grant application

**Essential proposal development steps** 



Writing practices, tips and (previous) good examples for writing each of the main section and related sub-sections of Part B1 (*the project*)

- **1. EXCELLENCE**
- 2. IMPACT
- 3. IMPLEMENTATION



#### CALL 2023

5 October 2023: Launch of the call for proposals 28 February 2024: Deadline for submitting proposals (5 pm Brussels time) June/July 2024: Notification of call results to applicants (TBC) November 2024: Grant agreement signature for successful projects (TBC) November 2024: First EU-funded projects start (TBC)

EUR 78.50 million

#### **CALL 2024**

EUR 81.23 million

10 October 2024: Launch of the call for proposals 5 March 2025: Deadline for submitting proposals June/July 2025: Notification of call results to applicants (TBC) November 2025: Grant agreement signature for successful projects (TBC) November 2025: First EU-funded projects start (TBC)





#### 72 projects funded in the Call 2021

All 8 major areas of research (known as scientific panels) covered

The average number partners in the funded projects: 6

### The average researchers-months of funded projects: 250 (max is 360)



https://cordis.europa.eu/search?q=contenttype%3D%27project%27%20AND%20programme%2Fcode%3D %27HORIZON-MSCA-2021-SE-01-01%27&p=1&num=10&srt=/project/contentUpdateDate:decreasing

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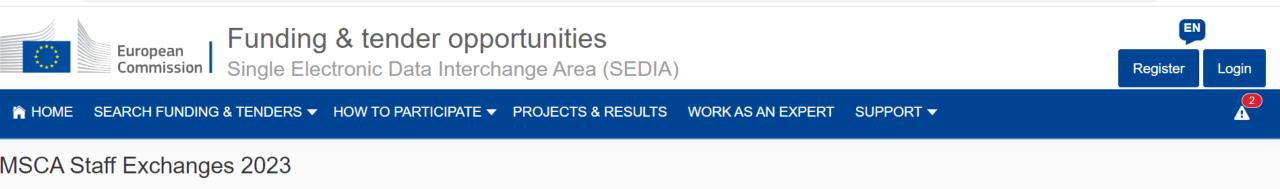
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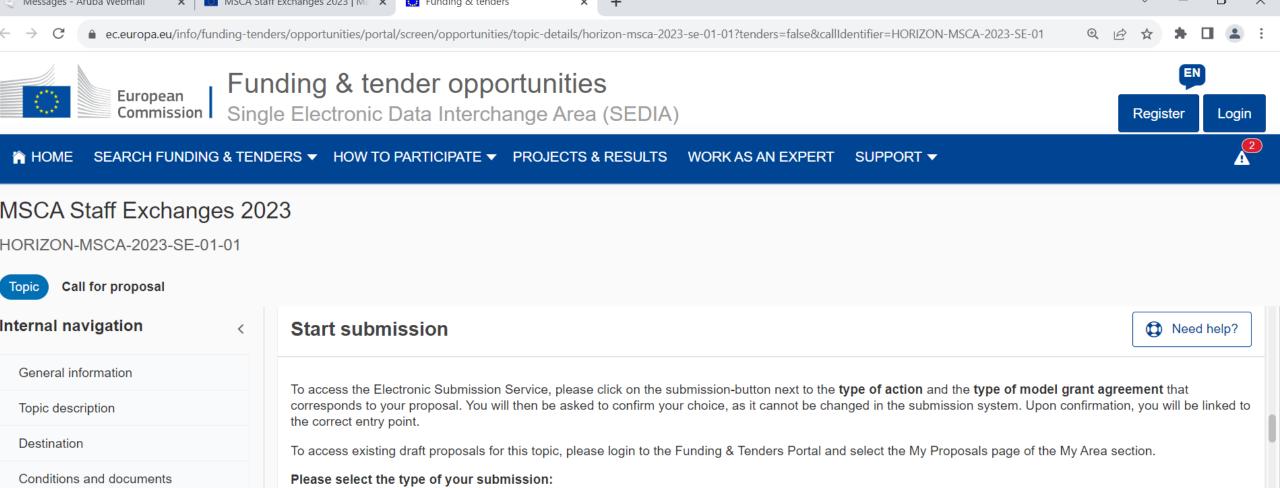
Topic Call for proposal		
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Conditions and documents	Standard application form (HE MSCA SE)	
Partner search announcements Start submission	Standard evaluation form — will be used with the necessary adaptations Standard evaluation form (HE MSCA)	
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Get support	Call-specific instructions HE MSCA SE Guide for Applicants	
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- Font size of text in tables alignment with standard application form template (*the minimum font size allowed for the main text and tables is 11 points*)
- Updated instructions on Artificial intelligence
- Removal of Table 2 Interdisciplinary secondments between partners within EU MS/AC participants in the same sector (aca-aca / non-aca-non-aca)
- Change of "lead beneficiary" by "lead participant". Lead participant can be a beneficiary or an associated partner
- Part B2 updated (*TABLEs' numbering*)





Partner search announcements

Start submission

Tonic related FAO

HORIZON TMA MSCA Staff Exchanges [HORIZON-TMA-MSCA-SE], HORIZON Unit Grant [HORIZON-AG-UN]

SZ

Start submission

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**Part A** (web-based forms) is generated by the IT system. It is based on the information entered by the participants through the submission system

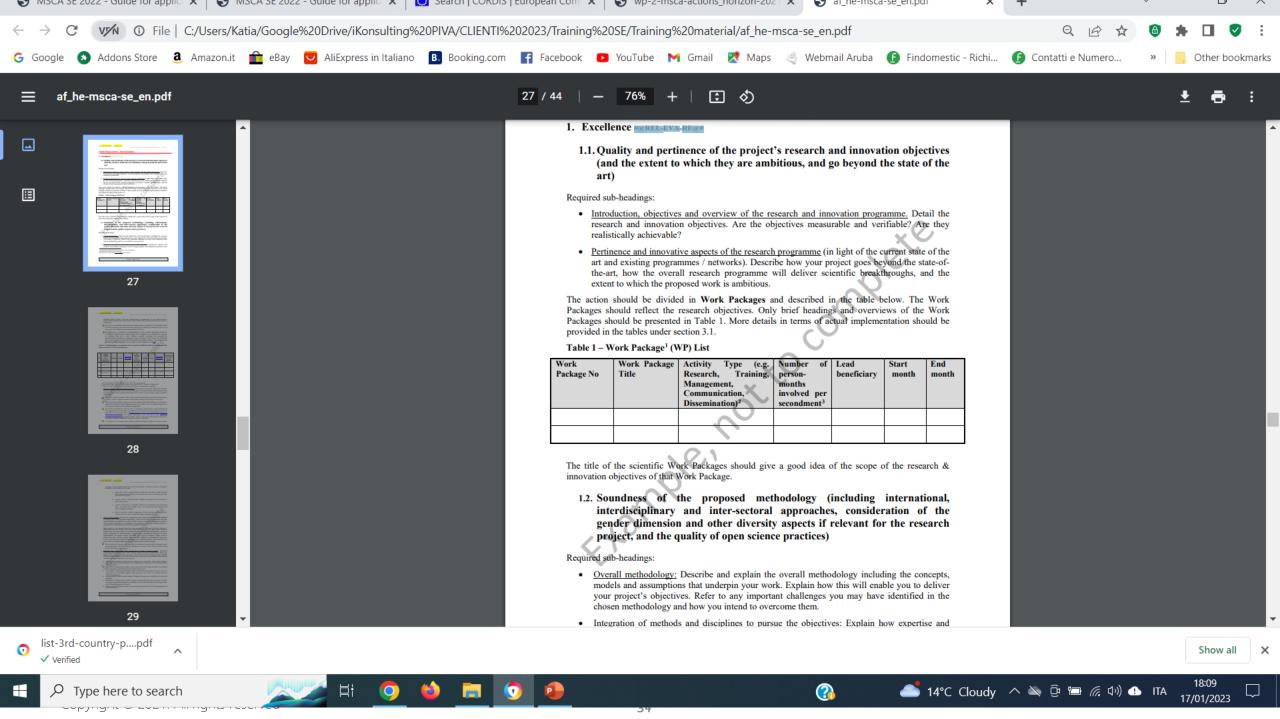


Part B1 is the narrative part that includes 3 sections (Excellence, Impact and Implementation) each corresponding to an evaluation criterion. <u>30 pages (</u>must comprise the Start Page, Table of Contents, and Part B sections 1-3. The maximum length for this document is <u>32 pages</u> Section 1 must start on page 3 of the document <u>NEW: TAGS!!!</u>

Part B2 is about the participating organisations presentation and letters of commitment. <u>No overall page limit</u>

Parts B needs to be uploaded as a PDF document





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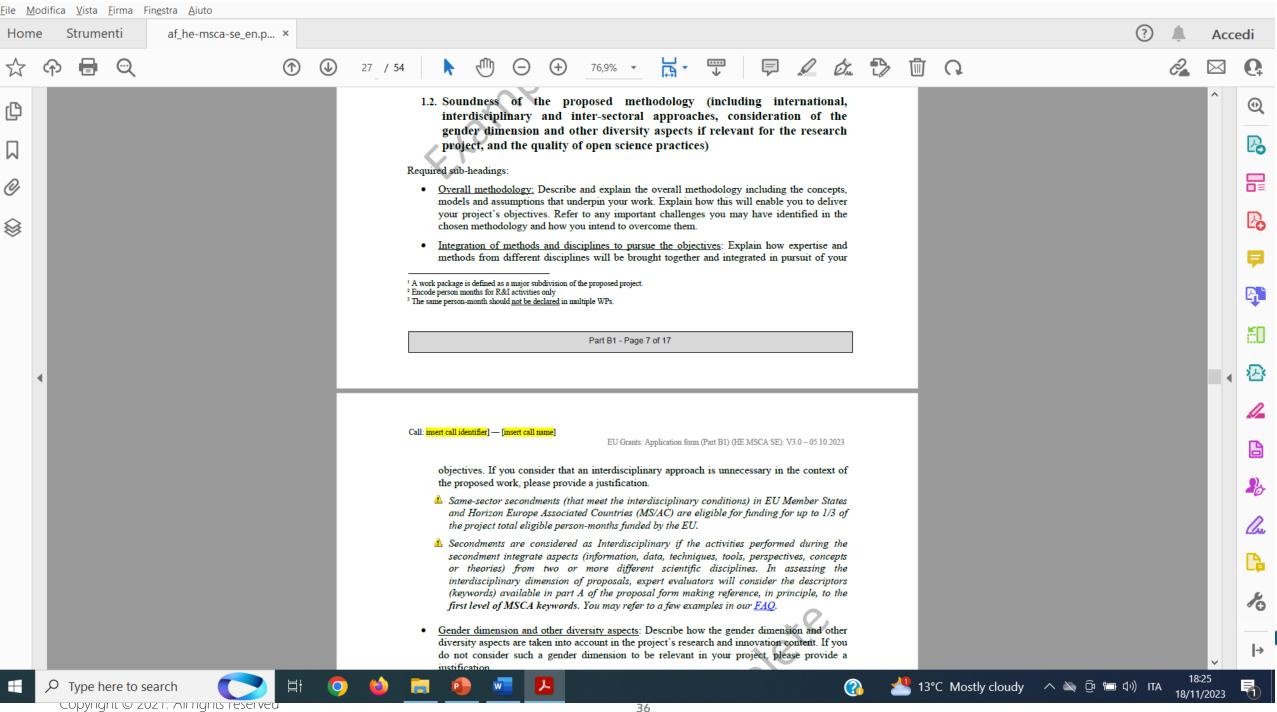
#### The main goals of the *EffectFact* proposal are

a) to advance pure and applied mathematics in the area of factorisation techniques, Wiener-Hopf and Riemann-Hilbert problems and related numerical techniques to solve time dependent boundary value problems in complex discrete and continuous domains. These problems cannot be solved independently, requiring continuous feedback from analytic, applied and computational researchers from numerous disciplines. This diverse collaborative international Network will i) forge interdisciplinary links within the EU, ii) strengthen the access of EU academics and SME's to international research and iii) lead to tangible and impactful results, while building a strong base of robust, independent researchers capable of furthering the aims of *EffectFact* long into the future;

b) to utilize the developed techniques to solve challenging problems from: i) biomechanics (DNA replication), ii) medicine (surgical resection and dentistry), iii) metamaterials (acoustic and gyro-elastic), iv) Artificial Intelligence (machine learning) and v) environmental and civil engineering (with a focus on earthquake and coastal defences) and, in doing so, the Network will be able

c) to establish a new, sustainable, EU-centred network of researchers from different sectors and disciplines, united by their dedication to furthering the project's techniques and results, while transferring this knowledge, best practice and creating new training opportunities for EU researchers.

EffectFact 4-INT Transfer of Knowledge and Innovation Strategy (Interdisciplinary, International,



## Examples 1.2.3 Gender management in Research



The research targets of our proposal do not relate directly to themes and research activities involving social, gender dimension and other diversity aspects. Our data analysis will not refer to biological characteristics and social/cultural factors. Human being and animal are not subjects of the research proposal therefore we do not expect to be facing any gender dimension aspects that are relevant during our proposal.

## In case it applies:

Part of the research planned within XXX (R2, R3, R4, R6, R7 and R10) involves clinical studies in healthy and diseased patients (ocular disorders and CVDs), experiments with volunteers in lab-controlled environments to perform visual tasks or acquiring facial images, or the use of data and images from clinical databases to validate the technologies proposed. Projects R1 and R5 involve the use of animals (mice) to perform in-vitro and ex-vivo optogenetic experiments. In such cases, the **gender dimension** will be addressed by performing an adequate **balance** and **demographic (including gender) characterization** of the patient (animal) population, as well as an appropriate assessment and statistical analysis of the **outcomes** to discern any **gender difference**. Whenever any gender-related differences arises, the identified issues will be taken into account in the implementation of the diagnostic tools combining light-based technology and ML.



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# **Section 1 Excellence**



1.3 Quality of the proposed interaction between the participating organisations in light of the research and innovation objectives

**1.3.1** Contribution of each participating organisation in the activities planned

**1.3.2** Justification of the main networking activities

Aspects to be taken into account Start with particular emphasis/by providing reference to the scientific objectives as described in section. 1.1

Provide precise details of the contribution of the academic, non-academic beneficiaries and partner organisations in the research/training programme

Then provide a list of overall **SPECIFIC Training Objectives**, and present the developing and running of three types of skills: <u>Core Research Skills</u> <u>Advanced/Additional Research Skills</u> <u>Transferable Skills</u>

Remember to details the trainings at local and network level

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	BelMAPE					Χ	X												Χ				

Here, X correspond to theoretical knowledge and X to its practical implementation

G. Mishuris has organised together with the leader of the UniMan team, Dr Anastasia Kisil, the aforementioned INI WHT event in 2019. BSU has built a strong collaboration with medical Partners RSPCTO and BMAPE and collaborates with YKSUG within a Belarusian national project. Furthermore, the *EffectFact* leaders have known each other from numerous presentations on Conferences and from their publications. In fact, the idea to create

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## **1.3.2** Justification of the main networking activities



Main Network-Wide Training Events, Conferences and Contribution of Beneficiaries/Associated partners

	Main Training Events & Conferences	ECTS ( <i>if any</i> )	Lead Institution	Action Month (estimated)
1	First consortium Kick-off meeting			1
2	International start-up Workshop TS3	4		9
3	Transferable skills 1 (blended attendance) TS2			10
4	H2/ fluid-rock interaction modelling training course TS1- RS1	4		12
5	Hydrogen for microbial metabolism training course TS1-RS2	4		15
6	Second Consortium meeting (at EGU)			18
7	subsurface monitoring training course TS1-RS3			24
8	Transferable skill 2 (blended attendance) TS2			26
9	Third consortium meeting (at EAGE)			30
10	Renewable finance Workshop TS3			34

## This table is not compulsory but strongly encouraged to be inserted!!!



# Section 2 Impact



2.1 Developing new and lasting research collaborations, achieving transfer of knowledge between participating organisations and contribution to improving research and innovation potential at the European and global level

#### Aspects to be taken into account

Describe the development and sustainability of new and lasting research collaborations resulting from international, interdisciplinary and/or inter-sectoral secondments and the networking activities implemented

Describe how the project will generate knowledge transfer that will benefit the participating organisations

Describe the contribution of the action to the improvement of the research and innovation potential within Europe and/or worldwide



<u>F</u>ile <u>M</u>odifica <u>V</u>ista <u>F</u>irma Fin<u>e</u>stra <u>A</u>iuto Strumenti EffectFact- Part B1- ... × Home Accedi La · എ → 159% т Ш ₽ 🖉 🏡 🖏 🔟 🗛 18 / 32 Ω  $\bowtie$ their behaviour, with numerous potential applications beyond those envisioned by EffectFact (WP4). It will also  $\odot$ offer improved understanding of the potential applications of their Assimilate® Machine Learning software B (WP5), allowing them to utilize this toolkit in innovative directions currently considered too risky or data hungry. Rockfield participation will both assist them in developing new, and improving existing, software. This includes utilizing direct results of WP1-2 to advance their famous, general purpose, FEM tools. While its immediate application refers to environmental and geophysical problems, the generalised nature of the software makes it Po ideal for extending these improvements to civil and even medical applications (their next goals). Rockfield is also looking to develop new tools dedicated to modelling bio-mechanical processes with medical applications (WP3). This will allow the results of *EffectFact* to be implemented at a base level, facilitating application of *EffectFact*'s B, ì WH-RH toolkit to a far greater range of problems following the project's completion, whilst also opening the μ option of future collaboration with *EffectFact* partners beyond the project's lifetime. In Fig.5b we highlight wide geographic spread of the Partner's locations. There are two major hubs: situated in R the UK and Belarus, with strong established collaborations between their leaders: Profs. G. Mishuris (AU) and S. Rogosin (BSU). Inside the hubs (Fig.5a) strong local collaboration is already established, while only a few links (from the INI WHT programme) with the other Partners. Red lines show the *EffectFact* collaborative Network.



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Section 2 Impact

# WRITING

## Aspects to be taken into account

Describe how the action contributes to realising the potential of individuals and provides new skills, enhances their knowledge and career perspectives

**2.2** Credibility of the measures to enhance the career perspectives of staff members and contribution to their skills development

Justify how the proposed action will contribute to the RESEARCH staff skills development /compulsory and transferable skills

Provide expected but realistic examples of opportunities for career advancement, in both sectors!

Do not repeat how these skills will be delivered, instead focus on the impact of the skills on the ESR's employability



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#### EffectFact

This approach ensures that the ESRs develop a deep interdisciplinary understanding that is sufficiently robust and comprehensive, while junior ERs will gain valuable experience from the participation.

The networks all in attendance will establish with non-academic/industrial partners through their secondments and attendance of business/industry orientated events (eg INI open for business, see 3.3.2), as well as academic through conferences, summer/winter-schools, workshops and research visits (see 3.1.2), will provide them with a broad knowledge of the possible career options contacts with which to realise their chosen path.

All researchers will benefit from a new mathematical toolkit with which to conduct ground-breaking research (WP1-2, see 2.1.4), new avenues for exploitation of these results (WP3-7, see 3.3.1), an improved understanding of related research outside of their field.

**Immediate impact:** New tools for the WH-RH & MF methods will give all *EffectFact* researchers a powerful new toolkit with which to conduct ground-breaking research (WP1-2). Exploitation of these results will propel researchers to the forefront of exciting and evolving fields (WP3-7). Secondments to non-academic and industrial partners will give researchers an improved understanding of differing research methodologies and the needs of industry. The *EffectFact* schools and workshops, alongside training at their home institutes, will provide ESRs with a robust and comprehensive set of skills with which to forge their chosen careers. All partners will benefit from a greatly expanded network, both academic and industrial, with whom to collaborate on future projects.

**Medium to long term impact:** The tools developed in *EffectFact* will be applied to an ever-increasing range of problems. The wide range of project exploitations in bio-mechanics, medicine, metamaterials, artificial intelligence, civil engineering and beyond have clear follow-up efforts, including direct implementation to aerospace engineering and seismic shielding, use of results for ANN & ML to apply algorithms to applications previously considered data hungry, and utilizing results in medicine to improve patient outcomes (see 3.3.1). These results will be pursued through continued partnerships between the project organisations, in particular the academic organisations and SMEs, funded by new grants originating from the *EffectFact* consortium (see 3.2.2). Improved career outcomes of the ESRs, trained in the *EffectFact* methods and with a comprehensive research network, will allow then to establish their independence within their chosen (academic, non-academic) career path. Junior ERs within *EffectFact* will have established their own growing research teams, at the forefront of exciting, inter-sectoral problems with important applications to solving issues of relevance to society.

The leaders of the EffectFact project will have cemented their place at the head of innovative fields, and utilize these position to foster inter-disciplinary collaboration, a focus on applications of benefit to society, and ensuring the transfer of knowledge to the next generation of inquisitive researchers.

# Section 2 Impact

WRITING

## Aspects to be taken into account

Provide an initial summary of your '**plan for the dissemination and exploitation including communication activities'** due in <u>M3 (Deliverable), final D in M60.</u> Activities must be strategically planned, with clear objectives, start at the outset and continue through the lifetime of the project.

**Dissemination** is sharing research results with potential users - peers in the research field, industry, other commercial players and policymakers. Describe in detail what activities you will organise and participate in to disseminate the research results to this audience.

Regarding **communication**, set clear measures of your public engagement strategy. The aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens

**For both dissemination and communication:** include quantifiable targets **(KPIs)** for measuring the effectiveness of dissemination, exploitation, communication and public engagement activities

If your project is selected, you will need an appropriate **consortium/partneship agreement** to manage (amongst other things) the ownership and access to key knowledge (IPR, research data etc.).

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

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



## **EXAMPLE OF A TABLE WITH KPIs**



Channel/Tool	Target audience, Type of activity (e.g. Dissemination / Communication / Outreach / Public	Researchers' Role	Excepted target numbers
	Engagement)		
Web-based (Website, Social Media)	Target audience: all stakeholders.         The website will be updated regularly with new material provided by all partners. Reviews of the site will take place at plenary meetings. ATwitter handle and Facebook Page will be established at the start of the project. Social media accounts will be used to link followers to publications, events at which PIs and researchers are presenting and directly to news items on the project website.         Communication and Outreach The website: will include a media area which will contain press releases, newsletters and briefing materials. Information on the Action (background, aims, the consortium etc.) A news area will contain details on activities of PIs and R written in language suitable for a lay audience. Key links: The website will link to related projects, to advocacy and patient groups, to research organisations, to other research projects, and partners' sites. Educational Area: educational materials for the research community         Public engagement:       Through our social media platforms members of the public can interact with the consortium         Dissemination of results       Dissemination of research results will be via a scientific area with links to scientific publications/other research outputs (e.g. OAdatasets)	Contribute with news stories, abstracts, presentations etc. to the website every 6 months. Use of social media to promote website updates, consortium OA publications and dissemination activities. All fellows will be responsible for contributing to social media channels and a rota will be implemented to ensure regular Tweets, others	Expected 5000 website visitors expected over the course of the Action Expected 3000 followers on Twitter (and other social platforms).
OAPublications	Target audience: scientific community.         Dissemination of results       Scientific results and findings will be published in peer-reviewed OA scientific journals. Multiple publications involving all members of the Consortium, with Researchers as first authors are expected.	Each fellow is expected to write 2 papers that will be published in appropriate leading peer reviewed journals	Expected readers: 2000
Conferences / Presentations	<ul> <li>Target audience: Scientific Community, other networks/projects and public at large.</li> <li><u>Dissemination of results</u> Fellows will present research (posters / oral presentations) at conferences and workshops,</li> <li><u>Communication and Outreach</u> Action brochures, flyers etc. will be produced and circulated at conferences and meetings.</li> </ul>	Fellows aim to present annually at national / international conference / meetings. Use social media to raise awareness pre- and post-event.	Expected 300 attendees reached at each event



# Section 2 Impact



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

## Aspects to be taken into account

Provide a narrative explaining how the project's results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project.

#### Required sub-headings:

**Expected scientific impact(s)**, e.g. contributing to specific scientific advances, across and within disciplines, creating new knowledge, reinforcing scientific equipment and instruments, computing systems (i.e. research infrastructures)

**Expected economic/technological impact(s)**, e.g. bringing new products, services, business processes to the market, increasing efficiency, decreasing costs, increasing profits, contributing to standards' setting, etc.

**Expected societal impact(s)**, e.g. decreasing CO<sub>2</sub> emissions, decreasing avoidable mortality, improving policies and decision-making, raising consumer awareness.s



# Key Impact Pathways

- 1. Creating high-quality new knowledge
- 2. Strengthening human capital in R&I
- 3. Fostering diffusion of knowledge and Open Science
  - 4. Addressing EU policy priorities & global challenges through R&I
  - 5. Delivering benefits & impact via R&I missions
  - 6. Strengthening the uptake of R&I in society

Societal Impact

**Scientific** 

Impact



- 7. Generating innovation-based growth
- 8. Creating more and better jobs
- 9. Leveraging investments in R&I

Economic/ Technological Impact



## **EXAMPLE OF CONTENTS**

**Expected scientific impact(s)**, e.g. the SHINE research programme will aim to make a significant contribution to specific scientific advances within the domain of subsurface hydrogen storage within porous reservoirs. This is a domain which still need to be fully explored given that no hydrogen injection experiment has been tested so far in Europe. The exploration, modelling and characterization of the hydrogen-fluid rocks-microbial interactions using new modelling methodology and experimental tools coupled to monitoring test across natural laboratory represents a unique approach producing an important step forward toward the construction of a solid workflow procedure to store hydrogen in the subsurface and test the methodology. The cross disciplinary approach includes engineering, computing science and metagenomics, microbial growth and monitoring techniques and will reinforce the intersectoral approach of the PhD cohort to work across and within disciplines (geosciences, microbiology, rock engineering and computing sciences), creating new knowledge, fine tuning scientific equipment and instruments (triaxial experimental rigs, vessel tools) and implementing multiflow computing modelling.

**Expected economic/technological impact(s)**, e.g. While estimating the impact of Hydrogen storage technology research on the job market is difficult due to the wide range of applications and the fast paced nature of the field, the growing need to decarbonize the gas grid that connect European industry and delivers more than 40% of heating in EU households and 15% of EU power generation will create up to hundreds of thousand new jobs including a reshaping of most of the geoscience hydrocarbon industry by 2030

according to the latest European Hydrogen roadmap report. Hydrogen Roadmap Europe, 2019.



<u>Expected societal impact(s)</u>. The SHINE program will represent an important move toward the development of a technology which will help to sustain transition to the renewable energy. Hydrogen is the only at-scale technology for "sector coupling", allowing the conversion of renewable generated energy into a usable form for storage and distribution to end use sectors to meet interseasonal energy demand. Electrolysers can convert renewable electricity into hydrogen, providing the energy demand flexibility with none of the carbon emissions of natural gas. Therefore, it can promote the ambitious scenario of decreasing CO<sub>2</sub> emissions coupled to massive increases in renewable power generation. In order for this to happen, we will require to be able to provide a technology able to store energy over long time periods (months), that is generated from excess, curtailed or off-grid dedicated renewable energy. This is converted to hydrogen through electrolysis and stored in subsurface geological formations

ikonsulting

# Section 3 Implementation



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

Aspects to be taken into account

First provide an introduction / summary of the WPs/tasks, how these are inter-related, the total involved staff and organisations, others Then include:

Work Packages description (table 2) List of major deliverables (table 3)

Proceed with an introduction of the foreseen risks, how these will be dealt with. Then include: List of risks (table 4)



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## Example of risk table

Risk number and title	Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High	Work package(s) involved	Proposed risk-mitigation measures
1	Delay in the secondments running	1-3	Steering committee will proceed with alternative plan
2	Issues with partner commitment		Supervisory board will re organize and re-define required secondment
2	Communication problems between the large number of partners blocking flow of the project	1-4	Steering panel meeting planned every 3 months and a monthly teleconference per work package to mitigate any lack of communication. The supervisory board may intervene in case of a clear drift.
3	Communication problems between the PhDs and their supervisors	1-3	Each PhD will have scientific and independent mentors, as well as an advisor from the industry partners. PhDs have two representatives in the Supervisory board.
4	Non-completion or delay of publications and dissemination	1-3	An editorial board will be defined right at the start at the kick off meeting with the aims of triggering a group specifically dedicated with dissemination strategy
5	The proposed strategies don't reach the Industry partners	1-3	The industry partners are well represented in the supervisory board and the advisory boards. Therefore, the annual planned meeting will serve as mentoring and advice to reinforce the RWP targets in case poorly executed research projects.
6	Unavailable experimental equipment leading to delays in R4,5,6,8 experimental tasks (Low-Medium)	1	Early identification of delays, quick communication with participants involved to search for possible solutions. Different beneficiaries institution share similar experimental lab, therefore secondment place can be revised accordingly
7	Unsatisfactory microbial culture growth and identification for R2 (Low-Medium)	1	Coordination of regular exchange of experimental progress. Quick communication with participants involved to search for possible solutions





# Section 3 Implementation



- **3.2** Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise
- **3.2.1** Appropriateness of the infrastructure and capacity of each participating organisation
- **3.2.2** Consortium composition and exploitation of participating organisations' complementarities
- 3.2.3 Exceptional funding (if applicable)

## Aspects to be taken into account

The aim here is to explain who is doing what and show that they have the necessary infrastructures and capacity to do it.

This section should complement Section 4 of Part B2 not duplicate it.

Capacity and role of each participant, as outlined in Section 4 (Participating Organisations), in light of the tasks allocated to them in the action

Extent to which the consortium as a whole brings together the necessary expertise. I suggest putting also **a geographical map**, showing where all partners are based and their main expertise/interaction Show how this includes expertise in social sciences and humanities, open science practices, and gender aspects of R&I, as appropriate

The commitment of associated partners and their active contribution to the research and training activities should be described (and then remand to their **letters of commitment!)** 

## Only entities from EU Member States, from Horizon Europe Associated Countries or from countries listed in the HE Programme guide are automatically eligible for EU funding

If one or more of the partners 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.



# Section 3.2 Examples



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

The consortium is defined by five beneficiaries which has long experience on both training PhD fellow but also taking part at large EU project and contain a variety of frontier research laboratory and infrastructure but also administrative experience (Unina, UEDIN, CSIC) have been leader of serveral large EU projects) able to sustain the all-research targets defined in the Shine proposal. In the list below we specify the main capacities and infrastructure of each participant in relation of the main work package 3.2.1 Appropriateness of the infrastructure and capacity of each participating organisation Detailed information about the capacities of all participating organizations and of their infrastructure

can be found in section 4, part B2, below we provide a summary.

Beneficiary name/number	Main capacities	Main infrastructures
<u>Unina/1</u>	PhD training course and graduation	Microbial and genomic lab;
	expertise course, EU admin	Hydrogen high pressure lab;
	experience (3 EU project currently Funded)	subsurface imaging lab (WP1)
<u>UEDIN/2</u>	<u>PhD training course expertise and</u> graduation, Hydrogen research	<u>Geochemistry lab, adapted pressure</u> rig for fluid monitoring (WP2,3)
	leader (3 EU project currently funded), EU admin experience.	
<u>TUDelft/3</u>	PhD training course expertise and graduation, storage research leader;	High performance computing center; experiment rock physics lab; multiphase flow modelling code
<u>UGA/4</u>	<u>PhD training course expertise</u> , Natural hydrogen research leader;	(WP2,3) Geochemistry lab; underground lab data access;(WP1,3)
<u>CSCI/5</u>	PhD training expertise; PhD grduation Long tradition link with UPC; Storage research leader (2 EU project funded), EU admin experience	Highperformancecomputingcenter;Geomechanicalmodelling;multiphaseflowmodellingcode;seismic monitoring (WP2,3)

#### Table 3.1.f Overview of beneficiaries' capacities and available infrastructures

3.2.2 Consortium composition and exploitation of participating organisations' complementarities The shape of the SHINE network has been designed to exploit the complementary expertise of all its Partners, and to maximize the synergies between Beneficiaries and Partners. Some Partners have expertise in common (e.g. computing or drilling and reservoir characterization), but each Partner brings unique expertise to the network that is essential to the research and training programmes (section.2). The SHINE consortium brings experts in Computing Geoscience (TUDelft, CSIC), world-class laboratories with expertise rock mechanics, fluid imaging (UEDIN, TUDelft), Microbial genomics and vessel experiment (Unina, UEDIN) seismic illumination, modelling and imaging (Unina, Seismik, ENI) and analogue natural hydrogen field expertise (UGA) including geochemical monitoring equipment (UB). This supra-disciplinary research environment is merged with our private partners that have expertise from CO2 sequestration (ENI, REPSOL), seismic monitoring (Seismik), subsea technology and data collection (Repsol, Chevron, Shell, ENI), petrophysics (SHELL), geomechanics modelling (ENI, Shell, Repsol, Chevron, CSIC), seismic visualization (Seismik, ENI), The detailed capacities of each SHINE research group are illustrated in section 1. Overall SHINE has an outstanding and exceptional range of expertise that encompasses the breadth of modern Geosciences, Microbiology, Geophysics, Rock mechanics. Synergy between Partners will be maximized in several ways. First, the research and training tasks have been allocated in a manner that best exploits the expertise of Partners and brings together Partners with related complementary expertise (see section 1 and tables 1.3 a,b,c). Second, we plan a range of networking activities with a view to maximizing interactions and communication (section 3).

3.2.3 Commitment of beneficiaries and associated partners to the programme. All Beneficiaries are committed to pursuit the objectives of the proposal and will sign a consortium agreement once the proposal will be approved. All partners agreed through an official signed letter their commitment to the proposal and their roles as specified across the various paragraphs. Each of the 5 beneficiaries will recruit two PhD and each non-beneficiary unit will be involved in a dense cross sectoral secondment. All beneficiaries and partner units will be actively involved into the rich and outstanding network wide training



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Table 6–	Data for <u>non-academic</u>	beneficiaries			Ø	
Name	Location of research premises (city/country)	Type of R&I activities	No. of full - time employees involved in the project	No. of employees in R&I	Web site	Annual turnover (approx. in Euro)
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A Important! This table is mandatory to assess correctly the operational capacity of non-academic beneficiaries.

All organisations (whether beneficiaries or associated partners) must complete the appropriate table below. Complete one table of maximum one page per beneficiary and half a page per associated partners. The experts will be instructed to disregard content above this limit (Min font size: 9).

Table 7 – Organisations (Beneficiaries and Associated partners) data

Beneficiary (organisations in EU M	IS/AC) legal name
General description	
Role and profile of key people	Include names, qualifications of the person(s) supervising the action.
Key Research Facilities, Infrastructure and Equipment	Demonstrate that the team has sufficient resources to offer a suitable environment to seconded staff and to contribute significantly to the research/innovation activities proposed.
Independent research premises?	Please explain the status of the beneficiary's research facilities – i.e. are they owned by the beneficiary or rented by it? Are its research premises wholly independent from other beneficiaries and/or associated partner organisations in the consortium?
Previous Involvement in Research and innovation actions	Describe relevant research/ innovation actions in which the organisation took part
Current involvement in Research and Innovation actions	Describe relevant research/ innovation actions in which the organisation is currently participating
Publications and/or research/ datasets/ softwares/ innovation products/ other achievements	Max 5 key elements of the achievement, including a short qualitative assessment of its impact and (where available) its digital object identifier (DOI) or other type of persistent identifier (PID). Publications, in particular journal articles, are expected to be open

Part B2 - Page 2 of 6

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Use the structure provided in the template and address all the evaluation criteria

Be in line with the action's objectives and expected outcomes

Show that your proposal addresses EU policy priorities and/or societal challenges/HE missions

Describe the benefits of cooperation and how they can go beyond this project

Have your proposal proof-read and/or pre-screened (by MSCA NCPs!)!!!!!



# THANK YOU!!!

## Katia Insogna Horizon Europe Funding Navigator <u>www.ikonsulting.eu</u> ik@ikonsulting.eu

