

SKELETON HORIZON EUROPE PROPOSAL

Topic: HORIZON-XX0-0000-XXXXX-00-00

⚠ The consortium members are listed in part A of the proposal (application forms). A summary list should also be provided in the table below.

List of participants [e.g. 1 page]

Participant No.	Participant organisation name	Country
1 (Coordinator)	University of Upper Freedonia (UUF)	AT
2	Molvania State University (MSU)	DE
3	Institute for Underwater Basket Weaving (IUBW)	UK

Please use the same participant numbering and name as that used in the administrative proposal forms.

1 Excellence

Excellence – aspects to be taken into account.

- Clarity and pertinence of the project's objectives, and the extent to which the proposed work is ambitious, and goes beyond the state of the art.
- Soundness of the proposed methodology, including the underlying concepts, models, assumptions, interdisciplinary approaches, appropriate consideration of the gender dimension in research and innovation content, and the quality of open science practices, including sharing and management of research outputs and engagement of citizens, civil society and end users where appropriate.

⚠ The following aspects will be taken into account only to the extent that the proposed work is within the scope of the work programme topic.

1.1 Objectives and ambition [e.g. 4 pages]

- Briefly describe the objectives of your proposed work. Why are they pertinent to the work programme topic? Are they measurable and verifiable? Are they realistically achievable?
- Describe how your project goes beyond the state-of-the-art, and the extent the proposed work is ambitious. Indicate any exceptional ground-breaking R&I, novel concepts and approaches, new products, services or business and organisational models. Where relevant, illustrate the advance by referring to products and services already available on the market. Refer to any patent or publication search carried out.
- Describe where the proposed work is positioned in terms of R&I maturity (i.e. where it is situated in the spectrum from 'idea to application', or from 'lab to market'). Where applicable, provide an indication of the Technology Readiness Level, if possible distinguishing the start and by the end of the project.

⚠ Please bear in mind that advances beyond the state of the art must be interpreted in the light of the positioning of the project. Expectations will not be the same for RIAs at lower TRL, compared with Innovation Actions at high TRLs.

1.2 Methodology [e.g. 14 pages]

- Describe and explain the overall methodology, including the concepts, models and assumptions that underpin your work. Explain how this will enable you to deliver your project's objectives. Refer to any important challenges you may have identified in the chosen methodology and how you intend to overcome them. [e.g. 10 pages]

⚠ This section should be presented as a narrative. The detailed tasks and work packages are described below under 'Implementation'.

- Describe any national or international research and innovation activities whose results will feed into the project, and how that link will be established; [e.g. 1 page]
- Explain how expertise and methods from different disciplines will be brought together and integrated in pursuit of your objectives. If you consider that an inter-disciplinary approach is unnecessary in the context of the proposed work, please provide a justification. [e.g. 1/2 page]
- For topics where the work programme indicates the need for the integration of social sciences and humanities, show the role of these disciplines in the project or provide a justification if you consider that these disciplines are not relevant to your proposed project. [e.g. 1/2 page]
- Describe how the gender dimension (i.e. sex and/or gender analysis) is taken into account in the project's research and innovation content [e.g. 1 page]. If you do not consider such a gender dimension to be relevant in your project, please provide a justification.

⚠ Note: This section is mandatory except for topics which have been identified in the work programme as not requiring the integration of the gender dimension into R&I content.

⚠ Remember that that this question relates to the content of the planned research and innovation activities, and not to gender balance in the teams in charge of carrying out the project.

⚠ Sex and gender analysis refers to biological characteristics and social/cultural factors respectively. For guidance on methods of sex/gender analysis and the issues to be taken into account, please refer to <https://op.europa.eu/en/publication-detail/-/publication/33b4c99f-2e66-11eb-b27b-01aa75ed71a1/language-en>

- Describe how appropriate open science practices are implemented as an integral part of the proposed methodology. Show how the choice of practices and their implementation are adapted to the nature of your work, in a way that will increase the chances of the project delivering on its objectives [e.g. 1 page]. If you believe that none of these practices are appropriate for your project, please provide a justification here.

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

- ⚠ *Please note that this question does not refer to outreach actions that may be planned as part of communication, dissemination and exploitation activities. These aspects should instead be described below under 'Impact'.*
- ⚠ *Proposals selected for funding under Horizon Europe will need to develop a detailed data management plan (DMP) for making their data/research outputs findable, accessible, interoperable and reusable (FAIR) as a deliverable by month 6 and revised towards the end of a project's lifetime. The DMP should describe how research outputs (especially research data) generated and/or collected during the project will be managed so as to ensure that they are findable, accessible, interoperable and reusable.*
- ⚠ *For guidance on open science practices and research data management, please refer to the relevant section of the HE Programme Guide on the Funding & Tenders Portal.*

1.2.1 Overall methodology [e.g. 10 pages]

1.2.2 Connections to other research activities [e.g. 1 page]

1.2.3 Interdisciplinarity [e.g. 1/2 page]

1.2.4 Gender dimension [e.g. 1 page]

1.2.5 Open science [e.g. 1 page]

2 Impact

Impact – aspects to be taken into account.

- Credibility of the pathways to achieve the expected outcomes and impacts specified in the work programme.
- Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities.

The results of your project should make a contribution to the expected outcomes set out for the work programme topic over the medium term, and to the wider expected impacts set out in the 'destination' over the longer term.

In this section you should show how your project could contribute to the outcomes and impacts described in the work programme, and the measures to maximise these impacts.

2.1 Project's pathways towards impact [e.g. 3 pages]

- Provide a **narrative** explaining how the project's results are expected to make a difference in terms of impact, beyond the immediate scope and duration of the project. The narrative should include the components below, tailored to your project.
 - (a) Describe the unique contribution your project results would make towards (1) the **outcomes** specified in this topic, and (2) the **wider impacts**, in the longer term, specified in the respective destinations in the work programme. Provide quantified estimates where possible and meaningful.
 - ⚠ *Be specific, referring to the effects of your project, and not R&I in general in this field.*
 - ⚠ *State the target groups that would benefit. Even if target groups are mentioned in general*

terms in the work programme, you should be specific here, breaking target groups into particular interest groups or segments of society relevant to this project.

- (b) Describe any requirements and potential barriers - arising from factors beyond the scope and duration of the project - that may determine whether the desired outcomes and impacts are achieved. These may include, for example, other R&I work within and beyond Horizon Europe; regulatory environment; targeted markets; user behaviour. Indicate if these factors might evolve over time. Describe any mitigating measures you propose, within or beyond your project, that could be needed should your assumptions prove to be wrong, or to address identified barriers.

⚠ Note that this does not include the critical risks inherent to the management of the project itself, which should be described below under 'Implementation'.

2.2 Measures to maximise impact: Dissemination, exploitation and communication [e.g. 3 pages, excluding section 2.3]

- Describe the planned measures to maximise the impact of your project by providing a first version of your 'plan for the dissemination and exploitation including communication activities'. Describe the dissemination, exploitation and communication measures that are planned, and the target group(s) addressed (e.g. scientific community, end users, financial actors, public at large).

⚠ Please remember that this plan is an admissibility condition, unless the work programme topic explicitly states otherwise. In case your proposal is selected for funding, a more detailed 'plan for dissemination and exploitation including communication activities' will need to be provided as a mandatory project deliverable within 6 months after signature date. This plan shall be periodically updated in alignment with the project's progress.

⚠ Communication^a measures should promote the project throughout the full lifespan of the project. The aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens. Activities must be strategically planned, with clear objectives, start at the outset and continue through the lifetime of the project. The description of the communication activities needs to state the main messages as well as the tools and channels that will be used to reach out to each of the chosen target groups.

⚠ All measures should be proportionate to the scale of the project, and should contain concrete actions to be implemented both during and after the end of the project, e.g. standardisation activities. Your plan should give due consideration to the possible follow-up of your project, once it is finished. In the justification, explain why each measure chosen is best suited to reach the target group addressed. Where relevant, and for innovation actions, in particular, describe the measures for a plausible path to commercialise the innovations.

⚠ If exploitation is expected primarily in non-associated third countries, justify by explaining how that exploitation is still in the Union's interest.

⚠ Describe possible feedback to policy measures generated by the project that will contribute to designing, monitoring, reviewing and rectifying (if necessary) existing policy and programmatic measures or shaping and supporting the implementation of new policy initiatives and decisions.

- Outline your strategy for the management of intellectual property, foreseen protection measures, such as patents, design rights, copyright, trade secrets, etc., and how these would be used to support exploitation.

⚠ If your project is selected, you will need an appropriate consortium agreement to manage (amongst other things) the ownership and access to key knowledge (IPR, research data etc.). Where relevant, these will allow you, collectively and individually, to pursue market opportunities arising from the project.

⚠ *If your project is selected, you must indicate the owner(s) of the results (results ownership list) in the final periodic report.*

^aFor further guidance on communicating EU research and innovation for project participants, please refer to the Online Manual on the Funding & Tenders Portal

2.3 Summary (OPTIONAL – Please remove this section if not used)

Provide a summary of this section by presenting in the canvas below the key elements of your project impact pathway and of the measures to maximise its impact.

Figure 1 on pages 6–7 presents a tableau summarising the project's impact.

3 Quality and efficiency of the implementation

Quality and efficiency of the implementation – aspects to be taken into account

- *Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages, and the resources overall*
- *Capacity and role of each participant, and extent to which the consortium as a whole brings together the necessary expertise.*

3.1 Work plan and resources [e.g. 12 pages (17 pages for topics using lump sum funding) – including tables]

Please provide the following:

- brief presentation of the overall structure of the work plan;
- timing of the different work packages and their components (Gantt chart or similar);
- graphical presentation of the components showing how they inter-relate (Pert chart or similar).
- detailed work description, i.e.:

- a list of work packages (table 3.1a);
- a description of each work package (table 3.1b);
- a list of deliverables (table 3.1c);

⚠ *Give full details. Base your account on the logical structure of the project and the stages in which it is to be carried out. Each work package should be a substantial part of the work plan, and the number of work packages should be proportionate to the scale and complexity of the project.*

⚠ *Structure each work package by breaking it down into tasks. If tasks are not appropriate, work packages can be organised according to other criteria (e.g., according to the type of work or thematically). For each task or element of the work package, describe all activities to be carried out and quantify them (e.g., number of protocols, tests, measurements, combinations, study subjects, conferences, publications, etc.). Provide enough detail to clarify who will do this work and why it is needed for the project, (e.g., the level of qualification and number of person-months for personnel, as well as the requested equipment, consumables,*

SPECIFIC NEEDS	EXPECTED RESULTS	D & E & C MEASURES
<i>What are the specific needs that triggered this project?</i> Example 1 Most airports use process flow-oriented models based on static mathematical values limiting the optimal management of passenger flow and hampering the accurate use of the available resources to the actual demand of passengers. Example 2 Electronic components need to get smaller and lighter to match the expectations of the end-users. At the same time there is a problem of sourcing of raw materials that has an environmental impact.	<i>What do you expect to generate by the end of the project?</i> Example 1 Successful large-scale demonstrator: Trial with 3 airports of an advanced forecasting system for proactive airport passenger flow management. Algorithmic model: Novel algorithmic model for proactive airport passenger flow management. Example 2 Publication of a scientific discovery on transparent electronics. New product: More sustainable electronic circuits. Three PhD students trained.	<i>What dissemination, exploitation and communication measures will you apply to the results?</i> Example 1 Exploitation: Patenting the algorithmic model. Dissemination towards the scientific community and airports: Scientific publication with the results of the large-scale demonstration. Communication towards citizens: An event in a shopping mall to show how the outcomes of the action are relevant to our everyday lives. Example 2 Exploitation of the new product: Patenting the new product; Licencing to major electronic companies. Dissemination towards the scientific community and industry: Participating at conferences; Developing a platform of material compositions for industry; Participation at EC project portfolios to disseminate the results as part of a group and maximise the visibility vis-à-vis companies.

Figure 1: Impact summary tableau

TARGET GROUPS	OUTCOMES	IMPACTS
Who will use or further up-take the results of the project? Who will benefit from the results of the project? Example 1 9 European airports: Schiphol, Brussels airport, etc. The European Union aviation safety agency. Air passengers (indirect). Example 2 End-users: consumers of electronic devices. Major electronic companies: Samsung, Apple, etc. Scientific community (field of transparent electronics).	<i>What change do you expect to see after successful dissemination and exploitation of project results to the target group(s)?</i> Example 1 Up-take by airports: 9 European airports adopt the advanced forecasting system demonstrated during the project. Example 2 High use of the scientific discovery published (measured with the relative rate of citation index of project publications). A major electronic company (Samsung or Apple) exploits/uses the new product in their manufacturing.	<i>What are the expected wider scientific, economic and societal effects of the project contributing to the expected impacts outlined in the respective destination in the work programme?</i> Example 1 Scientific: New breakthrough scientific discovery on passenger forecast modelling. Economic: Increased airport efficiency Size: 15% increase of maximum passenger capacity in European airports, leading to a 28% reduction in infrastructure expansion costs. Example 2 Scientific: New breakthrough scientific discovery on transparent electronics. Economic/Technological: A new market for touch enabled electronic devices. Societal: Lower climate impact of electronics manufacturing (including through material sourcing and waste management).

Figure 1: Impact summary tableau (continued)

meetings, etc.), to justify the proposed resources and so that progress can be monitored, including by the Commission.

- ⚠ Resources assigned to work packages should be in line with their objectives and deliverables. You are advised to include a distinct work package on 'project management', and to give due visibility in the work plan to 'data management' 'dissemination and exploitation' and 'communication activities', either with distinct tasks or distinct work packages.*
- ⚠ You will be required to update the 'plan for the dissemination and exploitation of results including communication activities', and a 'data management plan', (this does not apply to topics where a plan was not required.) This should include a record of activities related to dissemination and exploitation that have been undertaken and those still planned.*
- ⚠ Please make sure the information in this section matches the costs as stated in the budget table in section 3 of the application forms, and the number of person months, shown in the detailed work package descriptions.*

- a list of milestones (table 3.1d);
- a list of critical risks, relating to project implementation, that the stated project's objectives may not be achieved. Detail any risk mitigation measures. You will be able to update the list of critical risks and mitigation measures as the project progresses (table 3.1e);
- a table showing number of person months required (table 3.1f);
- a table showing description and justification of subcontracting costs for each participant (table 3.1g);
- a table showing justifications for 'purchase costs' (table 3.1h) for participants where those costs exceed 15% of the personnel costs (according to the budget table in proposal part A);

Table 3.1a: List of work packages

⚠ Use plain text for the tables in section 3.1. If the proposal is invited to start Grant Agreement preparation, these tables will have to be encoded in the grant management IT tool, where no graphics or special formats are supported.

Work package No.	Work package title	Lead participant No.	Lead participant short name	Person-months	Start month	End month
1	Requirements analysis	1	UUF	62	1	6
2	System integration	1	UUF	37	1	20
3	Dissemination and exploitation	1	UUF	17	7	20

Table 3.1b: Work package description

Work package number	1
Work package title	Requirements analysis

⚠ Participants involved in each WP and their efforts are shown in table 3.1f. Lead participant and starting and end date of each WP are shown in table 3.1a.)

Objectives **O1.1** First objective — **O1.2** Second objective — **O1.3** . . .

Description of work

(where appropriate, broken down into tasks), lead partner and role of participants. For each task, quantify the amount of work. Provide enough detail to justify the resources requested and clarify why the work is needed and who will do it. Deliverables linked to each WP are listed in table 3.1c (no need to repeat the information here).

Task 1.1: Literature survey (*Lead: UUF; Participants: MSU; Month: 1–6*) In this task, we will read a lot of books, and. . .

Work package number	2
Work package title	System integration

⚠ *Participants involved in each WP and their efforts are shown in table 3.1f. Lead participant and starting and end date of each WP are shown in table 3.1a.)*

Objectives **O2.1** First objective — **O2.2** Second objective — **O2.3** . . .

Description of work

(where appropriate, broken down into tasks), lead partner and role of participants. For each task, quantify the amount of work. Provide enough detail to justify the resources requested and clarify why the work is needed and who will do it. Deliverables linked to each WP are listed in table 3.1c (no need to repeat the information here).

Task 2.1: Develop prototype (*Lead: UUF; Participants: MSU; Month: 1–10*) In this task, we will do lots of coding, and. . .

Work package number	3
Work package title	Dissemination and exploitation

⚠ *Participants involved in each WP and their efforts are shown in table 3.1f. Lead participant and starting and end date of each WP are shown in table 3.1a.)*

Objectives **O3.1** First objective — **O3.2** Second objective — **O3.3** . . .

Description of work

(where appropriate, broken down into tasks), lead partner and role of participants. For each task, quantify the amount of work. Provide enough detail to justify the resources requested and clarify why the work is needed and who will do it. Deliverables linked to each WP are listed in table 3.1c (no need to repeat the information here).

Task 3.1: Organise public workshop (*Lead: MSU; Participants: all participants; Month: 7–10*) In this task, we will unite the greatest minds. . .

Table 3.1c: List of deliverables

Only include deliverables that you consider essential for effective project monitoring.^a

^aYou must include a data management plan (DMP) and a 'plan for dissemination and exploitation including communication activities as distinct deliverables within the first 6 months of the project. The DMP will evolve during the lifetime of the project in order to present the status of the project's reflections on data management. A template for such a plan is available in the Online Manual on the Funding & Tenders Portal.

#	Name	Short description	WP #	Lead participant	Type	Dissem. level	Delivery month
1.1	dmp	Data management plan	1	MSU	DMP	PU	6
2.1	demo	Working demo system	2	IUBW	DEM	SEN	10
3.1	proceedings	Workshop proceedings	3	MSU	R	PU	11

KEY

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.

Type:

Use one of the following codes:

R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

DATA: Data sets, microdata, etc.

DMP: Data management plan

ETHICS: Deliverables related to ethics issues.

SECURITY: Deliverables related to security issues

OTHER: Software, technical diagram, algorithms, models, etc.

Dissemination level:

Use one of the following codes:

PU – Public, fully open, e.g. web (Deliverables flagged as public will be automatically published in CORDIS project's page)

SEN – Sensitive, limited under the conditions of the Grant Agreement

Classified R-UE/EU-R – EU RESTRICTED under the Commission Decision No2015/444

Classified C-UE/EU-C – EU CONFIDENTIAL under the Commission Decision No2015/444

Classified S-UE/EU-S – EU SECRET under the Commission Decision No2015/444

Delivery date

Measured in months from the project start date (month 1)

Table 3.1d: List of milestones

KEY Due date Measured in months from the project start date (month 1) Means of verification Show how you will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype that is ‘up and running’; software released and validated by a user group; field survey complete and data quality validated.				
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#	Milestone name	Related WP(s)	Month due	Means of verification
1	Define use cases	WP1	12	expert review
2	Minimum viable product (MVP)	WP2	20	expert review

Table 3.1e: Critical risks for implementation

Definition critical risk: A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives. Level of likelihood to occur: Low/medium/high The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place. Level of severity: Low/medium/high The relative seriousness of the risk and the significance of its effect.		
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Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High)	WP(s) involved	Proposed risk-mitigation measures
Datasets are not available Likelihood: Low Severity: High	WP1, WP2	We’ll find new ones

Table 3.1f: Summary of staff effort

<i>Please indicate the number of person/months over the whole duration of the planned work, for each work package, for each participant. Identify the work-package leader for each WP by showing the relevant person-month figure in bold.</i>
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	WP1	WP2	WP3	Total PMs per Participant
1 UUF	23	6	11	40
2 MSU	18	17	1	36
3 IUBW	21	14	5	40
Total PMs	62	37	17	116

Table 3.1g: ‘Subcontracting costs’ items

For each participant describe and justify the tasks to be subcontracted (please note that core tasks of the project should not be sub-contracted).

1 UUF		
	Cost (€)	Description of tasks and justification
Subcontracting	25000	Design project website

Table 3.1h: ‘Purchase costs’ items (major equipment costs)

Please provide details on the need for equipment costs if they exceed 15% of the personnel costs for that participant (according to the budget table in proposal part A).

3 IUBW		
	Cost (€)	Description of tasks and justification
Equipment	2120	Computing cluster

3.2 Capacity of participants and consortium as a whole [e.g. 3 pages]

 *The individual participants of the consortium are described in a separate section under Part A. There is no need to repeat that information here.*

- Describe the consortium. How does it match the project’s objectives, and bring together the necessary disciplinary and inter-disciplinary knowledge? Show how this includes expertise in social sciences and humanities, open science practices, and gender aspects of R&I, as appropriate. Include in the description affiliated entities and associated partners, if any.
- Show how the partners will have access to critical infrastructure needed to carry out the project activities.
- Describe how the members complement one another (and cover the value chain, where appropriate)
- In what way does each of them contribute to the project? Show that each has a valid role, and adequate resources in the project to fulfil that role.

- If applicable, describe the industrial/commercial involvement in the project to ensure exploitation of the results and explain why this is consistent with and will help to achieve the specific measures which are proposed for exploitation of the results of the project (see section 2.2).
- **Other countries and international organisations:** If one or more of the participants requesting EU funding is based in a country or is an international organisation that is not automatically eligible for such funding (entities from Member States of the EU, from Associated Countries and from one of the countries in the exhaustive list included in the Work Programme General Annexes B are automatically eligible for EU funding), explain why the participation of the entity in question is essential to successfully carry out the project.

ANNEXES TO PROPOSAL PART B

Some calls may ask to upload annexes to proposal part B. The annexes must be uploaded as separate documents in the submission system. The most common annexes to be uploaded in Horizon Europe are (standard templates are published in the Funding & Tenders portal):

- **CLINICAL TRIALS:** Annex with information on clinical trials
- **FINANCIAL SUPPORT TO THIRD PARTIES:** Annex with information on financial support to third parties.
- **CALLS FLAGGED AS SECURITY SENSITIVE:** Annex with information on security aspects.
- **ETHICS:** ethics self-assessment should be included in proposal part A. However, in calls where several serious ethics issues are expected, the character limited in this section of proposal part A may not be sufficient for participants to give all necessary information. In those cases, participants may include additional information in an annex to proposal part B.